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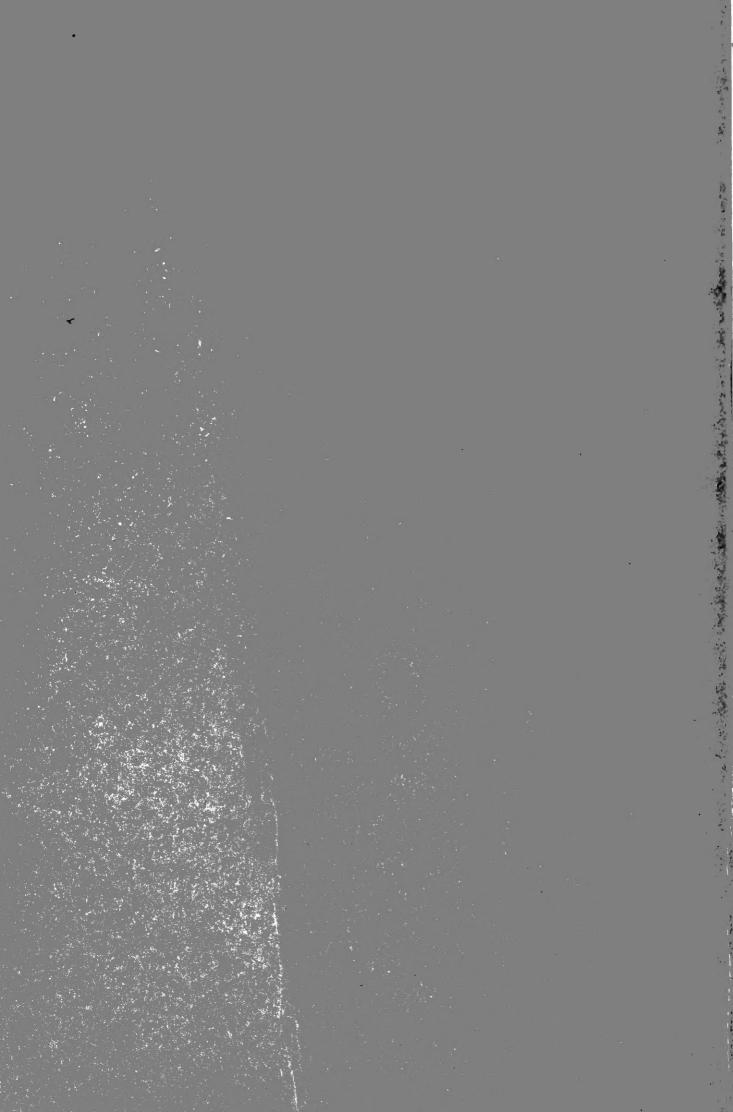
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No. 17. THE SUMMER BIRDS OF YAKUTAT BAY, ALASKA By T. M. SHORTT

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THE SUMMER BIRDS OF YAKUTAT BAY, ALASKA

By T. M. SHORTT

Introduction

In the spring of 1936, the writer was enabled to accompany an expedition to the Yakutat bay district of Alaska. The primary objective of the party which consisted of Mr. Douglas B. Deeks, Toronto, Ontario, Mr. J. F. S. Fletcher, Churchill, Manitoba, Mr. C. E. Roos, Toronto, Ontario, and the writer, was to obtain specimens of Alaskan bears and other big game and to bring back a motion picture record of the magnificent scenery of the region. The writer went in the interests of the Royal Ontario Museum of Zoology to make a collection of the birds and smaller mammals. This paper is a report on the birds which were collected or observed.

The expedition left Toronto in April, travelled by rail to Seattle and embarked on the "S. S. Alaska" of the Alaska Steamship Lines which arrived at Yakutat on May 13. Consequently, we arrived in time to see the tail-end of the spring migration of birds and to spend the whole breeding season at Yakutat. Our return was made on the same ship leaving for Seattle on August 24.

ITINERARY

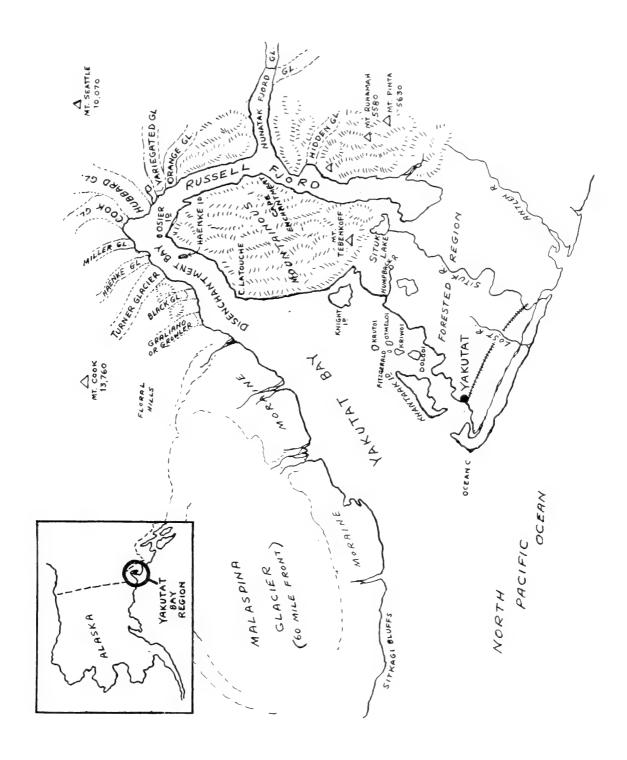
Headquarters was established in the old, disused court house in the village of Yakutat and using this as a base we were able to travel lightly and make a number of camps in different parts of the region. From the time of our arrival until May 23, the writer spent most of his time about the village observing the migration and collecting specimens of transient shorebirds. Two short trips were made during this time, one to Khantaak island and one to Knight island. Like the area about Yakutat village these islands are characterised by rocky, boulder-strewn shore-lines and are heavily timbered with Sitka spruce, western hemlock and birch.

On May 24 we proceeded by fishing boat to Disenchantment bay and got as far as the mouth of Russell fjord. From Osier island Disenchantment bay presented a panorama of rugged beauty. The greygreen water of the bay was filled with glittering ice-bergs of small size and opalescent colouring, while on every side were large glaciers of brilliant blues and greens some of which discharged more bergs with loud rumbling and roaring. Behind them rose mountains of moderate height and coloured in rich browns and purples, relieved by the greens

and buffs of vegetation. Beyond these rose other mountains of greater altitude with barren, rocky slopes panelled with slides of snow and gravel and beyond these, still mightier peaks, with their ever present cold blue mantle of ice and snow, lost their summits in the clouds. The bottom lands in this region still held numerous patches of snow late in May. These areas were covered with a growth of willow and birch. Osier island, at the entrance to Russell fjord was treed only by a dense growth of almost impenetrable willows.

About the end of the month we returned to Yakutat and a few days later established camp at the mouth of the Situk river, with the tidal flats and sand dunes to the south and the heavy spruce-hemlock forests to the north. The Situk is a shallow, meandering stream which rises in Situk lake and empties into the Pacific ocean some sixteen miles distant. It has low banks and many sand and gravel bars and is an important spawning ground for sockeye and king salmon, great "runs" of which were seen during our stay. The forests of this region are composed principally of Sitka spruce, mountain and western hemlocks. These trees reach a much greater size in the low altitudes of this region than on the mountain slopes north of Situk lake. The undergrowth is dense and in places almost impenetrable. Devil's club, salmonberry, alders and willows are common, the former in the forests and the others about the forest margins and along the river banks. The tundra-like flats for the most part are covered with sedges, deer cabbage, heather and Carex. Some of these clearings between Yakutat and the Situk are very swampy and are covered with a film of oil. There is also a heavy bacterial deposit of iron-oxide in these swamps which gives the vegetation and the many stagnant pools a rust-red colour. There is a broad beach of fine sand bordering the ocean at the mouth of the Situk.

