

SOME ALASKAN NOTES

BY IRA N. GABRIELSON

LIKE other ornithologists, I had long dreamed of visiting Alaska to see its famous bird colonies and fascinating wildlife. For one reason or another the trip was postponed until the summer of 1940 and when it did materialize, it came not as an ornithologist might plan but as a business trip, the primary purpose of which was to get acquainted with the personnel and problems of the newly formed Fish and Wildlife Service. A rather strenuous traveling schedule made it impossible to work any area thoroughly for birds. Effort was made to keep as detailed notes as possible in order to reveal something of the relative local abundance of the more widely-ranging species, and it is believed that these notes will be of value in this respect as well as in furnishing the definite locality records that are much needed.

The notes on small land birds are rather sketchy as little time could be given to locating and identifying small brush- and tree-inhabiting forms. Sea birds were often passed at a distance too great to permit identification, and the records of such forms as the Marbled Murrelet, Cassin's Auklet, California Murre, Pigeon Guillemot, and Tufted Puffin no doubt fall far short of giving an accurate idea of the relative abundance of these species along our route in southeastern Alaska. It was my practice to list only the species and numbers of individuals that could be accurately identified even though there might be additional thousands of birds within sight at the time. As a consequence my notes are full of references to auklets, murrelets, gulls, cormorants, and the like, not further identified.

Altogether the trip was one of the richest ornithological experiences in my twenty-eight years of work for the Biological Survey—now the Fish and Wildlife Service. The great bird colonies so far exceeded expectations as to leave me standing in somewhat dazed wonder at the spectacle they presented.

It is safe to say that the islands of the coast of Alaska, particularly from the Kenai Peninsula westward, together with those belonging to the United States in Bering Sea, undoubtedly have the most spectacular series of bird colonies to be found in North America. They far surpass any of the better known gull, tern, gannet, pelican, and heron colonies that are more accessible to centers of human population.

During the summer, 191 species and subspecies were noted. No general collecting was done but a definite effort was made: (1) to collect an adequate number of specimens of such variable species as the Song Sparrow, Fox Sparrow, Savannah Sparrow, and Winter Wren

to give a clear idea of their distribution, and (2) so far as limited collecting could achieve it, to fill the gaps in our knowledge of the forms inhabiting certain Aleutian and other islands. In doing this I was greatly assisted by several members of the party who frequently collected the desired material while I was busy with other duties. Frank Dufresne and H. Douglas Gray were particularly helpful, and they as well as others aided in the task of caring for the specimens—one that was sometimes rather trying after a full day's work in other fields.

LOG OF THE TRIP

Travel was by commercial steamer from Seattle to Petersburg, Alaska. At that point we boarded the Biological Survey boat, the 'Brown Bear,' on June 4. This sturdy 114-foot craft remained our home from that time until we left it in Bristol Bay on July 19. The following brief log will give an idea of the opportunities for observing birds.

June 3.—Steamer 'Alaska.' Approached Ketchikan in the early morning. Ashore here and at Wrangell for short stops, and boarded the 'Brown Bear' at Petersburg at 12:30 A. M. on June 4.

June 4.—Spent morning at Petersburg and on the fur farm some six miles away. Left Petersburg after lunch and stopped on Portage Bay, Kupreanof Island, for a couple of hours tramp through the forest in the evening. Arrived at Juneau during the night.

June 5 and 6.—Juneau. Visited Eagle River area and Mendenhall Glacier.

June 7.—Awoke at the entrance to Glacier Bay. Spent much of the morning there, going ashore at two places for a short time. Bay full of scattered birds. In the afternoon passed Cape Spencer and around northwest along Fairweather Range but some five miles off shore. Many birds.

June 8.—Approaching Yakutat in the early morning, had a wonderful view of the mighty St. Elias range and Malaspina glacier. Spent the day ashore at Yakutat. Went by Yakutat and Southern Railway nine miles to Situk river where a salmon weir is located. Frank Dufresne and I walked most of the way back in the late afternoon. Railway passes through some timber and much tundra. Left Yakutat at 11 P. M.

June 9.—Yakutat to Cordova across Gulf of Alaska. Birds few.

June 10.—Arrived in Cordova during night. Spent the day on Copper River flats with Clarence Rhode (Alaska game agent) in a speed boat visiting the fishing area and observing birds. Left Cordova about 11:30 P. M.

June 11.—Through Prince William Sound, arriving at Seward just after lunch. By auto to Coopers Landing on Kenai River where we spent the night. Had an opportunity for a short hike in evening.

June 12.—Climbed a mountain with Grenold Collins (Alaska game agent) to look over the country and returned to the 'Brown Bear' at Seward in the evening. Left Seward at 11 P. M.

June 13.—En route to Kodiak. Stopped on East Amatuli Island in the Barren Island group for a couple of hours and then proceeded to Kodiak, arriving in the

night. Many fulmars and petrels about in the evening as we approached the north end of Afognak Island.

June 14.—Ashore at Kodiak and at the new Naval Base.

June 15.—Visited Whale Island and Afognak Island. On the latter island hiked up Litnik River to see the site and buildings of abandoned fish hatchery.

June 16.—Left Kodiak at 7:30 A. M. Visited Whale Island and a small unnamed island, and arrived at Port O'Brien on the northwest side of Kodiak at 8 P. M.

June 17.—Left Port O'Brien at 5 A. M. Visited Karluk and took a combination motor boat and walking trip to a weir on Karluk River. Reached Larsen's Bay at 5 P. M. and climbed a peak just back of the salmon cannery, hoping to see some of the big Kodiak bears. No luck, although some of the animals had been seen from the cannery a few hours before.

June 18.—Left Larsen's Bay at midnight and arrived at Semidi Islands at 3:40 P. M. Tried to land on Aghiyuk Island, the northernmost big island, but heavy surf prevented. Landed on Choweit Island and spent the remainder of the day there and in circling smaller islands. Traveled in the night to the mainland.

June 19.—Spent morning in Chignik Bay. Short walk ashore after visiting float-cannery. Left at noon. Landed for a short time in the afternoon on Metrofania, a very rugged island just offshore.

June 20.—Arrived at Sand Point in Shumagin group at 5 A. M. in heavy rain and wind. Spent most of day in the canneries there but pulled around to Dolgoi Bay in the later afternoon to meet the Fisheries boat, 'Crane.' Many birds noted on the latter trip.

June 21.—Arrived at King Cove, 7:30 A. M. Spent three hours ashore and then sailed around to Morzhovoi Bay arriving at 2 P. M. Spent the remainder of the day ashore about a lagoon and on Frosty Peak to the eastward, returning to the boat at midnight. Most interesting day of the trip to date.

June 22.—Ashore at False Pass much of the morning; en route to Akutan the balance of the day.

June 23.—Up at 4 A. M. to visit the Tufted Puffin colony on Bereskin Island; also ashore at Akutan for several hours, and arrived at Unalaska at 5:30 P. M. Great masses of Fulmars with some shearwaters in Akutan Pass.

June 24.—Enroute to Bogoslof Island. Spent many hours ashore there.

June 25.—Ashore at Chagulak Island in the Aleutians in the morning and on Amukta Island in the afternoon.

June 26.—Ashore at Atka village in the morning and Kasatochi Island in the late afternoon.

June 27.—Ashore at Tanaga Island in the morning and Ogluga Island in the afternoon.

June 28.—Arrived at Amchitka Island in a heavy blow but managed to get ashore and spent the day with the men on the sea otter patrol. Walked across the island to their overnight cabin and back.

