NOTES ON THE BIRDS OF SLEDGE ISLAND, BERING SEA, ALASKA

By TOM CADE

In the course of field work conducted in the Bering Sea region, the writer was afforded the opportunity of visiting Sledge Island and making observations on its bird life from June 7 to June 15, 1950. The work was supported by a grant-in-aid from the Arctic Institute of North America with funds provided through contractual arrangements with the Office of Naval Research.

Sledge Island is a small, volcanic projection of land rising out of the Bering Sea some twenty-five miles west of Nome, Alaska. It is situated at approximately 64° 30′ north latitude and 166° 10′ west longitude. The island is about one and a quarter miles long and three-quarters of a mile wide at its widest point near the north end. Toward the south end, the island gradually narrows down to an outcropping of high basaltic cliffs which extend out into the water in a camel-backed ridge about six hundred feet above the sea and form the highest elevation of the island.

Everywhere the slopes dropping down to the shore line are steep, descending from a table-like top. This plateau inclines gently up from about three hundred feet at its north end to about five hundred feet at its south end, where the basaltic ridge then quickly ascends to its maximum height. There is a small, crescent-shaped sandspit about two hundred yards long by about thirty yards wide along the northwest shore line, on which are located three Eskimo shelters made of drift wood. This sandspit provides the only easy landing spot on the island for boats. The shore line facing west-southwest forms a slight cove, in which boats from Nome seek shelter during strong northerly or easterly winds. The eastern shore line has a beach of sea-weathered rocks where boats can land if necessary. There is also a cabin located here. Much drift wood accumulates on these rocks, as well as on the sandspit.

The flat top of the island may be described as a dry, rock-type tundra with crustose lichens the predominant vegetative form. Many small, crystal clear pools are formed by melting snow in the rocky depressions. These were largely devoid of invertebrate life during the period covered in this paper.

In contrast to the top, the slopes, particularly on the west side, are wet. Grassy or mossy swards are formed between the numerous rock seams or stripes caused by frost heaving. Small streams trickle through these vegetative areas from the melting snow and ice sheltered by the rocks. According to the Eskimos, one or two of these streams are to be found running all summer. Most of the island's flowering plants and foliose lichens occur on these wet slopes. Species of *Ranunculus*, *Pedicularis*, and *Lupinus* were blooming at the time these observations were made.

At least two red foxes (*Vulpes* sp.) were seen on the island, and because evidence of fox kills was very abundant, the depredations of these animals on nesting birds must be considerable. Cliff nesting species and their eggs seemed to be their favored foods. The carcasses, dried wings, and egg shells of these birds were scattered all over the island.

The King Islanders summering at Nome make frequent trips to Sledge Island in July and August for eggs and young birds, and undoubtedly these people carry out the greatest amount of predation with which the breeding birds must contend. Even so, it does not appear likely that their activities are in any significant way reducing the avian population of the island.

There have been two previous ornithological investigators on Sledge Island. On August 21 and 22, 1910, John Koren, then collecting birds in Alaska for John E. Thayer, visited the island and secured sixty-two specimens, including the following

species: *Lunda cirrhata, Fratercula corniculata, Uria lomvia, Uria aalgae, Phalacrocorax pelagicus, Cepphus columba, Cyclorrhynchus psittacula, Rissa tridactyla, Numenius hudsonicus,* and *Erolia ptilocnemis.* Nothing has ever been published on this collection. The writer is indebted to J. L. Peters of the Museum of Comparative Zoology for the foregoing information.

R. Horring (Report of the Fifth Thule Expedition 1921–24, 1937, pp. 4, 74, 90, 93-96) mentions a small collection of birds from Sledge Island secured by K. Rasmussen on August 30, 1924. These specimens include the following: *Larus schistisagus,* one juvenile of questionable identification; *Cyclorrhynchus psittacula,* two adults; *Lunda cirrhata,* four adults; *Fratercula corniculata,* three adults; *Uria lomvia,* one adult; and *Phalacrocorax pelagicus,* one adult and one juvenile. The writer wishes to thank E. W. Godfrey of the National Museum of Canada for directing his attention to this reference.

From an ornithological point of view the most important aspect of the island is the small cliff rookery at the south end. The following seven species were found nesting or preparing to nest on the cliffs: Tufted Puffin, Horned Puffin, Paroquet Auklet, Common Murre, Northern Murre, Pacific Kittiwake, and Pelagic Cormorant. Possibly one other species, the Pigeon Guillemot, was nesting here.

The following list of birds, most of which have not been recorded previously from the island, includes all species observed by the present writer, with some notes on their ecology and life histories.

Gavia arctica. Arctic Loon. A single individual was seen in the cove on the southwest side of the island on June 11. Several other loons, probably all of this species, were seen on the open water between Nome and Sledge Island on June 15.