Our Situk camp proved to be on such ideal collecting grounds that we remained there until July 3 when we returned to Yakutat, caught up with our work and left by fishing boat, for the Malaspina glacier on July 5. We found it impossible to land where we desired, due to the heavy surf and it was only with difficulty that we were able to get our supplies ashore on the desolate moraine near the foot of Black glacier. Two weeks were spent there, working north-east to Turner glacier along the mountainous coast and south-west over the terminal moraine of the Malaspina with its many eskers, and back inland over timbered moraine and "hogsback" ridges to the Floral hills. On July 23, the writer visited Khantaak island again and spent several days there, returning to Yakutat about the end of the month. In early August Russell and Nunatak fjords, Humpback creek and Situk lake were visited, each for a few days. The remaining week of our time was spent about Yakutat, packing and crating specimens and doing some



incidental collecting. Mr. Deeks remained another month at Yakutat, leaving at the end of September.

FAUNAL AREA

That the region is one from which a list of birds is desirable may be evinced from the following remark by Grinnell (1910) in a comparison of the faunal areas of southeastern Alaska: "Too little work has been done in the Yakutat bay district to warrant a discussion of its relationships." Though this was written in 1910, the statement was equally applicable in 1936 when our expedition sailed.

The fauna of the more southerly parts of the region, from Situk lake southward, proved to be predominantly Hudsonian in character with the following land birds strongly in evidence,—belted kingfisher, rufous hummingbird, Steller's jay, raven, crow, pine grosbeak, Lincoln's sparrow, fox sparrow and orange-crowned warbler. For the most part this region is heavily timbered but where prairie-like flats occur, such as at the mouth of the Situk river, a number of tundra species were found breeding. Examples include the Arctic tern, parasitic jaeger, northern phalarope, semipalmated plover and least sandpiper.

The mountainous peninsula, north of Situk lake and bordered by Disenchantment bay and Russell fjord, is also predominantly Hudsonian but with some influence of Alpine-Arctic, or treeless zone fauna. This is also true of the north-west shore of Yakutat bay. Some of the Alpine-Arctic species found were, redpolled linnet, rock and willow ptarmigan and American pipit.

Our collecting permits were limited as to the number of specimens of each species we could take. This number was too small to allow us to collect adequate series in some cases for completely satisfactory taxonomic studies. As a result our collection, comprising 233 specimens, all in the Royal Ontario Museum of Zoology, was made with a view to securing as many plumages, especially of juveniles as could be obtained. The writer has therefore, refrained from making comments on the subspecific status of Yakutat birds and has recorded the 112 forms under the specific names provided by Taverner (1934).

ACKNOWLEDGEMENTS

The writer wishes first to express his gratitude to his companions, to Mr. Deeks, who made the expedition possible and who was a constant source of encouragement and an able helper in the preparation of material, to Mr. Fletcher who conceived and planned the expedition and guided the party in the field and to Mr. Roos who besides taking much interest in the collections, acted as photographer of the expedition.

Of the residents of Yakutat, the writer cannot speak too highly. Responsible in a great measure for the success of our expedition was Mr. George Nelson who took us in his fishing boat to the Malaspina, to Russell fjord and to the islands of Yakutat bay. Mr. William Berry of the U.S. Bureau of Fisheries, Mr. Willard Branch, then with Libby, McNiel and Libby Co., and Mr. Hardy Trefzegar, U.S. Commissioner to the district, all gave us invaluable co-operation and assistance. It was through the courtesy of Mr. Axelson of the Swedish Lutheran mission that we were able to establish our headquarters in a comfortable building in the village. To the staff of the Libby's store and many others in Yakutat we also extend our thanks.

ANNOTATED LIST

Gavia immer. Common Loon.—This species was noted as fairly common on the clearer waters of the east side of Yakutat bay, on Russell fiord and on Situk lake. It was most common about Khantaak island where several pairs were evidently breeding since juveniles were seen with adults on August 20. No loons of this or other species were observed at any time in parts of Disenchantment bay or other waters which frequently were made murky by glacial torrents. These torrents are formed of water which has melted on the surface of a glacier, and percolated downward to form streams within the body of the glacier. When they issue at the melting front of the ice tongue their burden of ground up rock, known as "rock flour", and silt frequently gives them an opaque appearance, which is referred to as "glacial milk". This turbid and roily water mixing with the salt water of the bay evidently makes visibility under water extremely poor. This is probably of considerable importance in restricting the local distribution of fish-eating birds in glacier country.

Gavia adamsi. Yellow-billed Loon.—A single yellow-billed loon was noted well out to sea on May 25 opposite the Malaspina glacier. Close scrutiny of all loons observed thereafter failed to disclose further individuals of this species.

Gavia arctica. Arctic Loon.—This species was noted as fairly common at the north end of Yakutat bay and on Russell and Nunatak fjords. It was probably the most common loon of the region in May but though it was present in some numbers throughout the summer, no definite evidence of its having bred in the Yakutat area was obtained.

Gavia stellata. Red-throated Loon.—A not uncommon summer resident of Yakutat bay and vicinity. Immatures were seen with adults in late July in Russell fjord.

The method of fishing of this loon was noted to vary according to circumstances. One observed on May 25 near Haenke island dived by springing forward, bringing the breast and belly clear of the water before submerging head first. It usually remained under water for more than a minute and each time it reappeared had a large struggling fish in its bill. These seemed to be swallowed head foremost. Another individual seen on May 28 at Eleanor cove submerged its body gently until only the head and neck were visible, then dipping the head, it slid forward, scarcely causing a ripple as it disappeared. This bird remained on the surface only a second or two. It was not observed to bring up a fish and our inference was that it was feeding on small prey.

Colymbus grisegena. Red-Necked Grebe.—Noted only sparingly about Khantaak island from May 14 to May 20; thereafter not recorded in the district.

Colymbus nigricollis. EARED GREBE.—Large numbers of this species were seen near Khantaak island on May 16. They were components of a mixed flock of thirty-five eared grebes and twelve harlequin ducks which became alarmed at the approach of our boat. There was a stiff breeze blowing at the time and the grebes resorted to flight rather than diving to escape. They rose from the water with as much ease as the harlequin ducks and the mixed flock of grebes and ducks flew off in a bunched formation.

The eared grebe appears to be a common migrant at Yakutat, but was not found breeding nor was it recorded after May 18.

Diomedea nigripes. Black-footed Albatross.—An all dark albatross was observed a mile out to sea from Yakutat bay on July 5. The bill and legs were dark and it seems safe to assume that it was of this species. Another albatross had been seen on May 12, but did not come close enough for specific identification.

Puffinus griseus. Sooty Shearwater.—Known as "whale-birds". Throughout the Yakutat fishing district, shearwaters were observed many times during the summer but little opportunity was afforded for their study. All which could be identified with certainty were of this species.

Fulmaris glacialis. Northern Fulmar.—Northern fulmars appear to be of regular occurrence off the coast near Yakutat. Their mode of flight and light coloration made identification easy. It was estimated that probably thirty-five per cent. of all fulmars seen were the dark phase.

Oceanodroma furcata. Fork-tailed Petrel.—Petrels frequently were seen on the ocean but specific identification was difficult. Two individuals seen at close range on July 5 lacked white on the rump and were presumed to be *O. furcata*. Two specimens of this species were secured in Yakutat bay by G. W. Nelson after a severe storm at sea on Oct. 5, 1937 and presented to the Royal Ontario Museum of Zoology.

2 ♂ ♂, Oct. 5, 1937, Yakutat bay.

Phalacrocorax auritus. Double-crested Cormorant.—A fairly common summer resident with breeding colonies in Russell and Nunatak fjords.

Phalacrocorax pelagicus. Pelagic Cormorant.—This species is abundant in the Yakutat district with breeding colonies at cape Enchantment and in Nunatak fjord. Roosting places where large numbers of this and the preceding species congregate daily were noted at Logan bluffs and cape Latouche and smaller roosting places are known on Fitzgerald and Knight islands.