June 29.—Worst blow of the trip prevented landing on Gareloi Island.

June 30.—Landed on the west side of Atka Island and walked across to Atka village while the 'Brown Bear' went around to meet us.

July 1.—Ashore at Carlisle and Kagamil islands.

July 2.—In Unalaska most of the day while the 'Brown Bear' took on oil, water, and supplies. Sailed for the Pribilof Islands at 5 P. M.

July 3.—Ashore at St. George Island from 2 P. M. to 1 A. M. The last fifty miles

coming in, we traveled through increasingly dense concentrations of birds on the water. I believe this island harbors by far the greatest bird population of any visited on the trip.

July 4, 5 and 6.—Ashore, St. Paul Island.

July 7.—Ashore, Walrus Island in morning; en route to St. Matthew Island remainder of the day.

July 8.—Ashore, St. Matthew Island most of the day.

July 9.—Trip to Pinnacle Rock and ashore on St. Matthew Island in the afternoon.

July 10.—En route most of day. Ashore on northwest point of Nunivak Island in later afternoon and evening.

July 11.—Ashore at Eskimo village at Cape Etolin all day.

July 12.—On account of a strong wind we spent the day anchored in the lee of Cape Vancouver on Nelson Island instead of visiting goose nesting islands as we had planned. Did get ashore for a time on Nelson Island.

July 13 and 14.—En route to Bristol Bay.

July 15 to 17.—'Out of circulation' with streptococcic sore throat. In the afternoon of July 17, Dufresne and I drove around over the few miles of road there or near Dillingham.

July 18 to 22.—By boat and plane about Bristol Bay and on salmon spawning surveys of the streams and lakes tributary to it. An excellent opportunity to make bird notes as we often flew low enough to identify birds and alighted frequently. We covered many hundreds of square miles and saw literally thousands of lakes and ponds. Nearly every one had some waterfowl, but from the plane many of the birds could not be identified; hence the notes on the species for this locality will give a totally inadequate picture of the huge number of waterfowl actually present. Assuming that the species identified—the Mallard, Pintail, Green-winged Teal, and Greater Scaup Duck, abundant in that order—made up the bulk of those present, the total number of breeding pairs of these species in this area is enormous.

July 23 and 24.—Up Kvichak River and Iliamna Lake in a speed boat.

July 25.—On Iliamna Lake.

July 26.—Flying over salmon-spawning area in streams and lakes tributary to Iliamna Lake.

July 27.—By speed boat up Iliamna Lake; walked across the portage to Cook Inlet, and boarded Fisheries boat, 'Teal.'

July 28.—Ashore at Chisek and Kalgin islands. Visited Kenai village and anchored at night at the mouth of Kasilof River.

July 29.—Up Kasilof River and Tustamina Lake in a river boat.

July 30 and 31.—In moose country between Tustamina Lake and Kenai River, flying to Anchorage in the afternoon of July 31.

August 1.—In Anchorage and Matanuska.

August 2.—Left Anchorage by rail. Arrived in Mt. McKinley Park at 2:30 P. M. Spent the balance of the day in the park.

August 3.—In Mt. McKinley Park.

August 4.—By rail to Fairbanks.

August 5.—In Fairbanks.

August 6 and 7.—Along Steese Highway between Fairbanks and Circle.

August 8 and 9.—Along Richardson Highway between Fairbanks and Valdez. Boarded the 'Brown Bear.'

August 10.—In Cordova.

August 11 and 12.—Cordova to Sitka, via 'Brown Bear.'

August 13.—Little Port Walter and on into Juneau.

This was the last day of the trip on which it was possible to make observations on birds.

LIST OF SPECIES

COMMON LOON, *Gavia immer immer* (Brünnich).—This large loon was not common. A single individual on a little lake near Kenai Lake (June 11), another on a small lake back of the cabin on Amchitka Island (June 28), and a pair with one young on a lake near the cannery at the mouth of Egegik River (July 21), were all that were seen except for one day on the Kvichak River. Here on the 90-mile trip from Bristol Bay up the river to the foot of Iliamna Lake (July 23) both this species and the Pacific Loon were common. We saw them in pairs at intervals throughout the day. The Pacific Loon was the more abundant, but we noted at least a dozen pairs of the present species. The tundra along the river was dotted with lakes and ponds on which the loons settled after we flushed them from the stream.

YELLOW-BILLED LOON, *Gavia adamsi* (Gray).—A single individual noted just outside of the entrance to Portage Bay, Kupreanof Island (June 4), was the only bird of this species seen although a sharp watch was kept for it. The straw-colored bill was very conspicuous even at a distance.

PACIFIC LOON, *Gavia artica pacifica* (Lawrence).—By far the most abundant loon noted. It was first observed on Glacier Bay (June 7) when a pair in high plumage was watched for a time. In addition to scattered individuals, we saw perhaps thirty pairs or more on the Kvichak River (July 23). One pair was very much in evidence at the Iliamna Lodge, which was our headquarters from July 24 to 26. Always one or both of the birds could be seen fishing in the shallow waters and conducting a busy fish-ferry service to some lake back on the tundra. Another pair behaved precisely the same while we were anchored in the mouth of Kenai River (July 28).

I had always considered that the Common Loons were noisy enough, but these Pacific Loons were much more vocal. Usually they started calling when leaving the water and kept it up for some distance. This was especially noticeable when any one of the two pairs engaged in the fish-ferry business succeeded in making a catch. As they left on the inland trip, a harsh triumphant cry announced the departure.

RED-THROATED LOON, *Gavia stellata* (Pontoppidan).—We saw this species in only three localities, all in southeastern Alaska. Two individuals were seen in Portage Bay (June 4), six on a small bay in

Lynn Canal about twelve miles out of Juneau (June 5), and a single bird in high spring plumage on Glacier Bay (June 7).

HOLBOELL'S GREBE, *Colymbus grisegena holboelli* (Reinhardt).—A single male in high plumage on Glacier Bay (June 7) provided the only record for the summer.

HORNED GREBE, *Colymbus auritus* Linnaeus.—Two birds in Mt. McKinley National Park (August 3) and a number of individuals scattered on small lakes between Paxton and Valdez along the Richardson Highway were the only Horned Grebes seen. On one of the lakes mentioned, at least a dozen of these beautiful little grebes fed about the water plants totally unaware that we were watching them through the screen of low spruce and willow that bordered the lake.

[PIED-BILLED GREBE, *Podilymbus podiceps podiceps* (Linnaeus).—On August 3, I saw three birds on a lake near Fairbanks which I was certain were of this species. I was aware of the lack of Alaskan records and watched these individuals for a long time, trying to make something else of them. They certainly were not Horned Grebes, and if seen at a distance under the same circumstances farther south would have been recorded as Pied-bills. I am giving the record for what it may be worth.]

BLACK-FOOTED ALBATROSS, *Diomedea nigripes* Audubon.—We first sighted these master mariners while crossing the Gulf of Alaska (June 9). They accompanied us all the way with as many as fifteen in sight at once. One never tires of watching their evolutions and the ease with which they seem to take advantage of even the minor air disturbances accompanying the rolling of small waves. I spent hours on deck trying to coax them close enough for good photographs.

As we lay off Bogoslof Island (June 24) waiting for the fog to lift, four of these birds settled near the boat and swam about it unconcernedly as if they were domestic ducks. We did not see any of them during our Aleutian trip although Gray says they are of frequent occurrence about the islands. On the return trip across the Gulf of Alaska (August 11 and 12), five Black-footed Albatrosses were our constant companions, following us almost to Sitka. A few others were noted on August 11 among a great swarm of Pacific Fulmars clustered about a very large and very dead whale.

