

## NOTES ON THE WINTER BIRDS OF ATTU

By GEORGE MIKSCH SUTTON and ROWLAND S. WILSON

Attu is a remarkable island in many ways. Situated at the western end of the Aleutian Chain, it is nearly a thousand miles from the nearest point on the mainland of Alaska, it is far closer to Kamchatka than to any part of the North American continent, and it is directly south, not of Alaska nor any other American territory, but of Siberia. Furthermore, though generally thought to be far northern, it is well south of the Arctic Circle, at the southernmost limit of the Bering Sea. The ocean waters about it never freeze. It has what might, by persons who have never been there, be called an equable climate. Such ornithologists as William H. Dall, Lucien M. Turner, Austin H. Clark, A. C. Bent, Hamilton M. Laing, and Olaus J. Murie have visited it or written about its birds; but of these it is believed that only Turner actually visited the island in winter.

Our observations cover the period from February 20 to March 18, 1945, inclusive. During this time our work with the Armed Forces kept us in the southeastern part of the island, principally at Casco Cove, along the west side of Massacre Bay. We made three land trips to Alexai Point, the peninsula inclosing Massacre Bay at the east, one land trip from Casco Cove by way of a pass to the head of Temnac Bay, some five or six miles to the west, and one ocean trip eastward as far as Chirikof Point, the eastern tip of the island. But most of our bird observing was done about Casco Cove proper, from Gehre's Point (Casco Point on some maps) at the east around to Murder Point, the prominent headland enclosing Massacre Bay at the west. At no time were we able to visit the north side of the island or the rugged interior.

What impressed us most about Attu was the beauty of its mountains, the wildness of the weather, and the utter absence of trees. Within the period of our observations, the air temperature at sea level did not vary much from freezing as a rule. During the daylight hours it sank somewhat below 32°F. on 20 of the 27 days, climbed as high as 38° during the day on March 4, sank as low as 15° during the night on March 15, and averaged 31°. On March 18 the greatest temperature variation (15° to 31°), as well as the lowest temperature, was recorded. The general aspect was wintry: the sky overcast, the wind raw, the sea turbulent. Highlands and lowlands alike were covered with snow. Along the shore, tufts of rank grass and coarse stalks of wild parsnip protruded from the drifts, and boulders, turfy mounds and narrow gray beaches were always bare. Elsewhere, save for an occasional cliff or exposed slope, everything was white. When the sun came out in full force, as it did rarely, the surface of the snow melted a little even on the highest peaks, and the whole island took on a soft, almost satiny, sheen.

Where the snow was neither drifted nor subject to constant blowing, it was about knee-deep and difficult to walk through. On our trip to Temnac Bay we would have had a hard time without snowshoes, for nowhere was the crust firm, and some of the drifts were deep and treacherous. Especially troublesome were the streams, two of which flowed into the head of the Bay. The more easterly of these, Gorge Brook, was visible enough where the current was swift. We followed it almost to its mouth through a gorge. But the other, Temnac River, though larger, was so completely hidden by snow that we had to stay well to one side of anything which looked like a depression if we wished to avoid breaking through.

Several ponds northwest of Murder Point (see map) were frozen over, or at any rate covered with snow; but the ice was slushy and infirm and obviously not to be trusted, and one pond was open enough most of the time to attract a flock of golden-eyes.

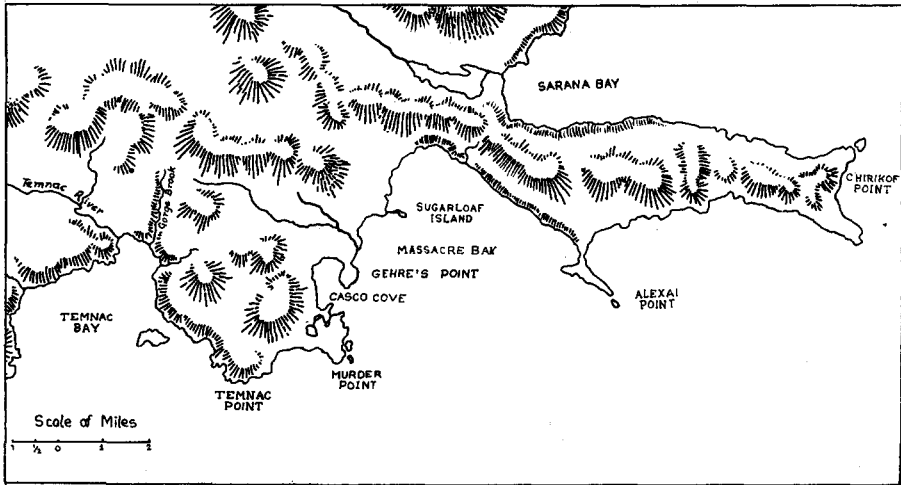


Fig. 18. Sketch map of southeastern part of Attu.