The habits of this species seemed to differ little from those of *auritus*. It was noted, however, that its posture was usually less upright and more graceful than that of the larger bird. When perched is neck is more gracefully curved and the bill pointed slightly upwards.

The nests of the birds at cape Enchantment had been built of wet, rotting seaweed and were placed on ledges of the wave-washed cliffs. A downy juvenile was taken from this colony on Aug. 6.

♂ Aug. 1, Fitzgerald island. Juv. ♀ Aug. 6, C. Enchantment. ad — Aug. 6, Russell fjord

Ardea herodias. Great Blue Heron.—This species became conspicuous about Yakutat in late July and August when both immatures and adults were seen and taken. Residents informed us that there was a heronry near Humpback creek, but we had no opportunity to verify this.

on Aug. 19, Yakutat. Imm. ♀ Aug. 20, Yakutat.

Branta canadensis. Canada Goose.—Several migrating flocks of geese of this species were observed in May. The last noted was passing to the north-west over Khantaak island on May 16. Indians claim that geese nest in the vicinity of Situk lake, but during our stay at the lake we saw no evidence of this.

Anas platyrhynchos. Mallard.—This species was not common, but was noted at Situk lake and on Russell fjord in August and had apparently bred at both places.

2 imm. $\nearrow \nearrow$ Aug. 5, Russell fjord.

Mareca americana. Baldpate.—This is evidently an uncommon summer resident of the Yakutat bay region. It was encountered only on the Situk river and only on two occasions during the summer. A family group of flying young was observed on Aug. 13 but these did not allow close approach and no specimen was taken.

Dafila acuta. Pintail.—The commonest of the "pond" or river ducks in the region. Large flocks which were made up almost entirely of male birds, were frequently seen on the tide-flats at the mouth of the Situk river. These flocks were frequently attacked and "badgered" by bald eagles, but no cases of actual injury by the eagles was observed by us although we spent much time, while in ambush of bears, in watching these birds.

Nettion carolinense. Green-winged Teal.—This species was not common, but a few drakes were observed almost daily during June on the tide flats at the mouth of the Situk river. This suggests that the species breeds in the Yakutat district.

Nyroca valisineria. Canvas-back.—Observed by us only during migration when a few individuals were noted on May 18 and 19 at Yakutat.

Glaucionetta islandica. Barrow's Golden-Eye.—This species was quite common and bred throughout the district. Flocks of young were seen on Situk river, Situk lake, Disenchantment bay and in Russell fjord.

The mating display as observed by us at Yakutat was precisely like that of the well-known American golden-eye.

♂ May 14, Yakutat.
♀ June 26, Situk river
juv. — Aug. 4, Russell fjord
juv. ♂ Aug. 4, Russell fjord
♀ Aug. 4, Russell fjord
♀ Aug. 4, Russell fjord

Clangula hyemalis. OLD-SQUAW.—Old squaws were common on Yakutat bay during the migration period and a few birds were noted among the islands in the bay throughout the summer. These latter were not regarded as breeding birds as they gave no indication of possessing nests or young.

Histrionicus histrionicus. Harlequin Duck.—A common breeding species on the east coast of Yakutat bay where it nested in the heavily-timbered river valleys.

Throughout June and the earlier part of July only small flocks of

male birds could be seen on the bay but by early August many females with their broods had appeared. Two immature birds were collected from a flock of eight birds which inhabited a small cove in Russell fjord.

Imm. ♂ Aug. 4, Russell fjord. Imm. ♀ Aug. 6, Russell fjord.

Melanitta deglandi. White-winged Scoter.—This species was common in summer in Disenchantment bay and in Nunatak fjord.

Adults and half-grown young were seen on August 5 in Disenchantment bay. When these adult birds stood up on the water to beat their wings, as they frequently did, it immediately become apparent that they were in eclipse plumage and flightless. They were very shy and difficult to approach.

Melanitta perspicillata. Surf Scoter.—This was the most abundant scoter of the region in the summer of 1936. The species was noted in large numbers about Yakutat until May 24 and, subsequently, was found breeding fairly commonly in the Disenchantment bay and Russell fjord waters. A male taken on August 4 was in the eclipse plumage and was unable to fly. Its beak, however, was fully as large and as brilliantly coloured as that of a specimen taken three weeks previously.

Oidemia americana. American Scoter.—This was the least common of the scoters of Yakutat bay. Though a few individuals were noted throughout the summer they gave no indication that they had bred in the area.

Mergus merganser. American Merganser.—A common breeding bird, well distributed throughout the Yakutat area. As many as a hundred young were seen in one flock on Situk lake in July. This flock probably represented the combined numbers of eight or more broods, since the average number to a brood as observed earlier in the season, was about twelve. The role of this species as a "conserver" of big game was forcefully impressed on us as we travelled down the Situk river in search of big brown and grizzly bears. Hardly had we left Situk lake in the canoe, intending to drift quietly downstream, when we came upon a family mergansers. The flock took fright and in great consternation fluttered, flapped and paddled away ahead of us to the accompaniment of loudly audible pattering, splashing and squawking. The woods on each side of the river were almost impenetrable—portaging was out of the question—we could only drift downstream driving before us an alarm that made hunting impossible. Soon a second flock was added

to the first, then a third and though the occasional bird would summon courage to dash past us and flutter back upstream, we were driving between sixty and seventy mergansers of all ages and sizes before us as we reached our camp near the mouth of the river. Game animals were indeed well warned of approaching danger. It is probable that these flocks never got "sorted out" again, as several times later in the season we saw a female merganser with a group of ducklings of decidedly assorted sizes.

♂ June 5, Situk river.

Mergus serrator. Red-breasted Merganser.—This species was seen in some numbers during the third week of May but evidently it did not remain to nest in the Yakutat bay region since all mergansers noted after May 22 were *M. merganser*.

Astur atricapillus. Goshawk.—This species appears to be a fairly plentiful summer resident of the heavy coniferous woods about Yakutat. It was observed on several occasions at Situk lake and an immature male was taken on the Situk river about 10 miles from its mouth on Aug. 13. The stomach of this bird contained the remains of a meadow mouse (*Microtus mordax*), the tail measurement of which was 67 mm. A second immature, a female, was taken on Aug. 20 while it was raiding a chicken-pen in Yakutat village. It was shot after making several unsuccessful attempts to capture a fowl through a two-inch mesh fence. Its stomach was entirely empty. It is interesting to note that the irides of this bird were a brilliant orange, intermediate between the normal yellow of immaturity and the deep red of the adult.

Imm. ♂ Aug. 13, Situk river. Imm. ♀ Aug. 20, Yakutat.

Accipiter striatus. Sharp-shinned Hawk.—Found only in the wooded parts of Malaspina glacier and at Situk lake. An adult male was taken at the former locality about 3 a.m. on July 14 as it hunted over the timbered moraine on the east end of the glacier. A nest and flying young were encountered at Situk lake on Aug. 11. Constant "badgering" and warfare was being carried on between the fully grown, but still immature hawks and a family of Steller's jays. The jays usually were the aggressors and often could be seen pursuing and harassing the hawks, but the reverse situation was also observed and on one occasion a pile of dark blue feathers was found under the nesting-tree of the sharpshins. This was probably the work of one of the adult hawks, for the attacks made by the young seemed particularly futile and were avoided easily by the jays.

The nest was situated about 30 feet up in a western hemlock.

♂ July 14, Malaspina glacier Imm. ♀ Aug. 12, Situk lake Imm. ♀ Aug. 11, Situk lake. Imm. ♂ Aug. 12, Situk lake 2 Imm. ♂ ♂, Aug. 11, Situk lake.

Buteo borealis. RED-TAILED HAWK.—The red-tailed hawk was recorded only on the Malaspina where a single adult was seen on July 11.

Buteo lagopus. ROUGH-LEGGED HAWK.—This species was not common but individuals were seen twice during the summer on the Malaspina, and a male of the dark phase was taken near the Situk river on September 12.

♂ Sept. 12, Situk river.