SHORT-TAILED ALBATROSS, *Diomedea albatrus* Pallas.—A single individual followed the 'Brown Bear' for about half an hour as we were crossing the Gulf of Alaska (June 9).

SLENDER-BILLED SHEARWATER, *Puffinus tenuirostris* (Temminck).—We saw a few shearwaters from time to time but did not encounter

any of the great swarms that sometimes frequent the Aleutians. We saw them in the Gulf of Alaska (June 9), in Akutan Pass (June 23), and at Atka (June 27). The 'Brown Bear' returned to the Aleutian Island patrol after leaving us at Bristol Bay and ran into innumerable shearwaters in Unimak Pass on July 22. Gray collected four which proved to belong to this form.

PACIFIC FULMAR, *Fulmarus glacialis rogersi* Cassin.—We sighted the first Pacific Fulmars as we crossed the Gulf of Alaska (June 9). There were two white birds among them. Between the Barren Islands and Afognak we passed through a moderately large concentration of these birds, some on the water and others flying.

The Semidi Islands Refuge, which embraces two fairly large islands and numerous smaller ones, proved to be the home of an enormous colony of this species. I am unable to say whether this colony or the one on St. Matthew Island is the larger, but I am sure that both exceeded any I saw in the Aleutians. Gray, who has visited colonies in the latter refuge which I did not see, was also inclined to believe that the Semidi Islands colony is larger than any of those on the Aleutians.

In the Semidis, there were two huge colonies on Chowiet, one of the larger islands, and considerable colonies on Ageak and Kateekuk among the smaller islets. We did not have time to do the sounding necessary for safe approach to the other islands, but our glasses revealed swarms of fulmars above the cliffs on Anowik, Kikiktagik, and Saklik, and on the southwestern corner of Aghiyuk, the northernmost of the two larger islands.

These swarms were acting precisely as did those we were then viewing at close range and undoubtedly were from other colonies. By careful maneuvering we were able to see into some of the nests on the high cliffs on the northwestern corner of Chowiet. They contained eggs but no young. In Akutan Pass (June 23) we passed through another vast flock of this species, mixed with shearwaters and other birds, but did not find any colony in the vicinity, nor did Gray know of any.

We visited the fulmar rookery on Chagulak Island on June 25. This is a very steep island, being nothing more than a sheer mountain top projecting above the water. By working carefully up the slopes, I succeeded in getting within a few feet of many sitting birds—each with a single white egg. I soon discovered that a few feet was close enough. Closer approach resulted in the ejection from the mouth of the bird of a thin stream of an oily and rather evil-smelling liquid which traveled with considerable force a distance of eighteen inches or more.

Along the north side of Atka Island (June 26) we passed through another great swarm of these birds—sure indication at this season that we were near another colony. Another concentration at the entrance to Tanaga Bay (June 27) probably came from some of the smaller islands nearby.

As we approached the southern end of St. Matthew Island (June 8), we met increasing numbers of these birds until the water and air seemed filled with them. We saw that the perpendicular cliffs about the bases of the three peaks which form that end of the island were literally covered with birds, a great proportion of which proved to be fulmars. In numbers this colony rivals, if it does not exceed, the combined aggregations on the Semidis. We took a small boat and cruised for a mile or more along the estimated four to five miles of fulmar colony. The cliffs were festooned with birds, with every available niche and ledge crowded. For the two days we were about this island we were never out of sight of swarms of fulmars.

It was interesting to note the distribution of the gray and white phases of these birds. In the concentration between the Barren Islands and Afognak there were very few white birds. The same was true in the Semidis. On Chagulak Island and along the Aleutians, gray birds predominated but white ones were more numerous than in the more southern localities. On one ledge I closely observed seven sitting birds, three of which were white, and while I watched this and nearby groups the mates who came to join them were of the same colors as the sitting birds. I did not see a white bird feed a gray one or vice versa.

On St. Matthew Island, so far as I could see, all of the birds were white. I looked for two days for a gray bird and failed to find one, although there could have been a sprinkling of them without my being lucky enough to pick them out among the swarming thousands about the faces of the cliffs. These observations prove nothing but they did occasion some speculation as to the distinctness of the two forms of the species.

FORKED-TAILED PETREL, *Oceanodroma furcata* (Gmelin).—In view of the known colonies along the Alaska coast, we did not see as many of these birds as might have been expected. Numbers of them flew about the boat on June 13 between the Barren Islands and Afognak Island. Among them was one dark-bodied bird that came fairly close to the boat several times but which could not be certainly identified. It was probably Leach's Petrel (*O. l. leucorhoa*). On August 11 a number of Forked-tailed Petrels were noted in a great swarm of birds about a dead whale in the Gulf of Alaska.

The party visited only one colony, that on Amukta Island in the Aleutians. Here an old and well-weathered lava flow, overgrown with moss, lichens, and other low vegetation, contained a good-sized warren. We dug out one bird that was sitting on its single white egg, heard many others in the rocky crevices, and detected the characteristic musky odor of these birds at many of the openings.

WHITE-CRESTED CORMORANT, *Phalacrocorax auritus cincinatus* (Brandt).—Many cormorants were sighted at a distance but not specifically identified. Cormorants were never present in such enormous numbers as were some of the other sea birds, but we seldom approached small rocky pinnacles or the sheer cliffs of the larger islands without sighting a few of them. The White-crested Cormorant was not abundant anywhere, being seen in largest numbers about Sitka and Little Port Walter, August 12 and 13, respectively, when several were observed. On other occasions this species was recognized only as single birds or groups of two to four that passed near enough the boat to be certainly identified. They were so noted from Cordova west along the Alaska peninsula and in Bristol Bay.

Much to my surprise, a small cormorant colony of perhaps a dozen pairs, established in a shallow cave on Carlisle Island in the Aleutian chain, was about equally populated by the White-crested and the Pelagic cormorants. Both species had well-grown young in the nests.

PELAGIC CORMORANT, *Phalacrocorax pelagicus pelagicus* Pallas.—This was by far the most widely distributed cormorant observed during the trip. From June 7, when in Glacier Bay we noticed a minor iceberg decorated with a black necklace of these small, iridescent-plumaged cormorants, to St. Matthew Island's great rookeries where it was the only cormorant, we saw these birds about every rocky island and point.

RED-FACED CORMORANT, *Phalacrocorax urile* (Gmelin).—This small northern cormorant was most common on Bogoslof Island and the Pribilofs, but in neither place did its numbers approach those of the murrelets with which it was associated. The rocky shelves of the Bogoslof Island peaks and cliffs sheltered a probable total of several hundred nesting pairs which, on June 24, had no young in the nests into which we could see.

This species was much more numerous in the Pribilof Islands. We visited two small nesting colonies on St. Paul Island on July 6 but could not inspect them closely from the base of the cliffs. On Walrus Island I had an opportunity to see numerous nests, only one of which contained eggs. The others held from two to five nestlings each,

varying from the leathery-looking, newly-hatched young to those half grown or more.

NORTHWESTERN COAST HERON, *Ardea herodias fannini* Chapman.—This, the only member of the heron family seen on the trip, was observed on three different days in four localities, as follows: June 4, two birds at Petersburg and one at Portage Bay; June 5, one at Juneau; and August 13, one at Little Port Walter on our return from the west. Somehow this last observation of this long-legged fisherman brought a sudden realization that we were returning to more familiar things and that our Alaskan trip of high ornithological adventure was nearly ended.