As for the wind, it blew most of the time. Indeed, we became so accustomed to it that when it subsided we were overly conscious of the calmness and silence. Its velocity was usually twenty to twenty-five miles per hour, with stronger gusts. It swept down across the mountains usually from the northwest, bringing with it soft snow fresh from the sky, mixed with harder flakes blown from the high slopes, or fine sleet which hissed on striking the ground. On certain days it kept aloft, blowing the dry snow like smoke from the peaks. Often we marvelled at the "smoking" of the big mountain just west of Casco Cove. The phenomenon was the more impressive when powerful eddies ascended the high gorges, sweeping masses of snow up into the very teeth of the gale.

The most notable quality of the Attu weather was its changefulness. During any one day we were almost certain to have wind, but there was no predicting what would accompany it. Squalls which were known locally as "williwaws" would pounce upon us with hardly a moment's warning. Watching from the Cove, we sometimes saw storm after storm moving slowly eastward, shutting whole sections of the island completely from sight. Between the dark, swirling clouds the sun might be shining, its rays sharply defining the limits of the storm areas and, falling full strength upon the mountains, giving them an almost supernal brilliance. Not infrequently the sunlight penetrated a snow-squall, and the swirling flakes, as seen against the yellow-gray, amorphous brightness overhead, were black as soot.

More than once we were astonished at our inability to distinguish the mountains from the sky on comparatively windless days. Because the distant cliffs were clear-cut and black, we knew there was no fog. So, putting our eyes to work on familiar slopes, we made out the faint shadows of gulches, pin-points of black which were exposed rocks a thousand feet farther up, finally the skyline itself. But how faint that horizon was, how curiously diaphanous the whole vast mountain mass! It was as if, in consequence of mirroring so perfectly the empty grayness of the sky, the earth itself had lost all substance and reality.

The sea and seashore were completely free of ice. Not once did we discover leather ice on pools among the rocks, or grounded ice-chunks on the tidal flats. The narrow gray pebble beaches were open everywhere to the waves, and the tides slipped in and

out over the seaweed-covered, dark brown rocks with never a sound of jostling or crunching. In Casco Cove the water temperature varied between 36° and 38°F., with an average of 37°.

The tidal flats teemed with animal life—sea urchins, chitons, snails, mussels, clams, limpets, and other creatures upon which birds might feed. We were not surprised, therefore, at the abundance of ravens and gulls. What the land birds lived on continued to be something of a mystery, however, for we found no extensive clumps of willow on which ptarmigan might feed, and the plants which should have furnished seeds for the finches and their allies all seemed to be buried under the snow. Nowhere away from the buildings did we come upon a trace of any species of rodent. The absence of lem-



Fig. 19. View northward from eastern tip of Alexai Point, Attu, March, 1945.

mings was the more surprising in view of the comparative abundance of the blue fox. These foxes, which we saw frequently, fed principally on garbage. Some of them were surprisingly tame.

The following list includes only such bird species as were actually seen alive by us or our acquaintances from February 20 to March 18, 1945. We are grateful to Olaus J. Murie for a critical reading of the manuscript and for many helpful suggestions; to J. Van Tyne for checking identification of an immature specimen of *Phalacrocorax p. pelagicus*; to Joseph J. Hickey for subspecific identification of the Snow Bunting specimen; to Dr. Alexander Bajkov for the photographic illustrations; and to A. L. Nelson, of the United States Fish and Wildlife Service, for identification of stomach contents. The specimens referred to are now at the Museum of Zoology of the University of Michigan.