Aquila chrysaetos. Golden Eagle.—Only a single pair of golden eagles was observed during our survey of the Yakutat region. This pair was evidently nesting on high inaccessible cliffs on Mount Tebenkoff. They were seen on three different and widely separated occasions during the summer. On July 4 they were hunting for marmots over a slide at about 1000 feet above sea-level. On the other two occasions they were soaring in great circles high in the air, presumably over their eyrie.

Haliaeetus leucocephalus. Bald Eagle.—Probably the most conspicuous feature of the Yakutat bird fauna is the abundance of bald eagles. It was not an uncommon sight to see from twelve to twenty eagles in the sky at one time. Their great bulky nests were a prominent and picturesque part of the landscape and no fewer than eighteen were noted in a more or less casual survey. These were situated from 30 to 70 feet from the ground, usually in large and conspicuous trees. A downy juvenile was taken from a nest on the broken stub of a giant Sitka spruce 65 feet from the ground. On June 15, five days later the adult female was collected from this tree.

The stomachs of the four eagles collected were examined; two were empty, one contained the remains of a hoary marmot and one fish offal.

Juv. ♀ June 10, Situk river. 2 imm. ♂ ♂, July 1, Situk river. Ad. ♀ June 15, Situk river.

Pandion haliaetus. Osprey.—A few pairs were noted during the summer but the species could not be referred to as common. On two occasions, ospreys were seen to pick up floating dead sockeye salmon. These fish had died after spawning in the upper waters of the Situk.

On May 29 a male was collected from a pair which had a nest on Yakutat bay. Later in the season this nest was again visited and two

adults were found in attendance, the female obviously having obtained a new mate.

♂ May 29, Yakutat bay.

Falco peregrinus. Peregrine Falcon.—Peregrine falcons were seen several times during the summer, but always at long range and travelling fast. They were noted at cape Latouche near a roosting rock of cormorants, and at Sitkagi bluffs. Many suitable nesting situations were seen but no evidence of actual breeding was obtained.

Falso columbarius. PIGEON HAWK.—A single individual of this species, an adult seen on Khantaak island on July 24, is our only record of its occurrence in the region.

Lagopus lagopus. Willow Ptarmigan.—The willow ptarmigan was found to be common on Osier island, the northwest coast of Russell fjord and along the coast from Icy bay on the Malaspina to the Turner glacier. The species was particularly noticeable during the last two weeks of May, when the males were crowing. A definite breeding record was obtained with the collection of a downy juvenile on July 12 on the west side of Disenchantment bay.

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    ♀ May 25, Osier island.
    ♂ May 25, Osier island.
    ♂ May 26, Russell fjord.
    ♀ July 12, Disenchantment bay.
    Juv. ♂ July 12, Disenchantment bay
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Lagopus rupestris. Rock Ptarmigan.—This ptarmigan was not so common as the last and seemed to frequent higher altitudes. A pair was taken on the west side of Russell fjord at an altitude of above 2000 feet on May 26. Strangely enough, though the male was still in almost full winter plumage at a date when male willow ptarmigan had complete summer feathering on head, neck and upper back and breast, the female had acquired much more of the summer plumage than corresponding females of the willow. The species was also observed on the west side of Disenchantment bay near Turner glacier at an altitude of 1400 feet.

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♀ May 26, Russell fjord. ♂ May 26, Russell fjord.
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Haematopus bachmani. Black Oyster-Catcher.—This species was found only on Osier island in Disenchantment bay. Two pairs were nesting on the gravel beach when we visited the island on May 25. The "nest" of one pair was discovered. This consisted of a few small pebbles brought together in a hollow on the beach and contained three eggs. The behaviour and attitudes of the adults while the writer searched

for the nest were interesting. They ran along in a peculiar crouched position as they tried to lead him away. The back feathers were raised and ruffled, the neck drawn in and head lowered with bill pointed slightly downward. The tail also was lowered, almost touching the stones. The female often squatted as though on a nest and feigned to flush hurriedly, often from the top of a great bald boulder. The island was still almost entirely snow-covered and the nest was situated within 10 feet of a bank of snow. On the seaward side large pieces of ice from the Hubbard glacier had been washed up and lay at high tide mark, only a few feet from the nest. The cries of the adult birds were to the writer somewhat reminiscent of the distress calls of the killdeer.

♂ May 25, Osier island. ♀ May 25, Osier island.

Charadrius semipalmatus. Semipalmated Plover.—A common breeding bird throughout the region. It was particularly abundant on the sand dunes at the mouth of Lost river and the flats of the Situk river. Several nests of this species were found. One, discovered on July 2 at the Situk river was hidden under the end of a large piece of driftwood. It was a shallow depression three and a half inches wide and lined with very small pebbles and bits of weed-stalks. As we examined this nest the parents came very close and tried to lead us away by feigning injury. They were soon joined by a second pair of adults which became greatly excited and also tried the "broken-wing" act to lure us off.

We found that we could locate the nests of semipalmated plover in sandy situations by the concentration of their footprints about the nest. Two sets of eggs which we had under observation were destroyed by ravens.

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Juv. ♀ July 6, Black glacier ♂ June 5, Situk river. Juv. ♂ July 14, Malaspina glacier ♀ June 5, Situk river.
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Oxyechus vociferus. KILLDEER.—A single killdeer was observed on a gravelly bar near the mouth of the Situk river on July 27. This was the only observation of this species.

Squatarola squatarola. Black-bellied Plover.—The black-bellied plover was seen and one taken on Khantaak island on May 16, and a lone male was collected at Icy bay on the Malaspina glacier on May 21.

Aphriza virgata. Surf-bird.—Observed as a migrant only. Large flocks, travelling northwestward were seen at Yakutat about the middle of May. Some of these flocks were composed of several hundred birds

and contained a small admixture of black turnstones and Aleutian sandpipers.

Only one specimen was secured and the species was not encountered after May 20.

♂ May 15, Yakutat.

Arenaria interpres. Ruddy Turnstone.—Twelve migrating birds of this species were seen on the south side of DeMonti bay on May 14. On the following day, two more were observed and one collected. The species was not seen after this date.

♂ May 15, Yakutat.

Arenaria melanocephala. Black Turnstone.—This species was migrating through Yakutat in large numbers about the middle of May. Two specimens were taken on May 16. No breeding evidence was secured. The southward flight was noted first on July 20, when two immatures were observed at Yakutat. Thereafter individuals and small flocks were seen moving southward until the middle of August. They seemed to be much more common on the west coasts of the islands in Yakutat bay during migration than on the mainland.

♂ May 16, Yakutat

Q July 22, Otmeloi island.

♂ July 24, Khantaak island.

♀ Aug. 5, Nunatak fjord.

♀ July 24, Khantaak island.

Capella delicata. Wilson's Snipe.—This bird was not common but a few pairs evidently bred on the flats bordering the ocean between the Situk and Lost rivers. The few birds seen were noisy and conspicuous, frequently perching on top of one of the scattered Sitka spruces or western hemlocks on the flats.

Actitis macularia. Spotted Sandpiper.—This sandpiper was fairly common along the Situk and Lost rivers. A nest with four eggs was found on a gravel bar on the Situk on June 24.

♂ May 21, Yakutat

Tringa solitaria. Solitary Sandpiper.—This species became numerous along the Situk and Antlen rivers early in August. The adult female collected exhibits well-mottled first primaries.

♀ Aug. 13, Situk river.

Heteroscelus incanus. Wandering Tattler.—A common bird during the spring migration. The "last seen" date was May 21. On July 24 a female was taken on Khantaak island, perhaps a returning migrant since the species was not observed during the breeding season.

♂ May 15, Yakutat.

9 July 24, Khantaak island.

Totanus melanoleucus. Greater Yellowlegs.—The greater yellowlegs obviously bred in considerable numbers in the muskeg and boggy flats from Ocean cape to the mouth of the Antlen river.

♂ May 19, Lost river.

♂ June 13, Situk river.