WHISTLING SWAN, *Cygnus columbianus* (Ord).—Although I was told that a few swans were spending the summer on the Copper River Flats near Cordova, we did not find the birds on the only day that we could spend in this interesting area.

About Bristol Bay this was a common nesting species in the little lakes that dotted the tundra. The first we saw were noted from a small plane while crossing over the tundra between Naknek Lake and Bristol Bay on July 19. On July 21, while flying over the vast extent of tundra that lies to the south of Bristol Bay, a great many pairs of swans were noted. On numerous occasions we counted from one to three small cygnets with the adults. Later we flew over the country north of Iliamna Lake, particularly Lake Clark and its tributaries. While flying along the largest of these, the Chulitna, numerous pairs of swans with from one to four young each were noted in the lakes well toward the headwaters of that stream.

WHITE-CHEEKED GOOSE, *Branta canadensis occidentalis* (Baird).—This big, dark-colored goose was first noted at Petersburg on June 4 when a mated pair and five other birds were seen. The next day, at Juneau, flocks of seven and twenty-six were noted near the mouth of Eagle River. Several hundred geese of the *canadensis* group were seen during the day spent on Copper River Flats (June 10). They included several mated pairs and numerous small flocks. Most of these birds were obviously one of the smaller and paler subspecies (probably *B. c. leucopareia*) although among them were several large and dark birds that seemed to be the White-cheeked Goose. One nest containing eight eggs, belonging to one of these smaller pairs was found by flushing the sitting bird.

WHITE-FRONTED GOOSE, *Anser albifrons albifrons* (Scopoli).—Five adult White-fronted Geese were noted on the Copper River Flats on June 10. The species was not recorded again until on July 21 when

several pairs, with what seemed to be well-grown young, were observed from the air near Becharof Lake. I could not be certain of the identity of these geese but local men assured me that the White-fronted Goose was the common nesting species of the tundra about Bristol Bay. I saw three pairs on the Kvichak River on July 23 and estimated 500 in one large and several smaller flocks along the Chulitna River on July 26. Among the latter were several groups of from four to six birds which we approached closely since they were unable to fly.

COMMON MALLARD, *Anas platyrhynchos platyrhynchos* Linnaeus.—The Mallard was the most common and widely distributed "puddle" duck. In the first marshes visited, those of the Copper River Flats (June 10) we saw many scattered pairs; one female with eleven young about ten days old was followed for some distance along one of the salt-water channels of this area. A single drake was noted flying along the shore of East Amatuli Island (Barren Islands) on June 13—certainly an odd place for a Mallard.

Many dozens of broods of ducks seen from planes and boats about Bristol Bay could not be identified. However, when we were flying low in good light conditions or when we landed on some of the small lakes, broods of Mallards were recognized more often than any other species.

GADWALL, *Chaulelasmus streperus* (Linnaeus).—Gadwalls were observed only on June 10 on the Copper River Flats. I watched two at close range for a time and saw several other individuals on the wing. I was surprised to find them, but was told that Gadwalls are more or less regular visitors to this area.

BALDPATE, *Mareca americana* (Gmelin).—A flock of fifteen birds was noted on the Copper River Flats on June 10. This was the only definite record although in the Bristol Bay area from the planes I several times saw birds that I was reasonably sure were Baldpates.

AMERICAN PINTAIL, *Dafila acuta tzitzihoa* (Vieillot).—This species ranked second to the Mallard in abundance among shoal-water ducks. Pintails were common on the Copper River Flats (June 10), being outnumbered in this area only by the Shoveller and the Mallard. None was seen following this until a single female was noted on the Naknek River (July 19). During the trip up the Kvichak River (July 23) numerous individuals were seen in marshy spots along the banks, some of them females, doubtless with families somewhere in the grass. One bird in particular circled our boat several times at close range, obviously to distract our attention from a bit of marsh near which we happened to stop for a few minutes.

On one little lake in the park (August 3) I noted a female scaup leading a brood of nine young and, bringing up the rear, a Pintail hen that was as constant in her attentions as the real mother. There was a single duckling about two or three days old swimming about the pond peeping constantly without receiving any attention from any adult. When captured it proved to be a downy Pintail. This pond was watched for some time, and except for the hen Pintail and the scaups, it sheltered only a pair of Old-squaws with two young. It appeared that the Pintail had left her own baby to shift for itself while she helped her scaup neighbor care for a much larger family.

EUROPEAN TEAL, *Nettion crecca* (Linnaeus).—This Old-World relative of our Green-winged Teal was first seen on Amukta Island (June 25), when a pair was flushed from a tiny pond on the beach just above the high-tide mark. In action, flight, and general appearance they were much like our species. Two males were watched at short range for some time on Tanaga Island (June 27). The lack of a white crescent in front of the wing is very evident and provides a good field-identification mark when the birds are at rest. On the afternoon of the same day, on Ogliuga Island, I saw ten of these little ducks and found one hen with a single newly-hatched young following her. These birds were in pairs or trios in the sheltered salt-water bays and lagoons or in the tide pools among the rocks. About a dozen were noted in different ponds on Amchitka Island (June 28) in the course of a walk across the island and back. A single bird on a small tidewater pool on Atka Island (June 30) was the last bird of the species noted on the trip.

GREEN-WINGED TEAL, *Nettion carolinense* (Gmelin).—While this was one of the more numerous river ducks noted during the summer, it was seen only at Cordova (June 10) on the Copper River Flats, where three males were observed, until July 23, after our return to the Alaskan mainland. Here, along the Kvichak River, it was common. Included among those seen there were a number of females, obviously attempting to toll us away from young hidden in marshy spots along the stream. On July 29, the Green-winged Teal was the most abundant duck along the Kasilof River. Many of the groups apparently consisted of a female and her newly-fledged young.

SHOVELLER, *Spatula clypeata* (Linnaeus).—The Shovellers were the most conspicuous, if not the most abundant, ducks on the Copper River Flats (June 10). They were flushed from numerous points or from little pools along the narrow channel as our speedboat roared past. Perhaps it was because they allowed a closer approach that

they were so much more noticeable than other species. A male and female seen on an island in the big lagoon at the north end of Morzhovoi Bay were the only other Shovellers noted during the summer.

RING-NECKED DUCK, *Nyroca collaris* (Donovan).—A single high-plumaged male Ring-neck was watched at close range on a little lake on the summit of the road from Seward to Hope on the Kenai Peninsula on June 11. I was surprised to see a duck of this species so far from its established breeding range and therefore made certain of its identity before recording it in my notes.

GREATER SCAUP DUCK, *Nyroca marila* (Linnaeus).—I am listing here all the scaups noted on the trip although there may have been a few of the Lesser Scaup Duck intermingled. Scaups were common breeding birds about Bristol Bay and in Mt. McKinley Park.

There were several fair-sized flocks on Copper River Flats on June 10. The species was not positively identified again until July 23 on the Kvichak River, although some of the numerous unidentified ducks, especially on Amchitka Island, were thought to be scaups. Poor visibility made it impossible to be certain of identifications at all times.

During the ninety-mile trip up the Kvichak four broods of one, three, three, and four scaups, from newly-hatched to half-grown, were noted. In addition, many adults, unaccompanied by young, were seen at intervals along the stream. Several broods were noted along the Chulitna River (July 26) and it is a fair assumption that a good proportion of the more than fifty duck families seen from the plane that morning, but not identified, were of this species. In McKinley National Park, females with broods of ten and seven each were noted on August 2, and three broods, of ten, nine, and one, respectively, were observed in the same area on August 3.