#### LIST OF SPECIES

*Phalacrocorax pelagicus pelagicus*. Pelagic Cormorant. Cormorants were common in Casco Cove and Massacre Bay. At first we thought they were of two species—one with distinct white patches on the flanks, the other without; but when, on February 28, we captured a specimen of the latter sort, to find that there was an indistinct sprinkling of white all over the flanks, we decided that what we had been seeing were all Pelagic Cormorants, some in almost complete nuptial plumage, others in first winter or subadult dress. They were surprisingly regular in their habits. Time after time we observed what we believed to be recognizable groups of 3 to 5 birds flying in to a favorite feeding ground even in the roughest weather, fishing for an hour or so, then rising laboriously into the wind

and flying off, or climbing out onto a rock for a rest. On calm, bright days they sometimes congregated on rocks offshore to preen their plumage or spread their wings in the sun. On March 4, we counted between 50 and 60 birds in such a company on a low rock in Massacre Bay. Most of these were adults, with distinct white patches on their flanks.

The specimen collected on February 28 was an exceedingly fat subadult male. Its stomach and crop were packed with small sculpins which it had caught in water about 15 feet deep along the west side of Casco Cove. Its eyes were dull gray, faintly tinged with olive green. The eyelids, bill, and mouth corners were dull black, without the slightest hint of bright color. The mouth lining was dull gray, with a suggestion of flesh color. The testes were very slender and about 7 mm. long.

*Philacte canagica*. Emperor Goose. This beautiful goose we saw almost daily along certain stretches of shore, in flocks numbering from 4 to about 150. It was especially common along the east shore of Massacre Bay (near Alexai Point), and on the west side of Murder Point. At the latter place we saw several flocks, each of a hundred birds or more, on March 15.

A band of five, which we saw repeatedly, spent most of their time along the west shore of Casco Cove. Their feeding ground was a quarter-mile stretch of slippery, seaweed-covered rocks which were exposed at low tide. Here they walked slowly about, never straying far from each other, gathering eagerly what appeared to be some form of plant food. Their movements were unhurried and graceful. Occasionally, to save the effort of a long walk around, they hopped over cracks or from one ledge down to another. Often we saw them at rest in midmorning, sitting in a compact group not far from the water's edge, all headed into the wind. To our surprise we found them quite approachable. When we walked toward them they evinced concern by lifting their heads, cackling in a low voice, walking slowly forward, slipping into the water and swimming off; or at other times they responded by croning loudly, moving forward at a half run, and rising in noisy flight. Their beating wings made a distinctly audible, crackling sound.

If we desired a really close look at Emperor Geese we had but to make our way quietly out to the very end of Gehre's Point or Murder Point at low tide. Here, stationing ourselves back of a big rock, or peering out through a "window" or narrow defile, we were able to watch the birds as they preened or fed. Even without a glass we could make out the delicate pink of the bill, the dark brown of the eyes, the bright orange-yellow of the feet.

The five Casco Cove birds which we saw so frequently might have been a family group, though we did not observe that two of them were larger, or more brilliantly colored, than the others. The larger flocks moved about together, exhibiting no tendency to break up into smaller groups when put to flight by the incoming tide.

*Anas crecca*. European Teal. On March 5 we saw an adult male teal close to the west shore of Casco Cove. Our attention was drawn to it by its shrill, almost whistled cry, which carried across the water with surprising power. When first seen, it was swimming at the water's edge, dabbling at the sand. In deeper water close by were two female Greater Scaups and a male Harlequin Duck; but the teal made no attempt to stay with these birds as we approached. It swam out from shore fifty yards or so, sprang lightly into the air, and flew northward a quarter of a mile. Carefully approaching the tidal pool in which it had settled, we had a good look with the glass. There was no white mark on the side of its chest. It was an Old World Green-wing.

*Nyroca marila*. Greater Scaup Duck. The Greater Scaup we recorded only along the west shore of Casco Cove, seeing a possible grand total of nine individuals. We noted it first on February 28, when a single male flew overhead as we were picking our way along the tidal flats. On March 4 we closely inspected a male and female which were idling in shallow water close to some rocks on which Emperor Geese, Harlequin Ducks, Eiders and Rock Sandpipers were resting. Both birds spread their wings while preening, giving us a look at the extensive white on the primaries. On March 5 we saw four individuals, two males, by themselves, and two females in company with a male Harlequin Duck and a male teal. On March 17 we saw two females near the head of Casco Cove, diving in water about ten feet deep.

*Glaucionetta clangula*. Common Golden-eye. A flock of about 15 male golden-eyes frequented the east side of Murder Point throughout our stay. They were reported to us shortly after our arrival, but we did not actually see them until February 26, on which date we observed them just south of the mouth of Casco Cove, feeding about a hundred yards from shore. Thereafter we saw them repeatedly, usually well out from shore in fairly deep water. Occasionally they flew inland to a fresh water pond at which our friend Everett L. Stone observed them several times.