Totanus flavipes. Lesser Yellowlegs.—This species was not so common at Yakutat as the greater yellowlegs but it was found breeding on the Situk river flats. A male collected on June 12 was evidently in breeding condition.

♂ June 12, Situk river.

Arquatella ptilocnemis. Western Purple Sandpiper.—The western purple sandpiper was encountered only in small numbers among the flocks of surf-birds and black turnstones. Three specimens were collected on May 16 from one of these flocks. These proved to be two males and a female.

2 & May 16, Yakutat

♀ May 16, Yakutat.

Pisobia minutilla. Least Sandpiper.—Quite common during migration and found breeding in some numbers on the coastal plain. A nest with four heavily incubated eggs was taken on July 2 at the Situk river. On June 24, downy chicks just out of the egg were encountered and one was collected.

♂ May 14, Yakutat.

Juv. ♂ June 24, Situk river.

Pelidna alpina. Dunlin.—A fairly common migrant from the date of our arrival, May 12, until May 24. The dunlin was not observed during the summer months. The male collected at Khantaak island on May 16 was in particularly well-marked and brilliant plumage.

♂ May 16, Khantaak island.

Limnodromus griseus. Dowitcher.—A common species, summering in the muskegs near the Situk river. A female taken at Yakutat on May 29 contained an egg, almost fully-formed, but without shell. Males were noted going through their aerial "dance" over the coastal plains on several occasions.

♀ May 14, Yakutat.

3 ♂ ♂ May 21, Yakutat.

2 ♀ ♀ May 29, Yakutat.

Ereunetes maurii. Western Sandpiper.—The western sandpiper was recorded as a common migrant. It was observed in large flocks during the latter half of May. Small groups were present throughout the summer but according to our observations these were composed of non-breeding individuals.

♀ May 14, Yakutat.

♂ June 9, Situk river.

♂ June 28, Situk river.

♀ June 9, Situk river.

♀ June 30, Situk river.

Lobipes lobatus. Northern Phalarope.—This was a common breeder in the wet grassy sloughs of the Situk river flats. Several nests were located during the summer and two sets of eggs collected. A male bird was flushed from a nest in a tussock in a boggy field on June 8. The parent birds, nest and four eggs were taken. On June 12 a set of three fresh eggs was collected.

Flocks of northern phalaropes were encountered on Yakutat bay during August. These were mostly immature birds.

- ♀ June 8, Situk river.
- Q Aug. 2, Fitzgerald island.
- ♂ June 8, Situk river.

Stercorarius parasiticus. Parasitic Jaeger.—The parasitic jaeger was a fairly common species, particularly on the Malaspina glacier. The dark phase was more common than the light one at Yakutat according to our observations. About 65 per cent of the jaegers seen by us during the summer were of the dark phase. The stomach of a female which was collected on July 6 contained the remains of a downy sandpiper of unidentified species.

♀ July 6, Black glacier.

♀ July 11, Graliano glacier.

Stercorarius longicaudus. Long-tailed Jaeger.—A lone individual of this species was seen in Disenchantment bay on July 7. It was flying steadily towards the northwest and gave the impression of being merely a transient in the region.

Larus glaucescens. Glaucous-winged Gull.—This was the most plentiful of the large gulls of the region. It nested abundantly on some of the islands in Disenchantment bay, particularly on Haenke island. At any time during our stay large numbers could be seen at the salmon cannery and about the dock.

♀ May 14, Yakutat.

Imm. ♀ Aug. 21, Yakutat.

♂ Aug. 21, Yakutat.

Larus argentatus. Herring Gull.—Herring gulls possessing the restricted, dark-grey, primary pattern typical of the form thayeri, were not uncommon about Yakutat and a specimen was obtained on Aug. 21. A female was taken on June 20 at the Situk river, but unfortunately was lost. It is of interest to record that, though both of these birds were in fully mature plumage, they had light brown irides, bordered by purplish-pink eyelids. The writer has examined quite a number of herring gulls from eastern Canada, and without exception fully adult birds possessed light yellow irides with yellow, orange or scarlet eyelids.

♂ Aug. 21, Yakutat.

Larus canus. Short-billed Gull.—This was a very common bird during our stay at Yakutat. It was observed throughout the entire region and presumably bred in many localities. Eggs were taken from a small colony at Icy bay on the Malaspina glacier. A juvenile still partly clothed in down was discovered swimming on a small pool near Black glacier on July 6. A parasitic jaeger flew over and immediately swooped at the young gull. The parent gulls in turn attacked the jaeger. The latter was deflected from its intent and pursued the attacking adult for over a mile above the flats.

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♀ May 22, Yakutat.
♂ May 22, Yakutat.
♀ July 2, Situk river.
Imm. ♂ July 24, Khantaak island.
Juv. ♀ July 6, Black glacier.
♀ July 2, Situk river.
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Larus philadelphia. Bonaparte's Gull.—Bonaparte's gull was a plentiful summer bird of the area under consideration. A breeding record was obtained; a juvenile just able to fly was collected on July 14 on the Malaspina glacier.

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Imm. ♀ June 24, Situk river. Juv. ♀ July 14, Malaspina glacier. ♂ June 24, Situk river. ♀ Sept. 5, Yakutat.
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Rissa tridactyla. KITTIWAKE.—The kittiwake apparently breeds somewhere in the vicinity of Yakutat since immature and adult birds began to show up in numbers in the bay about July 25. An adult was collected on Aug. 10 at Ocean cape.

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♂ Aug. 10, Ocean cape.
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Sterna paradisaea. Arctic Tern.—The Arctic tern is an abundant breeder in the region. They nested commonly on the sand dunes at the mouth of the Situk river and on the gravelly moraine of the Malaspina glacier. Eggs were taken on May 21 on the Malaspina near Icy bay from a large-sized colony, and a juvenile, not long from the egg was taken on June 17 at the Situk river.

Of considerable interest to us was the complete absence of the Aleutian tern (*Sterna aleutica*) colony which was found on the Situk river flats by Walker (1923) who located a few nests and saw a considerable number of adults in 1922. We visited all of the tern colonies in the Situk region and closely scrutinized the adults but all proved to be *paradisaea*.

This apparent evacuation is of special interest in relation to the remarks of Bent (1921) and Friedmann (1933). The former suggests that *aleutica* is of Asiatic origin and that the Alaskan colonies are sometimes of a temporary nature. Friedmann records a similar desertion of the Kodiak island colony and the appearance of one at Goodnews

bay. The latter colony grew from "one nest in 1932 to between 60 and 75 pairs" in 1933.

♂ May 16, Khantaak island
 Juv. ♀ June 17, Situk river.
 ♂ June 18, Situk river.

Cepphus columba. Pigeon Guillemot.—The pigeon guillemot is a very common breeding bird of the islands in Yakutat bay. During May pairs, and larger groups, were often seen performing a mating "display". They would pursue each other in rapid flight close to the water, then suddenly drop with considerable force on the water and almost immediately dive. Being submerged for about one-half minute would reappear on the surface and go through a "billing" act similar they to that of the domestic pigeon. This latter performance is perhaps a better justification for the birds vernacular name than the rather vague physical resemblance to a pigeon.

The species was especially numerous about the rocky shores of Fitzgerald and Khantaak islands. On July 17 when we visited the former island dozens of adult guillemots were observed diving for seaweed. On procuring a strip of seaweed, perhaps a foot in length a bird would fly ashore and disappear into the nesting cave, evidently taking food to its downy chick. Three specimens were shot during this procedure and the seaweed was examined. In all cases it was found to be covered with tiny molluscs and other marine creatures and the question which came to mind was whether the weed was actually fed to the young or whether this was merely a convenient way of carrying a supply of animal life to the nestling. We attempted to dig out several of the caves to examine the nests with this in mind, but were unable to do so due to the numerous boulders and large tree roots which made it impossible. Adults were also seen carrying long marine worms to the nesting burrows.