AMERICAN GOLDEN-EYE, *Glaucionetta clangula americana* (Bonaparte).—A single bird industriously feeding about the piling of the dock at Juneau (June 5) directly behind our boat was the only one of this species definitely recorded.

BARROW'S GOLDEN-EYE, *Glaucionetta islandica* (Gmelin).—Frank Dufresne took two downy ducklings of this species from two Indian boys at Yakutat on June 8. The boys said they found them but had not seen their mother. Two birds were watched for a time in a little pond along the Richardson Highway near Paxton on August 8.

BUFFLE-HEAD, *Charitonetta albeola* (Linnaeus).—A female in Glacier Bay (June 7) was the only Buffle-head recorded during the summer.

OLD-SQUAW, *Clangula hyemalis* (Linnaeus).—Old-squaws were not noted until July 8 when we reached St. Matthew Island. They were

fairly common about the larger lakes and lagoons of the tundra. We hunted for nests but without success in the short time available. These birds were equally common on Nunivak Island on July 11 but were not again seen until August 3 when four adults and one female with two downy young were found on two of the numerous small lakes that adjoined the McKinley Park road.

WESTERN HARLEQUIN DUCK, *Histrionicus histrionicus pacificus* Brooks.—This beautifully marked duck was widely distributed along the rocky coast and islands but was never abundant. Twice both sexes were seen flying up and down swift mountain streams, the first time on Kenai River and Russian River (June 11), and the second, near the falls of Kittiwake Creek between Brooks and Naknek lakes (July 19).

During the remainder of the summer the Harlequin was frequently seen on coastal waters in groups of two or three to upwards of a hundred. In June, flocks of both sexes were frequently noted; the largest flock was one of more than a hundred birds on Kodiak Island (July 16). Through July bands of ten to seventy-five of the brightly marked males were observed, but the only flock of females seen was one of fifteen birds at St. Matthew Island on July 9.

STELLER'S EIDER, *Polysticta stelleri* (Pallas).—Two adult males of this beautiful little eider were noted on Morzhovoi Bay on June 21, and one was collected. This bird was very thin and definitely indicated as non-breeding by the condition of the sex organs.

PACIFIC EIDER, *Somateria v-nigra* Gray.—Like the Harlequins, the Pacific Eiders were not often so abundant as to stand out in the great hordes of birds present in Alaskan waters, but they were widely distributed and were seen at most stops from the time we observed a dozen at the new naval base on Kodiak (June 14) until we reached Bristol Bay on July 14. One nest with five eggs was found on the Semidi Islands (June 18) and some forty adults were present in the little bay where we landed on Choweit Island. A second nest with five eggs was discovered on Amukta Island (June 25). On a single little rocky point on Tanaga Island I found eight eider nests, six with five eggs each, one with six eggs, and one with one egg in the nest and two eggs that were stone cold in the grass outside. On Nunivak Island (July 10) a female with five young was noted.

WHITE-WINGED SCOTER, *Melanitta deglandi* (Bonaparte).—This scoter was not common. About a dozen were noted at Petersburg (June 4) and the species was one of the most numerous of those observed on Glacier Bay (June 7). A few birds were in the harbor at Yakutat

(June 8) and about a hundred were seen in the straits between Kodiak and Afognak Island (June 16). A small flock was seen on the north-west corner of Nelson Island (July 12).

SURF SCOTER, *Melanitta perspicillata* (Linnaeus).—The Surf Scoter was less common than the preceding species. Two were seen at Petersburg (June 4), two males were found at Portage Bay the same day, and four old males were flushed by our boat on the Kvichak River on July 23. Charles E. Jackson found a downy young of this species dead on the shore of Lynx Lake (north of Bristol Bay) and brought it to me on July 17.

AMERICAN SCOTER, *Oidemia americana* Swainson.—The American Scoter was found breeding on a number of ponds about Bristol Bay and in Mt. McKinley National Park. The first family positively identified comprised a female accompanied by three newly-hatched young on a little lake at Egigik (July 19). Three females with broods of one, three, and four, respectively, were seen along the Kvichak (July 23), and three broods of one, three, and seven young on small lakes in Mt. McKinley Park (August 3). In addition, adults, but no young, were seen along the Naknek River on July 19 and they were common along the Kvichak River throughout the trip.

A female fed about the dock at Iliamna Lodge daily from July 24 to 26 during our stay there.

AMERICAN MERGANSER, *Mergus merganser americanus* Cassin.—Many female mergansers were seen that could not be satisfactorily identified, some of them with young. Those on the Alaska peninsula and in the vicinity of Bristol Bay that were collected or could be otherwise named with certainty proved to belong to the next species. Three birds seen from the train on the Susitna River near Curry on August 2 were American Mergansers, and possibly some of those observed on the Kenai River on June 11 were of this species although the only males noted on the latter stream were Red-breasted Mergansers.

RED-BREASTED MERGANSER, *Mergus serrator* Linnaeus.—This fish-duck was first noted on the Kenai River (June 11) where several individuals were seen. The first broods of young were seen on July 18 on Wood River. In the next few days, many mergansers, including numerous broods of young varying in size from those newly hatched to others nearly half grown, were seen on the lakes and streams tributary to Bristol Bay. Over fifty broods of young mergansers were noted on the Kvichak River on July 23. There was one female with two young, and another with four; but others had done much better, and had broods ranging from seven to twelve in

number. Single birds collected out of these broods in three cases proved to be of this species.

SHARP-SHINNED HAWK, *Accipiter velox velox* (Wilson).—Hawks of all species were surprisingly rare. I had hoped to find at least some forms reasonably abundant but was disappointed. Single individuals of this species were seen on Tustamina Lake (July 30) and along the Richardson Highway south of Fairbanks (August 8).

WESTERN RED-TAILED HAWK, *Buteo borealis calurus* Cassin.—Single birds were seen along the Kasilof River (July 29) and the north shore of Tustamina Lake (July 31). Two were observed in Mt. McKinley Park (August 2), and a number along the Alaska Railroad between the Park and Fairbanks on August 4. Four were identified along the Steese Highway on August 6, including one collected on the banks of the Yukon at Circle.

AMERICAN ROUGH-LEGGED HAWK, *Buteo lagopus s. johannis* (Gmelin).—A very ragged-looking bird on Kodiak (June 14) provided the first record of this species. No other rough-leg was seen until July 17 when another single bird was observed near Dillingham. Several were identified along the Steese Highway (August 6) and the species was fairly common along the Richardson Highway (August 8–9).

NORTHERN BALD EAGLE, *Haliaeetus leucocephalus alascanus* Townsend.—Bald eagles were not as common as I had expected to find them in view of the stories of their reputed abundance and destructiveness. We had almost ideal opportunity to watch for them from the boat. We saw them nearly every day from the time we embarked at Petersburg (June 4) until we left the Aleutians on July 2. We did not see them again until our arrival at Bristol Bay on July 17 but saw them commonly again from that date whenever we were along the coast. The greatest number observed in one day was ten along the Kvichak River (July 23). Six were noted on each of two days at Cordova (June 1) and Mt. McKinley Park (August 2). This last record was the only one for the species away from the coast. From one to four birds a day was the usual quota.

MARSH HAWK, *Circus hudsonius* (Linnaeus).—A number of Marsh Hawks were seen from the train between Mt. McKinley Park and Fairbanks (August 4) and two on open lands along the Steese Highway on August 6.