We saw them to good advantage late in the afternoon on March 17. The sun was low but bright, and as they popped up from their diving, we noted the shining green of their heads and roundish white spots very clearly. All of them were males, of this we made certain; but five or six which were less glossy and less distinct in pattern than the others were, we decided, subadult individuals in changing

plumage. We saw a single female on March 4, off Sugarloaf Island, about two miles northeast of Gehre's point.

*Clangula hyemalis*. Old-squaw. The Old-squaw we noted daily. Even when we did not see it, we heard its far carrying and musical *ah, ah away! ah, ah away!* sounding far out in Massacre Bay or in the open sea east of Murder Point. Fair sized mixed flocks of males and females fed regularly in the middle of Casco Cove, occasionally making their way into shallower water or climbing out onto the low rocks with the Harlequin Ducks and Emperor Geese. Single birds which we encountered along the shore were, without exception, oil soaked or crippled. The Old-squaw was one of the very few species we saw in the open sea south of Chirikof Point, on March 7. It was uncommon in Temnac Bay, on March 12.

All Old-squaws which we had a chance to examine with the glass appeared to be in full winter, or breeding, dress (see Sutton, Auk, 49, 1932:42-51). Especially on sunny, quiet days we witnessed considerable courting, if not actual mating. From March 4 on we several times observed males and females which kept together as if paired.

We did not ascertain what these ducks were feeding on. They dived in water known to be 30 to 36 feet deep and presumably obtained food at the bottom. On February 28 we timed three males with a watch, finding the first to stay under 59 seconds, the second 58 seconds, the third a full minute. They opened their wings just as they dived, as if for flight under water.

*Histrionicus histrionicus pacificus*. Harlequin Duck. We saw the Harlequin daily, never in large flocks, but in little scattered groups of three to eight birds along the shore, especially on the outlying headlands where the surf pounded in among the rough rocks. It was distinctly the commonest duck of the region.

On several occasions we noticed flocks of three to six birds composed wholly of subadult males; but a hit and miss mixture of males and females appeared to be the rule, and we frequently came upon single birds of either sex standing quietly on a rock or feeding in water four or five feet deep a short way out from shore. So inconspicuous were the pied creatures as they scrambled from the rocks, slipped into the water, swam swiftly off and dived, that we were struck by the brightness of their plumage as they bobbed up, sleek and trim, from the dark waves. Now and then we saw a male and female together; but we witnessed neither courtship antics nor pursuit flights and "pairs" were the exception rather than the rule.

One specimen, a beautiful male which had died as a result of oil in the plumage, we preserved (March 9). Its stomach was empty and its testes were only slightly enlarged. On February 22, along the west side of Gehre's Point, we discovered the partly eaten, somewhat oily carcass of a female bird.

*Somateria mollissima*. Eider. From February 22 to March 5 we frequently saw what we believed to be the same three Eiders along the west shore of Casco Cove. Two of these were males in full breeding plumage, and one a female. Oddly enough they never seemed to be feeding. Whenever we saw them they were floating side by side in shallow water a few yards out from shore, or standing quietly on a rock. The bills of the males were bright greenish yellow. We recorded the species only once otherwise: a few birds (both males and females) some distance from shore at the head of Temnac Bay, March 12.

We agree with the A.O.U. Committee (Auk, 61, 1944:444) in considering the Pacific Eider conspecific with *mollissima* of Atlantic waters. So, while we did not collect a specimen, and are therefore not certain of the subspecies, we wittingly use the name *Somateria mollissima*.

*Melanitta fusca*. White-winged Scoter. This scoter we recorded only once: a male in high plumage, along the west shore of Casco Cove, March 17. We saw it very clearly, noting through the glass all its important field marks.

*Oidemia nigra*. Black Scoter. This scoter we recorded almost daily at the north end of Casco Cove, where rafts of 50 to 70 birds fed and rested usually about 300 yards out from shore. We clearly saw both males and females in these rafts, and males seemed to be the more numerous. On March 17, along the west side of the Cove, we saw two males which may have been suffering from the chilling effect of oil in their plumage. Presumably all these birds belonged to the American race, *Oidemia nigra americana*, but we took no specimen.