♀ July 17, Fitzgerald island. 2♂♂ July 17, Fitzgerald island

Brachyramphus marmoratus. Marbled Murrelet.—The shrill piercing *keer*, *keer* of this species was one of the characteristic sounds of dawn in Disenchantment bay. No need for an alarm clock here, for with the first streak of light in the eastern sky, the murrelets, singly and in groups would mount into the air and course about, splitting the silence with their shrieks. Often they seemed to select our tent as a focal point for their flight and would travel around and over it sometimes diving to within a few feet. Their nerve-wrecking screeches would bring the occupants tumbling out to hurl ineffectual shot and invectives after the revellers.

Throughout the summer we watched this species carefully, but they gave us no indication of where they were nesting in the region.

♀ Yakutat, May 30

♂ July 17, Yakutat.

Brachyramphus brevirostris. KITTLITZ'S MURRELET.—This was a fairly common summer resident of the region. It was frequently seen in company with *B. marmoratus* from which it was distinguished only with difficulty. It was surprising how seldom light conditions were suitable to show the lighter, more greenish colour of the back due to the fine admixture of grey and cinnamon buff feathers of this species. This proved to be the only reliable fieldmark, however, and we found as did Bailey (1927), that any disparity in swimming, diving or flying habits was governed more by wind conditions and the exigency of the occasion rather than by any marked physical difference affecting of the two species.

♂ July 2, Lost river. ✓ July 5, Disenchantment bay.

Cerorhinca monocerata. Rhinoceros Auklet.—This species is apparently rare and was identified by us only on one occasion, June 8, in Yakutat bay.

Lunda cirrhata. Tufted Puffin.—Although many tufted puffins were observed south of the Yakutat bay region they were encountered only in small numbers at Yakutat in May. They were not observed during the summer months.

Otus asio. Screech Owl.—This species was encountered only on the Situk river, about twenty miles from its mouth. Three individuals were heard, at this point on the evenings of August 5 and 6, calling from deep woods composed of western hemlock, Sitka spruce and birch. They responded readily to a crude imitation of their calls. Only one specimen was obtained and this had to be collected in the moonlight with a soft-nosed bullet from a .30 calibre Springfield. The specimen was badly damaged but nevertheless is an extremely interesting bird since it apparently marks a range extension of approximately two hundred miles northwestward. The specimen is considerably redder and slightly darker than any example of O. a. kennicotti in the R.O.M.Z. collection.

♂ Aug. 6, Situk river.

Bubo virginianus. Great Horned Owl.—The characteristic hooting of two great horned owls was heard on July 23 on Khantaak island and a very dark individual was seen at long range the next day. Several times during the summer on Khantaak island and in the heavy forest about Situk lake the angry clamour of crows suggested the presence of a horned owl, but on each occasion the crows moved off or became quiet before the writer was able to approach through the almost impenetrable tangle of devil's-club and other underbrush.

Glaucidium gnoma. Pygmy Owl. -This species was heard only in the dense evergreen forests bordering the Situk river about eight miles from Situk lake and at the foot of Mount Tebenkoff. On Aug. 12, a male was readily attracted to a whistled imitation of his *kook* call and was collected. This was the only one actually seen during the summer. Various chuckling notes in an undertone were heard to precede and follow each *kook* note when the owl was but a short distance away.

Scotiaptex nebulosa. Great Gray Owl.—Several times during late July the writer heard a strange "hooting" of an owl in the evergreen forest near Lost river. At dusk on July 28 a huge, long-tailed owl which could only be of this species was flushed from some big spruces and flew slowly across a stretch of open muskeg. Although the region was laboriously hunted the bird could not be found again.

Asio flammeus. Short-eared Owl.—The short-eared owl was fairly plentiful on the tidal flats of the Situk river during the summer. During the early part of June a pair, apparently mating or mated, took over a territory to the west of the Situk river mouth. A third individual was observed to fly over this territory and often seemed to attempt to associate with the pair. It was chased off the territory by the smaller of the two birds on each occasion. On the morning of June 9 this smaller of the mated birds was collected and oddly enough proved to be the female. Later in the same day the third owl was observed in company with the male, performing the graceful and butterfly-like aerial "dance" which ultimately evolved into the spectacular mating flight.

The nest with five eggs was located by Mr. Deeks on July 10. The first owlet hatched on July 20 and subsequently three juveniles were taken, each representing a different stage of development of the juvenile down. The nest, however, was destroyed on the night of Aug. 10 and the two remaining young, still quite incapable of flight were missing. The signs suggested that the predator was a fox.

It was remarkable how seldom the owls made any attempt to attack certain birds though often menaced by them. Ravens, crows, yellowlegs and phalaropes all seemed instinctively to identify the buoyant, erratic flights over the tide-flats and would excitedly swoop at the owls. The latter deftly and complacently avoided them. Arctic terns were seen to fly over the owls as they perched on driftwood and return to swoop many times but the owls took little notice and remained on their perches. Passing glaucous-winged and Bonaparte's gulls usually swooped a few times before proceeding on their way but the owls' only movements were to draw in the neck or "duck" from a particularly close encounter.

They usually turned their heads so that they faced their attackers. However, when a bald eagle crossed the owls' territory, the latter would ascend to a height above the eagle and sail along like an escort ushering the trespasser out to sea. Often when one of the owls captured a mouse, a band of gulls would attempt to purloin it and on one occasion a jaeger attacked with the object of securing the owl's prey. However, such robbery was never observed to be successful. The owls were too adept at dodging and performing half-rolls in the air and the gulls, usually, gave up after two or three attempts. Several times the hoarse "ough ough" of the owls was heard to mingle with the cries of the gulls.

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♀ June 9, Situk river.
Juv. ♂ Aug. 10, Situk river.
Juv. ♀ July 21, Situk river.
♂ Aug. 28, Situk river.
Juv. ♀ July 27, Situk river.
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Chordeiles minor. NIGHTHAWK.—On Aug. 8 at about 7 p.m. a nighthawk passed over our camp on the Situk river, flying high and travelling in a southeasterly direction. The unmistakable call note was uttered three times within our hearing. This constituted our only record.

Selasphorus rufus. Rufous Hummingbird.—From the time we arrived at Yakutat, May 13, until the first week of June, rufous hummingbirds were very conspicuous and the males were "displaying" vigourously. The common type of display, as observed by us, usually centred on some vertical object, which seemed to act first as a stimulus or magnet and became the stage for the performance. This object generally took the form of a tall, somewhat isolated tree. Our tent several times served as the stimulus, and on one occasion a hummer looped twice around the writer as he stood quietly in an open field. The display generally started at a point near the base of the prominence, where the hummer hovered for a second or two, then made an almost vertical climb at high speed to the top of the object, over the crown, down the other side and back to the starting point without pause or hesitation. The only vocal sound during the display occurred as the hummer completed his "dive" and regained the starting point, when an angry buzzing sound resembling the syllables tzit-it-it-zit was uttered. The display sometimes took place over trees up to fifty feet in height and again the climb was only five or six feet. The performance was often repeated two to four times with a slight pause between "acts." On May 24 three males could be heard performing from one point. The absence of females, or, if present, their apparent indifference to the actions of the male was noticeable.

Megaceryle alcyon. Belted Kingfisher.—A fairly common nesting bird of the area about Yakutat village and the banks of the Situk and Lost rivers. The stomach of a male, collected on June 15, contained the remains of a large water-beetle.

♂ June 15, Situk river.

♀ June 22, Situk river.

Colaptes auratus. Yellow-shafted Flicker.—This species was not seen by us, but a specimen, taken in June 1935 at Yakutat was given to us by Mr. Hardy Trefzegar, the Commissioner of the Yakutat district. Mr. Trefzegar stated that this was the only individual of the species he had seen in the vicinity of Yakutat.

♂ June - 1935, Yakutat.

Dryobates villosus. Hairy Woodpecker.—This species was not uncommon in the wooded districts east of Yakutat and on Khantaak island.

♂ June 2, Lost river.

♂ July 24, Khantaak island

Empidonax difficilis. Western Flycatcher.—This species was met with only at Situk lake on August 12 when a female and a juvenile male were taken in a low, swampy, mixed woods.