OSPREY, *Pandion haliaëtus carolinensis* (Gmelin).—Single birds were seen on each of four days at the following places, all in the Bristol Bay district: Wood River (July 18), Brooks Lake (July 19), Iliamna Lake (July 25), and Chulitna River (July 26).

PEALE'S FALCON, *Falco peregrinus pealei* Ridgway.—One bird on Chagulak (June 25) and three on Kasatochi (June 26) provided the only records for the trip.

WESTERN PIGEON HAWK, *Falco columbarius bendirei* Swann.—This was the most common hawk in the interior. Eight were seen on August 2 in Mt. McKinley Park and the same number on the Steese Highway (August 6). It was also observed from the train on August 4 between the Park and Fairbanks and a total of five was recorded on the trip down the Richardson Highway (August 8–9).

EASTERN SPARROW HAWK, *Falco sparverius sparverius* Linnaeus.—This little hawk was seen only twice—the first time in Mt. McKinley Park (August 2) and the second time along the Steese Highway (August 6).

SITKA GROUSE, *Dendragapus fuliginosus sitkensis* Swarth.—Two hens, one with one chick and one with five, were seen near Petersburg (June 4); four male birds were heard hooting and one was seen on Portage Bay the same evening.

ALASKA SPRUCE GROUSE, *Canachites canadensis osgoodi* Bishop.—Three Spruce Grouse were seen along the Susitna (August 2) and ten noted near Circle Hot Springs along the Steese Highway (August 6). One was collected.

VALDEZ SPRUCE GROUSE, *Canachites canadensis atratus* Grinnell.—A male was collected along Kenai River on June 11.

ALASKA PTARMIGAN, *Lagopus lagopus alascensis* Swarth.—Two broods of Willow Ptarmigans, each containing about eight birds, were noted along the Susitna River (August 2). On the next day, seven coveys were noted in Mt. McKinley Park. Of these, two contained ten birds each (in each case two adults and eight young), and one had two adults and seven young. In four cases, only the female was present with well-grown young to the number of three, four, five, and six, respectively. Three birds collected were found to be referable to this subspecies.

ALEXANDER'S PTARMIGAN, *Lagopus lagopus alexandrae* Grinnell.—While ptarmigans were not plentiful, local residents, as well as representatives of the Alaska Game Commission, reported the population to be increasing again after the last 'low' in the cycle. A single male referable to this form, collected on a high peak near Kenai Lake (June 12), was the only individual seen on the Kenai Peninsula. Three birds were taken out of a flock on the shores of Iliamna Lake by Dufresne on July 25.

NELSON'S PTARMIGAN, *Lagopus rupestris nelsoni* Stejneger.—A single

male collected on Frosty Peak near Morzhovoi Bay (June 21) belongs here. It was one of two birds seen. H. D. Gray, who went back to Dutch Harbor with the 'Brown Bear,' collected three Nelson's Ptarmigans on Amaknak Island (July 27). Two birds from Mt. McKinley Park (August 3) seem to be intermediates between this form and *dixonii*.

TURNER'S PTARMIGAN, *Lagopus rupestris atkhensis* Turner.—A nest containing eight eggs was found at Atka Island on June 30. It was well concealed by the huge leaves of the wild parsnip that is found abundantly throughout these islands. Five adult birds were seen during a 'hike' across the island on which two were collected.

TOWNSEND'S PTARMIGAN, *Lagopus rupestris townsendi* Elliot.—A special effort was made to obtain ptarmigans on Amchitka Island but only two were seen and one taken (June 28). This single bird, a male in high plumage, is close to the form described from Kiska and may be placed with it, at least until more material is available.

RING-NECKED PHEASANT, *Phasianus colchicus torquatus* Gmelin.—The Alaska Game Commission has introduced these birds into various parts of the territory but it is yet too soon to determine the degree of success. They have nested and raised broods near Petersburg where we saw several birds on June 4.

LITTLE BROWN CRANE, *Grus canadensis canadensis* (Linnaeus).—A pair of cranes was seen and heard on St. Matthew Island on July 9. The birds were evidently nesting in a rather extensive mountain meadow near the north end of the island but time did not permit a successful search for the nest. On August 5, eleven cranes were sighted in a small field near the University of Alaska grounds at Fairbanks. While we watched them through field glasses, nine more flew in and joined them. Several times, a number of the birds indulged in a few steps of the dance that is usually seen in spring.

BLACK OYSTER-CATCHER, *Haematopus bachmani* Audubon.—We did not see this bird until June 13 at Barren Island, largely because we stayed well away from most of the rocky reefs. Oyster-catchers were noted as somewhat irregularly distributed from that point through the Aleutians as far west as we traveled. The greatest numbers seen were fifteen to twenty noted on the Semidi Islands and twelve counted in a mile along the rocky shores of Atka Island. When near, it was not easy to overlook these noisy birds, whose shrill calls cut clearly through the rumbling of the surf.

At Tanaga, six birds followed me as I walked along a rocky point jutting into Tanaga Bay. I suspect there might have been three nests there but I found only one, containing two newly hatched young

and one pipped egg. It was in the beach gravel but so near the vegetation that it was shaded by wild parsnip leaves.

SEMIPALMATED PLOVER, *Charadrius semipalmatus* Bonaparte.—Several Semipalmated Plovers, evidently migrants, were observed in Yakutat Bay and on the Situk River (June 8). A male and female about a little pool in the dunes on Morzhovoi Bay gave evidence of breeding as they were much disturbed by my presence. A single bird seen at a small pool at the edge of the snowfield on Frosty Peak later on the same day (June 21) acted in a similar fashion. A pair on Nunivak Island (July 10) was obviously nesting. The female had a curious modification of the injury-feigning reaction. She ran swiftly along, dragging her tail through the sand and calling incessantly. The resulting 'track' might have aroused considerable speculation if it had not been seen in the making. During the entire performance, which was repeated several times, the wings were kept folded in normal position.

RUDDY TURNSTONE, *Arenaria interpres morinella* (Linnaeus).—A single Ruddy Turnstone was seen on St. Paul Island (July 6) with a flock of Pribilof Sandpipers.

BLACK TURNSTONE, *Arenaria melanocephala* (Vigors).—The only Black Turnstones noted during the summer were seen on the Kvichak River (July 23). They were common along the entire ninety miles of stream traveled, usually in groups of four to six. All of them were feeding on the exposed bars and mud flats. At one cabin a number of birds were walking on split salmon on the drying racks apparently in search of flies. The people complained, however, that they also pecked holes in the fish.

WILSON'S SNIPE, *Capella delicata* (Ord.)—Two birds were seen near Dillingham on July 17.

BRISTLE-THIGHED CURLEW, *Phaeopus tahitiensis* (Gmelin).—A flock of twenty birds flushed from the bank and circled over our boat on the Kvichak River (July 23). Dufresne had seen a flock several times on the tundra back of the fisheries station at Naknek in the three previous days.

HUDSONIAN CURLEW, *Phaeopus hudsonicus* (Latham).—A single bird in Mt. McKinley Park (August 2) was the only one observed during the summer.

UPLAND PLOVER, *Bartramia longicauda* (Bechstein).—Several birds were seen about the shores of Wonder Lake in Mt. McKinley National Park on August 2 and 3. One pair, evidently nesting, perched anxiously on the tips of the scattered spruces, flying from one to another as we moved across the sloping tundra above the lake.