*Haliaeetus albicilla*. Gray Sea Eagle. The only eagles we saw during our stay were two dark-headed, white-tailed birds which drifted in wide circles from the head of Temnac Bay southeastward over Murder Point and out to sea at about 4 o'clock in the afternoon of March 15. They appeared to be on their way to Agattu Island. We were told that eagles nested somewhere in the mountains north of Temnac Bay, but no one ventured to describe the birds for us in detail. The Gray Sea Eagle may well be more than casual in the Aleutians, despite Turner's comment (Contributions to the Natural History of Alaska, 1886:159) to the contrary, especially if the two we saw were a mated pair (see also A.O.U. Check-list, 4th ed., 1931:71).

*Falco peregrinus*. Peregrine Falcon. We recorded this falcon, possibly the same individual, along the west side of Casco Cove on February 21, 22, and 27, and March 4. On March 9 we noted a single bird several times along the cliffs just back from the east shore of Massacre Bay. Observing it critically at close range in fair light, we decided that it probably belonged to the dark race, *pealei*.

*Lagopus mutus*. Rock Ptarmigan. It is noteworthy that we did not ourselves see ptarmigan or ptarmigan tracks during our stay despite the fact that we made a point of looking closely for them, especially on our trip to Temnac River on March 12. Two birds in full winter plumage, seen on a hill 2 miles west of the head of Massacre Bay on March 7, were reported to us, however; and droppings, which may have been several months old, were found on a snow-free ridge north of Casco Cove on March 4.

*Erolia ptilocnemis couesi*. Rock Sandpiper. This sandpiper we saw almost daily throughout our stay. It was especially common along the west shore of Casco Cove and at the outermost tip of Murder Point and Gehre's Point. As a rule we encountered it in flocks of 6 or 8 to about 50 individuals on rocks which were exposed at low tide. On February 22 and March 5 we saw unusually large flocks, numbering 100 or more, along the shores of Casco Cove and the east side of Murder Point. When motionless, it was very difficult to see. Often we descried one bird moving stealthily back of a rock as if to get out of sight, and with our next step forward put up a flock which had been in plain



Fig. 20. Tidal flats at Gehre's Point, Attu, March, 1945.

sight the whole time. The birds were very sure-footed. Their ability to alight upon steeply sloping, slippery rocks and to gather food at the very edge of the rough water amazed us. While standing or running, they rarely cried out; but as they sprang into the air they uttered a shrill *tserp* or *kreek* or *ke-rick*. In flying birds the rump and upper tail coverts were conspicuously dark.

We observed that small flocks frequently chose to run rapidly ahead of us rather than rise in flight. Occasionally, on having to run around a boulder, they would separate. Those which took the "high road" would scamper along the boulder's base as if loath to lose sight of the water; the others, caught by an incoming wavelet, either sprang into flight or swam forward with energetic strokes of their short legs and a bobbing motion of the head.

Several birds which we examined closely with the glass had spots of oil on their under plumage. One such bird was so weak that we captured it. A male in perfect winter plumage we collected on February 22. It was not fat. The testes were not enlarged. Its eyes were dark brown, its eyelids dull gray, its feet dull olive green, its bill yellowish olive at the base, blackish brown at the tip. The stomachs of these two specimens contained fragments (including operculi and digested body materials) of a heavy-shelled snail, probably *Littorina*.

*Larus hyperboreus*. Glaucous Gull. We saw large white gulls throughout our stay. Because they were indistinguishable in size from *Larus glaucescens* we at first thought these to be individuals of that species in some little-known plumage stage or phase, but the more we saw of them the more certain we became that they were immature *hyperboreus*. Their remiges were invariably white, and their general appearance, even at considerable distance, was much whiter than that of the palest sub-adult Glaucous-winged Gull. We had abundant opportunity to compare the two forms directly at Murder Point, where the voracious birds wheeled in close to shore as the garbage was dumped. Counting them as they moved upwind past us, we estimated that there was one Glaucous Gull for about every 25 Glaucous-winged Gulls on March 17. On that date we saw no adult Glaucous Gull in the flock. Indeed, the only adult Glaucous Gull we recorded during our stay we saw along the west shore of Casco Cove on February 22. The bills of immature *hyperboreus* seen at close range were very pale flesh color, occasionally with a dark band or ring near the tip. The feet appeared to be brownish flesh color.