Q Aug. 12, Situk lake.

Juv. ♂ Aug. 12, Situk lake.

Tachycineta thalassina. VIOLET-GREEN SWALLOW.—On June 30 about fifteen violet-green swallows were seen on the Situk river about half way between the sea-coast and Situk lake. They were feeding over the river in company with an equal number of tree swallows. One violet-green swallow was taken.

♂ June 30, Situk river.

Iridoprocne bicolor. Tree Swallow.—A fairly common species, nesting under primitive and natural conditions along the Situk river in cavities in trees.

♂ June 15, Situk river.

Hirundo erythrogaster. Barn Swallow.—This was a fairly common species nesting about the cannery buildings at the Situk river and in Yakutat village.

Cyanocitta stelleri. Steller's Jay.—Steller's jays were common throughout the great evergreen forests of the region. A nest from which the young had flown was found on the timbered moraine of the Malaspina glacier on July 14, and juvenile birds were taken at Yakutat

and at Humpback creek in August. The nest which was constructed of small twigs and coarse grass was thickly lined with moss.

- ♂ May 16, Khantaak island. Juv. ♂ Aug. 2, Humpback creek.
- ♂ June 13, Situk river. Juv. ♂ Aug. 21, Yakutat.
- ♂ July 14, Malaspina glacier.

Pica pica. American Magpie.—This species was not common and was encountered only in Russell fjord where a juvenile female was taken from a family group.

Juv. Q Aug. 6, Russell fjord.

Corvus corax. Raven.—The raven was abundant throughout the Yakutat bay district. For several days after our arrival, on May 13, pairs were seen soaring and sailing about in a manner which suggested a courtship flight. Frequently during these flights a bird would perform a half-roll and grasp with its feet at a companion sailing above it. At other times they were seen to "tumble" several feet after the fashion of a tumbler pigeon, but for the most part their flight was a magnificent display of soaring; their ability in this phase of flying being reminiscent of the soaring of the large *Buteos*.

About the village of Yakutat, ravens were as tame as barnyard fowl, partly due perhaps, to the fact that they are still held in some degree of veneration by the Tlinkit Indians of the village. They walk about on the streets and paths and sometimes merely hop to one side to allow a human to pass. It is well that this condition exists for they act as street-cleaners and scavengers and rid the village of much filth that might otherwise accumulate. It is difficult for one from east of the mountains to accustom himself to the raven's confidence and indifference to man since in eastern North America the bird has become the very embodiment of solitude and retirement.

In addition to acting as scavengers about an Indian village, the raven associates with the gulls along the coast and rids the shore of much refuse. Often large numbers may be seen about the carcass of a fish or other marine animal. In the economics of the raven this habit should be weighed against predaceous habits, usually regarded as destructive. Two nests of the semipalmated plover and one of the Arctic tern which we had under observation were destroyed by ravens.

Almost every author who writes of ravens attributes a "sense of humour" to this species and at times the writer is almost inclined to agree. On four separate occasions while he was walking along the road to Yakutat from our camp, a band of about a dozen ravens perched quietly and without the writer's knowledge in the low bushes on either side of the road. They remained perfectly still until he had passed and

then burst forth with a chorus of resounding "warwhoops" to fly off in a great clamour of feigned confusion, only to circle quietly back and resume their perches, talking among themselves with almost human chuckling. It is little wonder that the natives still look upon this amazing bird with awe.

We found ravens nesting in two distinctly different types of situation. A new nest, without eggs, was found on a ledge on the sheer face of a rock cliff on Osier island on May 24. In order to examine this nest Mr. Deeks was lowered over the cliff on a rope. Another nest, containing one young bird was found near the top of a large Sitka spruce near the Situk river. The juvenile was collected.

♀ May 23, Yakutat.

Juv. ♀ June 5, Situk river.

♂ May 23, Yakutat.

Corvus brachyrhynchos. American Crow.—The tiny north-western race of the American crow was second in interest only to its big relative, the raven, and like that species was very tame in the vicinity of the village, but somewhat wilder in the outlying districts.

It, too, was important as a scavenger and numbers could often be seen forming an "outer circle" about a carcass which was being devoured by ravens and glaucous-winged gulls. A crow would frequently make a sortie through the "inner circle" of the bigger birds, snatch a morsel and if adroit and lucky enough to escape a blow from the savage beaks, fly off to perch on a piece of driftwood where it would be attacked and robbed of most of its hard-earned food by its own kind. Refuse which we purposely threw out of our tents was almost instantly removed by these trim and alert little corvines.

We noticed that in some respects this small race of crow resembled in appearance the raven rather than the large crow of the east. This was particularly true of the way in which the feathers of the forehead and throat were raised, in curiosity or indecision.

9 June 11, Situk river.

Penthestes atricapillus. Black-capped Chickadee.—The black-capped chicadee was not common and was found by us only on the north side of Yakutat bay where it replaced the common chestnut-backed chickadee. A male was taken near Black glacier and others were observed on the timbered portions of the terminal moraine of the Malaspina and Guyot glaciers.

July 6, Black glacier.

Penthestes rufescens. Chestnut-backed Chickadee.—A very common species in the evergreen woods east of Yakutat and north of Situk lake.

A nest which was made almost entirely of fine mosses was found on June 30, in a hole 20 feet up in a giant Sitka spruce. It contained four juveniles which were collected with the nest.

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♀ May 19, Lost river.
♂ June 5, Situk river.
Juv. ♀ June 30, Situk river.
Juv. ♂ July 2, Situk river.
Juv. ♀ July 2, Situk river.
Juv. ♀ July 2, Situk river.
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Cinclus mexicanus. DIPPER.—One singing bird was seen at the mouth of a small mountain stream at Chichagof harbour in early June.

Nannus hiemalis. Winter Wren.—This species was not common and was characteristically elusive and difficult to collect during the breeding season when it frequented the deepest and densest of the spruce-hemlock-birch forests.

♂ May 20, Yakutat.

Turdus migratorius. American Robin.—A very common species at our Situk river camp, at Yakutat and on the Malaspina. Breeding records are afforded by a nest with four eggs found at Situk river on June 9 and a spotted juvenile taken at Black glacier on July 12.

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♂ May 20, Yakutat. Juv. ♀ July 12, Black glacier.
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Ixoreus naevius. Varied Thrush.—This species was common in the spruce-hemlock forests of the Situk river region and about Yakutat. Two birds in juvenile plumage were collected from the edge of a nest on June 26 at the Situk river. The nest was located about 4 feet up in a Sitka spruce in a spruce-hemlock-birch woods.

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♂ May 21, Yakutat. Juv. ♀ June 26, Situk river. 
♂ June 9, Situk river. Juv. ♂ June 26, Situk river.
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Hylocichla guttata. HERMIT THRUSH.—The hermit thrush was a common bird in almost every part of the region. Nests with eggs were found at Situk river, on Khantaak island and juveniles were taken at Yakutat and near Black glacier, providing breeding records for four localities.

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Juv. ♀ June 30, Situk river.

Juv. ♂ July 23, Khantaak island.

Juv. ♂ July 23, Yakutat.

Juv. ♂ July 12, Black glacier.
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Hylocichla minima. Gray-cheeked Thrush.—The gray-cheeked thrush was not uncommon in the mixed woods on the terminal moraine of the Malaspina glacier. Anxious parent birds, carrying food were observed on July 7 near Black glacier.

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♂ July 7, Black glacier.
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Regulus satrapa. GOLDEN-CROWNED KINGLET.—The less common of the two kinglets at Yakutat but found sparingly throughout the summer.

Of June 5, Situk river.

Corthylio calendula. Ruby-crowned Kinglet.—This was probably the commonest bird of the evergreen forests of the Yakutat bay district. Its loud, lilting song was to be heard constantly in the woods about the Situk river throughout June.

June 2, Yakutat.