SPOTTED SANDPIPER, *Actitis macularia* (Linnaeus).—Spotted Sandpipers were common only on the Kenai Peninsula where a pair was noted on a little lake above Kenai Lake (June 11). They were common at the mouth of the Kenai River (July 28), along the Kasilof (July 29), and about Tustamina Lake (July 30–31). Except for these Kenai birds, 'teeter-tails' were noted only twice, the first time at Petersburg where a single bird was observed (June 4), and the second time along the Sustina River (August 2) when a number of birds were seen.

WANDERING TATTLER, *Heteroscelus incanus* (Gmelin).—Single tattlers were noted on three separate days. On July 24 and 26 a bird was seen each day on the shores of Iliamna Lake, and on August 3 a single young tattler with down still on its head was found in Mt. McKinley Park.

GREATER YELLOW-LEGS, *Totanus melanoleucus* (Gmelin).—Between Yakutat and the Situk River, Greater Yellow-legs were breeding on the tundra. There were at least ten pairs in the area we walked across. The birds sat on the tips of the scattered spruces or flew in circles about us. One pair resorted to 'dive-bombing' tactics so persistently that we knew a nest or young were near. These birds dived straight at our faces, sheering off just out of reach. We finally discovered the cause of their demonstrations in a long-legged and rather tired, fuzzy youngster running along some distance ahead of us between the rails of the Yakutat & Southern Railway.

The species was common on the Kenai and Alaska peninsulas.

LESSER YELLOW-LEGS, *Totanus flavipes* (Gmelin).—Lesser Yellow-legs were present in smaller numbers in the same bit of tundra near Yakutat where we found the preceding species. They behaved the same except that we found no young and experienced no 'dive bombing.' Three pairs were noted here and two pairs about bits of open swampy land along the Kenai River (June 11).

PRIBILOF SANDPIPER, *Arquatella ptilocnemis ptilocnemis* (Coues).—This sandpiper, which was one of the most abundant birds on St. George Island (July 3) and St. Paul (July 4–6), was even more conspicuous on St. Matthew (July 8–9). Two were seen and one collected on Nunivak (July 10). This bird was a juvenile with some of the down still visible about the head although it was able to fly well.

This species utters one of the most pleasing and melodious calls heard on the wetter tundras of its nesting islands. In some way these sandpipers reminded me of the Upland Plover; they had the same trick of whistling as they alighted with upraised wings. In the north in summer, they have little in common with the wintering Aleutian

Sandpipers of the Oregon coast in either habits or habitats. They are grassland birds and only once, on St. Paul Island (July 6), did I see them on the rocky beaches. On this occasion a group of a dozen, accompanied by a single Ruddy Turnstone, was observed. The breeding season seems to be rather extended. On St. Paul (July 5) I found a family of young fully feathered (except for the head and neck which were still downy). The next day Victor Scheffer brought in three downy young with their wing quills just started, and on the same day I found a nest with four fresh eggs. On St. Matthew, the Pribilof Sandpiper and McKay's Snow Bunting were the most common birds except for the inhabitants of the great seabird colonies. The Alaska Longspur was a poor third.

In contrast to the nearly related Aleutian Sandpiper, these birds were noticeably more rufous on the back and on the sides of the breast even at some distance. As we were on the breeding grounds of both forms within a week, we had an excellent chance to compare them.

ALEUTIAN SANDPIPER, *Arquatella ptilocnemis couesi* Ridgway.—Aleutian Sandpipers were exceedingly common in the tundra about the base and on the slopes of Frosty Peak in Morzhovoi Bay. They were more abundant there than at any place we happened to land in the Aleutians. In the latter group we found them on Tanaga (June 27), Amchitka (June 28), Atka (June 30), and Kagamil (July 1). They were most numerous on Amchitka and Kagamil. Their behavior was much like that of the preceding form.

PECTORAL SANDPIPER, *Pisobia melanotos* (Vieillot).—The Pectoral Sandpiper was noted only twice. Several were seen about a small pond on the northwestern part of Nunivak Island (July 10) and three individuals among a group of sandpipers on a bar in Kvichak River (July 23).

LEAST SANDPIPER, *Pisobia minutilla* (Vieillot).—A few Least Sandpipers were observed on the high meadows of Frosty Peak (June 21) and Becharof Lake (July 21).

RED-BACKED SANDPIPER, *Pelidna alpina sakhalina* (Vieillot).—Four birds about a group of little tundra pools on St. Matthew Island (July 8) acted as if they had nests.

LONG-BILLED DOWITCHER, *Limnodromus griseus scolopaceus* (Say).—Three males were taken from a flock of ten on the tundra near Yakutat (June 8).

SEMPALMATED SANDPIPER, *Ereunetes pusillus* (Linnaeus).—This was the most common bird in the two areas visited on Nunivak Island

(July 10–11). The sandpipers were paired and though they were very much disturbed as we passed through their territories, no nests were found.

PACIFIC GODWIT, *Limosa lapponica baueri* Naumann.—Three were observed on the lagoon near the village on St. Paul Island (July 6).

RED PHALAROPE, *Phalaropus fulicarius* (Linnaeus).—A single bird in red plumage flew around the boat on June 9 as we were crossing the Gulf of Alaska.

NORTHERN PHALAROPE, *Lobipes lobatus* (Linnaeus).—This dainty phalarope was common on the Copper River Flats near Cordova (June 10). It was not seen again until July 8 on St. Matthew Island where twenty or more individuals were present about a group of small tundra lakes. One nest, a deep cup in the moss, containing four eggs, was found on a neck of land between two of these pools. Single pairs of birds were noted on Nunivak (July 10) and in Mt. McKinley Park (August 2).

PARASITIC JAEGER, *Stercorarius parasiticus* (Linnaeus).—The first Parasitic Jaegers observed were three pairs on the Copper River Flats near Cordova (June 10). A single bird flew about the boat in Larsen Bay on the west side of Kodiak Island (June 17). One pair was present on Choweit Island in the Semidis (June 18) and a single bird was observed in Tanaga Bay (June 27).

The species was not observed again until July 17, at Dillingham. The only day on which any number of jaegers was seen was July 19, at the mouth of Naknek River on Bristol Bay. There we found fifteen jaegers, twelve of this species, and a few gulls hanging about an anchored cannery boat. A pair with two young just able to fly was seen on a gravel bar on the Kvichak River (July 28) and two followed our boat for a half hour in the Gulf of Alaska (August 11).

All of the adults observed were in the dark phase except the group in Bristol Bay which was divided about equally between dark and light plumages.

LONG-TAILED JAEGER, *Stercorarius longicaudus* Vieillot.—The first 'long-tail' that was seen flew across our bow as we were headed north toward Yakutat along the Fairweather Range (June 7). The species was not noted again until a single bird was found on St. George Island (July 3). On St. Matthew (July 9) a pair with two young, still not able to fly too well, was watched as the two birds maneuvered over a large mountain meadow. These birds were among the most graceful on the wing of all the birds seen on the trip, at times appearing like giant Barn Swallows. Three birds were seen each day,

July 10 and 11, on the two widely separated points visited on Nunivak Island. A single 'long-tail' was observed at Dillingham (July 17) and three, associated with a large number of Parasitic Jaegers, were seen on Bristol Bay (July 19). A pair with two young was watched for a time in Mt. McKinley Park on August 2 and two of this family were noted again the next day.

[CHILEAN SKUA, *Catharacta chilensis* (Bonaparte).—A single skua, perhaps of this species, followed our boat for about half an hour in the Gulf of Alaska (August 12).]

GLAUCOUS GULL, *Larus hyperboreus* Gunnerus.—This large and beautiful gull was seen only once outside of Bering Sea. The exception was a bird in second year plumage in Yakutat Bay (June 8). Two or more individuals were present among the Glaucous-winged Gulls on Walrus Island (July 7); there were so many gulls in the air, however, that I could not be certain whether there were more of the glaucous species or whether I was seeing the same birds repeatedly.