*Larus glaucescens*. Glaucous-winged Gull. This gull was common along the shore wherever we went and on our two trips to sea we saw it at some distance from land (March 6, 4-5 miles south of Murder Point; March 7, 8-10 miles south of Chirikof Point). At Murder Point, where hundreds of gulls gathered to feed on garbage, it outnumbered all other species combined. Here the adults were easily recognizable, some appearing to be in full breeding plumage, others in slightly mottled, less clearly patterned, winter plumage. Far less easy to identify, and about three times as numerous, were the immature birds. These fell into three color-groups: (1) those which were brownish gray all over—like first year Herring Gulls but of a lighter, warmer brown; (2) those with brownish-gray body, wings and tail, light gray head, and indistinct white ring around the neck; and (3) those with brownish-gray body and wings, light gray head, white tail, and mixed pearl gray and brownish gray back and scapular plumage. We looked in vain for an individual with dark-tipped tail such as would surely have been encountered in any large flock of wintering *Larus argentatus* or *L. delawarensis*.

In adult birds the bill was yellow marked with an orange spot and fleck of blackish brown at the angle of the lower mandible; in subadult birds it was pale purplish flesh color, with a darkish tip; in birds assumed to be under a year old it was dark grayish flesh color. In adults the feet were pink, in immature birds pale flesh color or pinkish brown. As for the eyes, we noted that those of fully adult birds appeared to be pale grayish yellow, but those of immature birds varied so that we despaired of describing them adequately. In some individuals they were pale greenish gray, in others silvery hazel, in others dull yellowish brown, etc.

So much garbage was thrown out at Murder Point that the gulls could probably have subsisted wholly on it for months at a stretch; but we noticed that certain birds deliberately left the garbage, moved down the shore a way and fell to gathering clams. They followed the well known custom of dropping the mollusks onto the hard rocks, carrying them higher and higher until at last the tough shells were broken.

A male bird which we collected on March 7 had appeared, in flight, to be in full breeding plumage; but on close inspection we found the head and neck to be flecked with scattered gray feathers (most of which dropped out later, during the skinning process). Some of the rectrices were curiously malformed and twisted. The bird was exceedingly fat. Its testes were only slightly, if at all, enlarged.

*Larus argentatus*. Herring Gull. We recorded this species several times from February 20 to 27, the only birds we were sure of being those which we saw at close range in Casco Cove. Most of these were adults in winter plumage. Poor light conditions and stormy weather were partly responsible for this paucity of records; but our unfamiliarity with the field characters of immature *Larus glaucescens* was also to blame. In late February and early March we looked in vain for adult Herring Gulls at the Murder Point garbage dump; and after February 27 we saw only an occasional immature bird which we suspected of being this species.

*Rissa tridactyla*. Black-legged Kittiwake. On February 26, after a bad three-day storm, we saw a kittiwake in full winter plumage in the middle of Casco Cove. It flew about our anchored vessel with several Glaucous-winged Gulls, occasionally hovering not far from us as it prepared to drop to the surface of the sea for food. Its feet were black.

*Uria lomvia arra*. Northern Murre. This murre we saw almost daily from February 22 to March 12, principally in the deeper waters of Casco Cove, where it came regularly in small numbers (5 to 15 birds) to feed. We noted that it was fairly common (about 20 single birds; several flocks of 3-5) in the open sea south of Alexai Point and Chirikof Point on March 7. Birds seen close to the shore were invariably in weakened condition as a result of oil in the plumage. We almost caught one such bird along the west shore of Casco Cove on February 27; we heard of another which had crawled several yards through the snow and died (March 5); and on March 9 we found the oil-soaked remains of one several rods from the shore near Alexai Point. Most mures which we saw at all clearly were in

winter plumage, but the dark-headed individual which we almost captured alive on February 27 appeared to be in full breeding dress.

*Synthliboramphus antiquus*. Ancient Murrelet. This species we noted infrequently from February 25 to March 4, principally in the deeper waters of Casco Cove. We never saw more than two birds together and as a rule the birds appeared to go about singly. Most individuals which we had opportunity to examine with the glass were preening themselves vigorously, trying to get oil out of their plumage.

*Nyctea scandiaca*. Snowy Owl. Acquaintances informed us that several persons saw a "large white owl" perched on one of the turfy mounds along the shore of Gebre's Point on March 14.