Anthus spinoletta. American Pipit.—Found commonly only on Osier island in Disenchantment bay, where numbers were seen in the few bare grassy spots which were free of snow in late May. These were believed to be resident birds of the district and a few small flocks, apparently of adult and immature birds, were observed migrating southward on the south-east shore of Yakutat bay in late August.

Q May 25, Osier island.

Vermivora celata. Orange-crowned Warbler.—This was a common nesting species about Yakutat, the Lost river and on the northwest shore of Yakutat bay. A nest and four eggs was taken with the female from a mossy bank at the edge of a spruce-hemlock forest. The nest was constructed entirely of grasses and plant stalks. Juveniles of this species became conspicuous about July 1. A juvenile collected on July 12 is already changing into the yellower first winter plumage.

♂ May 19, Lost river.
♀ June 2, Lost river.
Juv. ♂ July 7, Black glacier.
Juv. ♂ July 12, Black glacier.
Juv. ♀ July 3, Yakutat.

Dendroica aestiva. Yellow Warbler.—The yellow warbler was not common but was noted in the younger, second-growth woods and willow thickets at the Situk river, at Chichagof harbour and near Yakutat.

9 June 2, Yakutat.

Wilsonia pusilla. Black-capped Warbler.—A very common species, breeding in numbers in the small stands of willow and birch on the Situk flats. A nest was found in the ground in such a locality on June 27. It contained six young birds which were just able to fly and left the nest on its discovery. Four of these juveniles were taken and the nest was subsequently collected. The nest was made of moss and fine grasses.

♂ May 16, Khantaak island. 2 Juv. ♀♀ June 28, Situk river. ♂ June 25, Situk river. 2 Juv. ♂ ♂ June 28, Situk river. **Pinicola enucleator.** Pine Grosbeak.—Fairly common throughout the whole Yakutat bay district, apparently a nesting bird of the region. A male taken on June 8 was in the ochraceous-orange and grey plumage of immaturity yet was apparently mated to a female bird and was in breeding condition.

♀ May 21, Lost river.
 ♂ June 21, Yakutat.
 ♂ July 7, Black glacier.

Acanthis linaria. Redpolled Linnet.—Noted only in the Disenchantment bay region where a few birds were noted in late May and again in July. The only specimen taken was a "highly plumaged" male. The species frequented the gnarled, dwarfed willows of Osier island and cape Enchantment.

♂ May 26, Cape Enchantment.

Spinus pinus. Pine Siskin.—The pine siskin was noted only in the immediate vicinity of Yakutat village where it was fairly common and breeding. Definite evidence of its nesting was secured on July 22, when a juvenile was collected. A female taken on June 18, showed ruptured follicles in the ovaries and possessed a naked brooding patch, yet was associating with a large flock. It is possible that this flock was composed entirely of breeding birds and was coming daily to a favourite feeding ground. This habit has been described for the Bohemian waxwing by Swarth (1922).

♀ June 18, Yakutat.♀ June 19, Yakutat.♀ June 19, Yakutat.

Loxia leucoptera. White-winged Crossbill.—A lone, adult male white-winged crossbill, seen and collected on June 28 at the Situk river, proved to be our only observation of this species. It was feeding on the seeds of Sitka spruce cones.

June 28, Situk river.

Passerculus sandwichensis. Savannah Sparrow.—Next to Lincoln's sparrow this was the commonest species of the plains at the mouth of the Situk river; elsewhere it outnumbered that species. Four nests with eggs were found during June and a number of juvenile specimens were collected.

♂ May 14, Yakutat.♂ June 20, Situk river.♂ May 20, Yakutat.Juv. ♂ July 2, Yakutat.♀ May 20, Yakutat.Juv. ♂ July 5, Black glacier.♂ June 8, Situk river.Juv. ♀ July 6, Black glacier.

Juncus oreganus. Oregon Junco.—Though not common this junco was fairly well distributed throughout the timbered parts of the Yakutat bay district where it inhabited the slashes and clearings in the forest. Adults were exceptionally wild and could be approached and collected only with great difficulty. Three juvenile birds taken on July 28 at Yakutat provide a breeding record.

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♂ June 2, Lost river. 2 Juv. ♀ ♀ July 28, Yakutat. Juv. ♂ July 28, Yakutat.
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Zonotrichia coronota. Golden-Crowned Sparrow.—A common nesting bird on the Malaspina and in the Disenchantment bay area. Migrants were noted passing through Yakutat until May 20 after which time the species was not observed in that locality.

This bird was the most constant singer we encountered during our visit to the Malaspina. The songs of three simple notes could be heard day and night.

A nest was located at the base of a willow near Black glacier on July 6. It contained two young birds.

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♀ May 16, Khantaak island.
♀ July 7, Black glacier.
₂ July 6, Black glacier.
♂ July 14, Malaspina glacier.
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Passerella iliaca. Fox Sparrow.—The fox sparrow was one of the commonest nesting species noted throughout the area surveyed. A nest with two eggs was collected from the lower branches of a Sitka spruce on June 8 at the Situk river. The nest was constructed of fine twigs and plant stalks and lined with fine clean dead grasses.

Five juveniles, in various stages of plumage progression, were collected. The soft parts of one taken June 10 at the Situk river (probably Passerella i. annectens, the Yakutat fox sparrow) are as follows:

Iris,—vandyke brown; bill,—flesh coloured, the ridge of the upper mandible, greyish; gape and interior of mouth,—bright cadmium yellow; tarsi and toes,—pinkish flesh-colour, greyish at the joints.

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♂ May 25, Osier island.Juv. ♀ June 30, Situk river.♀ June 8, Situk river.Juv. ♂ June 30, Situk river.♂ June 9, Situk river.Juv. ♂ July 14, Malaspina glacier.Juv. ♂ June 10, Situk river.Juv. ♀ July 28, Yakutat.
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Melospiza lincolni. Lincoln's Sparrow.—This was probably the commonest bird at our Situk river camp. In this region Lincoln's sparrow was a very confiding and unsuspecting bird. One pair actually made a nest at the edge of a hole that we had dug, in which to throw our refuse. This hole was about ten feet to one side of our tent. When a tin can was tossed into the hole, the incubating female merely hopped

off the nest, perched in a small willow about two feet away and inquisitively examined the newly arrived can. Usually she was back on her eggs in less than a minute.

Four nests, each containing a set of five eggs, were collected between June 7 and June 12. These were all situated on the ground in mossy or grassy muskeg clearings in the spruce woods of the Situk district. Juveniles became conspicuous about June 25 and from that date until July 15 a low pitched "diz" presumably a call for food by the young, was a characteristic sound on the flats and muskegs.

2 ♀ ♀ June 2, Lost river. ♂ June 18, Yakutat. ♂ June 2, Lost river. Juv. ♂ June 25, Situk river. ♀ June 12, Situk river. Juv. ♂ June 29, Situk river.

Melospiza melodia. Song Sparrow.—This species was not uncommon in the Yakutat bay district. The song sparrow of this region is a large dark bird to be confused in the field only with the fox sparrow. The song, however, was to the writer identical to the song of the smaller song sparrows of the east.

A juvenile male was taken from a nest situated five inches from the ground in a small willow at the Situk river on June 29. Two flying juveniles were collected on July 23 on Khantaak island. The juvenile plumage of this geographic race, the Yakutat song sparrow, *Melospiza m. caurina*, apparently has not been described. The bird taken at the Situk river is similar in plumage to the adult but with all the markings more suffused especially those about the face, which are very obscure. The greys are warmer and darker and the markings of the head, back and throat and the breast streaking are sooty black without the seal brown edges as in the adult. The underparts are suffused with buff. The iris is dark brown; the upper mandible dark grey with a lighter cutting edge; lower mandible very pale, tending to bluish at tip and flesh at the base; the gape and buccal cavity, pale lemon yellow; foot, purplish-pink with pale yellow-green soles.

♀ May 15, Yakutat.
♂ May 20, Yakutat.
Juv. ♂ June 29, Situk river.
♂ July 23, Khantaak island.

♂ June 2, Yakutat.

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