A few pairs were observed nesting on the high cliffs at the south end of St. Matthew Island and a group of twenty-five birds was seen on a bar in a small lagoon (July 8). The next day there were fifty birds sitting at the mouth of a little stream and a few apparently on nests on the flat top of a nearby rock pillar. The 'burgomaster' was common on both days on Nunivak (July 10 and 11) and a number were present on Nelson Island (July 12).

GLAUCOUS-WINGED GULL, *Larus glaucescens* Naumann.—This species was a constant daily attendant on the 'Brown Bear' and, while by no means as abundant as some other seabirds, it had a more uniform distribution along the coast. It was seen in small numbers everywhere except in the interior and in great concentrations about operating canneries. The largest aggregations of these birds were noted in Bristol Bay and Cook Inlet where every active cannery had a large number of attendant gulls.

The birds nested in small colonies along the rocky headlands or even on the flats of some of the islands. Every large murre and kittiwake colony had its smaller population of Glaucous-winged Gulls bent on picking up some of the easy living to be found about these bird cities. The largest colonies of this species were found on Bogoslof Island (June 24) and Walrus Island (July 7). In both, the nests were on the more level parts of the islands and covered acres of land.

No particular effort was made to locate nesting colonies, but notes were kept on those we found while conducting routine visits to various areas for other purposes. Nesting birds and nests with either

eggs or young were noted as follows: Resurrection Point, Seward, Barren Islands, Whale Island, west side of Kodiak Island, Morzhovoi Bay, Bereskin Island near Akutan, Bogoslof, Chagulak Island, Tanaga Island, Walrus Island, Iliamna Lake, and Chisek Island. Many of these smaller colonies contained trails beaten through the grass by natives gathering eggs. Typical nests were on the ground in more or less thick vegetation, although in several cases, such as at Chagulak, Tanaga, and Chisek, the nests were among rocks.

HERRING GULL, *Larus argentatus smithsonianus* Coues.—Herring Gulls were occasionally observed from the steamer between Seattle and Ketchikan, but it was difficult to pick them out among the swarming masses of other gulls about the canneries and docks.

Several individuals were identified in the group that followed us across the Gulf of Alaska (June 9). There was a small mixed colony of this species and the Short-billed Gull on a little grassy island on the Copper River Flats (June 10). A few individuals were noted about the Kenai Peninsula and at various points along the base of the Alaska Peninsula.

SHORT-BILLED GULL, *Larus canus brachyrhynchus* Richardson.—This species was fairly common in both adult and immature plumages about the southeastern Alaska harbors in early June. Three nests with two eggs, one nest with three, and one young bird able to swim lustily were found in a small colony on the Copper River Flats (June 10). They were fairly common in the interior in late July and early August.

BONAPARTE'S GULL, *Larus philadelphia* (Ord).—This beautiful little black-headed gull was still in flocks in early June. Of ten in Petersburg harbor (June 4), three were in full spring plumage and the others showed various stages of advance into the spring dress. Birds noted in Juneau (June 5), as well as two large north-bound flocks that passed our boat off Mount Crillon (June 7), showed the same mixture of plumages, as did also groups at Yakutat and the Situk River (June 8). All of the birds of a flock outside of Sand Point in the Shumagins (June 20) were in full breeding plumage.

These gulls were very widely distributed about Bristol Bay and Cook Inlet during late July, and the sight of them winging their way along the streams or perched on the topmost twigs of the stunted spruces, while common, was always welcome. We found no nests, but two young birds just learning to fly were seen on Iliamna Lake on July 26.

PACIFIC KITTIWAKE, *Rissa tridactyla pollicaris* Ridgway.—The giant colonies of these trim little gulls provided one of the ornithological

highlights of the trip for me. The graceful flight and the tame and unsuspecting behavior of the birds made them favorites with all. The first individuals were sighted in Yakutat Bay (June 8) and a few followed the boat for a time across the Gulf of Alaska (June 9).

The first colony visited was that on Resurrection Point near Seward (June 11). There were thousands of birds with nests built or under construction on every available ledge along the face of a perpendicular cliff. Few of the nests into which we could see had eggs. These birds build more of a nest than other gulls, making it, in this region, of seaweed and sometimes other material in a small mound with a depression in the top in which two or three eggs are laid. This species, nesting on inaccessible cliffs, was not bothered so much by eggers as were the murre and Glaucous-winged Gulls. Except for marauding by the Glaucous-wings we saw little evidence of predation in these colonies. Each, however, had its quota of these larger gulls which were many times seen stealing eggs and young.

Other large colonies of kittiwakes visited were at Whale Island, Semidi Islands, Chagulak, St. George Island, St. Paul Island, Walrus Island, St. Matthew, Hall Island, and Chisek Island. The nests at Whale Island were fairly accessible and we managed to see into a great many of them. All contained two or three eggs. On Chagulak we could see into a few but found no young hatched. On Walrus Island they were most accessible of all and there I inspected dozens but found no young yet hatched. Nests in the other colonies were entirely inaccessible to us as we were without special equipment. At one of the larger colonies, on Chisek Island, many young were hatched. With the glasses we could see them on the nests and we also found several dozen dead nestlings at the base of the cliff on which the colony was established.

H. D. Gray took two newly hatched young from a colony on Haystack Rocks in the Shumagin Islands (August 1) and brought them to me. This was a colony that we failed to visit on the outbound trip, due to lack of time.

RED-LEGGED KITTIWAKE, *Rissa brevirostris* (Bruch).—One of the disappointments of the trip was my inability, due to lack of time, to visit the great colony of this species on the cliffs of St. George Island. However, I saw numerous birds flying about the village and the nearby tundra ponds. At close range, the stubby bill is very conspicuous; the bird is graceful and beautiful.

Several were seen each day on St. Paul Island (July 4–6) but I failed to find the birds nesting on the Tolstoi cliffs as reported. All the

nesting birds seen there were Pacific Kittiwakes. The 'red-legs' were also reported to nest occasionally on other cliffs of St. Paul and Walrus islands. I did not get to visit all the possible nesting sites on St. Paul Island, but found no red-legged birds nesting either here or on Walrus Island. We also looked carefully over the kittiwakes on St. Matthew and Hall islands for this species, but found none.

SABINE'S GULL, *Xema sabini* (Sabine).—A single bird observed on St. Matthew Island (July 8) flew about over a large lagoon for some minutes, and three birds followed the boat for a time in the Gulf of Alaska (August 11).

ARCTIC TERN, *Sterna paradisaea* Brünnich.—This was the only tern seen during the trip. While rather widely distributed, it was never present in great numbers although several marked concentrations were noted after the breeding season. The largest of these were at the mouth of the Kenai River (July 28) and on the lower Kasilof River (July 29). The species was noted only twice in the interior when single birds were observed in Mt. McKinley Park (August 3) and on Fielding Lake (August 8).

These terns were rather common on the Copper River Flats (June 10) where two nests, containing two eggs each, were found. A small colony was observed on a low sandy island in the lagoon at the north end of Morzhovoi Bay (June 21); one nest with three eggs and two with two eggs each were found there, besides others that evidently had been robbed by some predator. A single pair of Arctic Terns had a nest with two eggs on a little point in Tanaga Bay (June 27). On Nunivak (June 11) I saw a downy young tern in the possession of an Eskimo boy and observed also several free adults.

(*To be continued*)