*Corvus corax*. Holarctic Raven. The raven we saw daily even in the wildest weather. It was common along shore, where it fed on garbage with the gulls; but we saw it inland, too, flying about the cliffs and mountain tops. It was courting during our entire stay, and we frequently saw one bird feeding another solicitously, two birds prancing about together in the snow, or several birds cutting capers high in air. Their cries were varied, often comical, often surprisingly human.

On February 22 we watched one slowly beating its way upwind to a pole about a mile inland from the head of Massacre Bay. Here it perched, with head lowered and wings lifted slightly. As if in play, it spread its wings, allowed itself to be carried aloft a few feet, and dropped easily back to its perch. This performance it repeated ten or twelve times, keeping its bill parted the whole time. So far as we could see, it was not showing off before another bird. During bad storms, flocks of Ravens sometimes gathered in the shelter of a hill, or back of one of the turfy headlands along the shore, croaking and sputtering while the wind raged.

We noted that courting males had a habit of erecting the feathers of the sides of their heads into odd little ridges or horns which were distinctly visible from the front, less visible from the side. Several times we observed what we thought to be copulation in flight.

On February 28 at Murder Point, our friend Donald Stullken captured a full grown and apparently perfectly healthy Raven whose wing tips had frozen to the body plumage in such a way as to render it incapable of flight. At a distance we watched Stullken holding the bird; but an instant later we saw it peck savagely and break free, hobble off through the snow with Stullken in pursuit. Eventually it flapped its wings free of ice and rose in perfect flight!

*Troglodytes troglodytes meligerus*. Winter Wren. We saw our first wren on February 28, during a savage snowstorm. We had made our way to the point at the south end of Casco Cove and were scrambling about a hillock looking in vain for signs of lemmings and other small mammals. Noticing some bird tracks in the deep snow, we paused to examine them when out ran a tiny brown creature which at first we thought was a mouse. Without opening its wings, the wren scuttled under a tuft of grass, darted through the soft snow to the shelter of a rock, hopped into plain sight, jerked its body once, and disappeared. When next we saw it it was a rod away, scampering from rock to rock, keeping out of the wind as best it could. Judging from its tracks, it had been living about the hillock for some time, probably finding food in snowless areas under the matted wild rye.

On March 5, Stullken saw two wrens in the shelter of a bluff at Murder Point and heard one of them singing. On March 12, we learned that two wrens had been seen repeatedly about the Army Base hospital grounds, some distance back from the shore. One had been singing a good deal and everyone regarded the birds as a mated pair.

On March 15 we saw six or more wrens at Murder Point, but none of these seemed to be paired and we heard no singing despite the fact that the day was relatively calm and bright. One bird made its way between grassy hillocks, running from rock to rock along the shore. Another sprang from driftwood underfoot, flew 60 feet to the base of a towering boulder, alighted in a crevice among bright orange-red lichens (*Calloplaca elegans*), and fluttered by easy stages to the top.

We took one specimen, a male, on February 28. Though not at all fat, it was in good condition. The testes were not enlarged. Its eyes were dark brown, its bill and feet dark grayish brown, the lining of its mouth deep orange-yellow. In its stomach were "finely ground up fragments of amphipods resembling Talitridae."

*Leucosticte tephrocotis griseonucha*. Gray-crowned Rosy Finch. We saw this handsome species almost daily from March 1 to 17. It went about in flocks of 3 or 4 to 10 birds as a rule, although on March 17 we counted 21 feeding together near the garbage dump at Murder Point. Usually we saw it about snowless places on the bluffs and ridges, along one of the military roads, or drinking at an open spot along a brook. Its flight was graceful and sweeping, especially as it let itself be borne up and away by the wind at the brink of a cliff, or dropped, swoop by swoop, from some peak to the seashore. Its call note was a rather harsh *chew* or *tsew*. We took two specimens, a male and female, near the head of Casco Cove, March 5. In these the plumage was somewhat worn, the feet dark brown, the bills grayish olive at the base, dark brown at the tip, the eyes dark brown. Both were very fat.



The stomachs contained moss stem, fragments of seeds, blades and glumes of grass, and grit. In one of them there were 7 seeds of the crowberry (*Empetrum nigrum*).

*Acanthis* sp. Redpoll. Our friend Everett L. Stone perfectly described to us a single Redpoll which he saw feeding near a pond inland from Murder Point early on the morning of February 18. We could not be sure of the species, of course. McGregor (Condor, 8, 1906:120) found *Acanthis flammea* nesting on Unalaska Island. Turner (Contributions to the Natural History of Alaska, 1886:172) believed that the species did not occur anywhere in the Aleutians west of Unalaska. O. J. Murie (in letter dated June 14, 1945) calls the redpoll "a rare bird in the western Aleutians."

*Melospiza melodia sanaka*. Song Sparrow. An ornithologist fresh from the eastern United States will instantly recognize the Aleutian Song Sparrow's chirp of alarm, for this note has the same huskiness and alto quality as that of the brookside finch with which he is familiar. He will recognize also a higher pitched *chip*, which indicates greater excitement, and certain beady cries which accompany pursuit flights. As for the song, he will not at first be so certain it is a Song Sparrow's, but this will be partly because he hears it indistinctly in the high wind. Listening to it for the third or fourth time he will note the accented opening notes and will decide that it is a fairly average Song Sparrow song after all—much like those he has heard in New York, Pennsylvania, or South Dakota.

If the bird gives no call note, it is not so quickly recognizable. There are several reasons for this: (1) It seems to be in the wrong sort of environment. There are no bushes about, no brush piles, no weed patches. The only vegetation is coarse grass, most of which has been blown flat and buried under the snow, and the bare stalks of high weeds which offer little shelter. (2) Its shape is wrong. Because it is fluffed up, it looks far too short tailed for a Song Sparrow and its bill, even as seen at a distance, is too slender to be familiar. (3) The streaking of its under parts is not distinct. As seen in the usual gray weather, and against the snow, the bird appears to be plain grayish brown all over. (4) Its manner is not quite orthodox. It seems to move too slowly and it keeps under rocks too much of the time. This is not quite a valid comment, for the eastern ornithologist's concept of Song Sparrow behavior is based principally on the bird as seen in spring and summer.

We saw these interesting finches daily. Even during the wildest gales one or two of them stayed around the door of our barracks, looking for something to eat. Most of them lived along the shore, spending virtually all their time between the water's edge and the snow—a coastal strip varying in width from a few feet at high tide to a hundred yards or so at low tide. A few of them we invariably found about the turfy headlands, and the population was sometimes concentrated at these favorable points. As a rule we saw the birds in two's, and we believe that most of these were actually mated pairs. They were not in breeding condition, however (the gonads of specimens examined being unenlarged), and we saw little in the way of courtship, few pursuit flights of any sort, and no copulation. Singing we heard now and then on windy days, but it was especially noticeable in calm, sunny weather.

Certain facts about these sparrows merit special comment: (1) We frequently encountered them on the tidal flats feeding side by side with the Rock Sandpipers. Interested in what such individuals could be eating we collected a specimen, finding in its stomach several tiny snails. (2) We were struck by the fact that the bird's underplumage was unusually dense and that its skin was much tougher than that of Eastern Song Sparrows we had prepared as specimens. As for its odor, which was strikingly like that of the sandpipers, we guessed that littoral existence and food were responsible. (3) Certain pairs lived about scrap heaps of metal, piles of gasoline drums, and so forth, as Song Sparrows might be expected to live about brush piles. (4) The usual roosting place was a niche or crevice on the face of a big rock, or under a tussock on a turfy headland. As a rule our observing was done between 5 o'clock in the afternoon and dark, and we frequently saw the sparrows going to roost or flushed them from their roosting places. One which we saw asleep was fluffed up, with bill stuck between the back and scapular plumage, chest against the bare rock, and tail out, down and slightly spread. Others, which flew out as we climbed about the rocks in the twilight must have been sleeping under the rocks on the bare ground.

*Plectrophenax nivalis townsendi*. Snow Bunting. We saw the Snow Bunting infrequently: 5 birds inland a mile or so from the head of Casco Cove, February 20; 2 birds along the west side of Masacre Bay, and 6 along a snow buried stream at the head of Casco Cove, March 5; a single bird flying upwind through the storm, north of Casco Cove, March 8; several on the highest part of Gehre's Point, March 11; one on the beach, and 5 others flying back and forth between the beach and the highest part of Gehre's Point, March 14; a single bird at Murder Point, March 15; and 2 birds at Murder Point (garbage dump), March 17. All of these were males. They were quite wary. We did not hear any of them singing. The only specimen taken (Gehre's Point, March 14) was very fat. There was a good deal of brown in the plumage. The testes were slightly enlarged. The wing measures 118.5 mm.

*United States Army Air Force's Tactical Center, Orlando, Florida, August 13, 1945.*