Phalacrocorax pelagicus. Pelagic Cormorant. This species is apparently the earliest nester and one of the commonest birds on the island. Approximately half of the nests examined between June 8 and 14 contained four to six eggs, while many others held one or two. Very few of the occupied nests were still empty on June 14. This cormorant was nesting in considerable numbers all over the cliffs on any suitable ledge, but the greatest concentrations of nests occurred along the rim of the rocky precipices just below the grassy slopes. In these situations nests were often located no more than a foot apart. Immediately west of the cliffs at the edge of the water were a number of large, flattened boulders, which provided loafing platforms for hundreds of cormorants. Some of these rocks were being used by cormorants at points all around the island.

Philacte canagica. Emperor Goose. An adult alighted on the sandspit for a few minutes on June 11.

Anas carolinensis. Green-winged Teal. A female teal was flushed from the sandspit on June 10. She was flushed from the same spot again on June 11 and 12. Each time she flew up the slope and settled into a grassy area among some rocks.

Aythya marila. Greater Scaup Duck. One was seen swimming by the sandspit on June 9.

Clangula hyemalis. Old-squaw. This duck was common in the waters about the island, most often being seen in groups of five or six. They were particularly common in the cove on the southwest side.

Histrionicus histrionicus. Harlequin Duck. A pair was seen in the cove on June 12.

Somateria v-nigra. Pacific Eider. Flocks of these ducks were seen over the open water between Nome and Sledge Island on June 7. They were also common in the little cove on the southwest side of the island. Occasionally two or more were seen flying very low across the sandspit.

Mergus serrator. Red-breasted Merganser. On June 11 a male was seen sunning himself on a flat rock by the edge of the water on the west side.

Buteo lagopus. Rough-legged Hawk. A pair of these hawks was seen perched on some basaltic pinnacles immediately west of the cliff rookery on the evening of June 8. They were seen frequently in the same area on succeeding days, sometimes circling high in the air, sometimes perched on one of the pinnacles, and it was assumed that they had established a territory there. On June 12 one of the pair was seen swooping down over the bird rookery.

Grus canadensis. Sandhill Crane. On June 14 four cranes were seen milling about in the air over the top of the island, and about half an hour later a flock of approximately thirty birds flew around

the island at a considerable altitude. The four birds first seen joined this group and presently all moved off to the south.

Eudromias morinellus. Dotterel. On June 14, while returning to camp over the flat top of the island about 9 p.m., I encountered a pair of very gentle birds running about from rock to rock. In the diffused light they could only be distinguished as some species of plover, but as they continued to pay no attention to my slow approach, I was able to come within ten yards of them. It was then discovered that they were a beautiful pair of Asiatic plovers, which subsequently proved to be this species. When I returned at 10:30 p.m., they still showed no fear, and, indeed, often approached me directly out of curiosity. Both birds were obtained as specimens and are now deposited with the Alaska Cooperative Wildlife Research Unit. Bailey in his Birds of Arctic Alaska (1948:199) says of the Dotterel, "These colorful Asiatic birds are stragglers along the northwest coast of Alaska, but it is likely that additional field work will show they occur more regularly than records indicate, and that they breed occasionally from Wales to Point Barrow." The fact that these birds were obviously mated lends additional support to his prediction.

Arenaria interpres. Ruddy Turnstone. A pair of turnstones alighted on the sandspit on the evening of June 12 and foraged among the seaweed for an hour or so.

Erolia melanotos. Pectoral Sandpiper. One was seen on the sandspit on June 8 and three more on top of the island on June 13.

Erolia bairdii. Baird Sandpiper. A nest containing four eggs was discovered on June 12 on the western slope near the top of the island and another, also containing four eggs, was found on June 14 about a dozen yards above the first nest.

Stercorarius pomarinus. Pomarine Jaeger. One was observed flying in the air over the open water between Nome and Sledge Island on June 7. As the floating ice was moving past the sandspit on June 11, two of these jaegers were seen harassing a group of kittiwakes perched on one of the ice cakes.

Stercorarius parasiticus. Parasitic Jaeger. Two or three of these jaegers were nearly always to be seen flying about the cove on the southwest side of the island, where they constantly harassed the kittiwakes and murres which congregated there in large numbers.

Larus hyperboreus. Glaucous Gull. This was the only large gull observed on the island. It was fairly common about the cliff rookery, where it was usually to be seen perched high on top of some pinnacle, doubtless watching for exposed eggs, upon which it feeds almost exclusively during the nesting season.

Rissa tridactyla. Kittiwake. This was one of the commonest birds on the island, being found in flocks swimming about the shore line and, of course, particularly about the cliff rookery, where many hundreds of them were preparing to nest. Old nests were being reoccupied and fresh material was being added to them. No eggs were found during the time of these observations. Kittiwake nests were situated only on the more precipitous rock faces, especially in deep clefts formed in the basaltic rock.

Uria aalge. Common Murre. This bird was very abundant at the cliff rookery and in the water about the island, being equaled in numbers only by its near relative.

Uria lomvia. Northern Murre. This species seemed to be somewhat ahead of the former in its breeding schedule. *U. lomvia* was frequently seen in the act of copulation during the course of these investigations and two eggs were found, one each on June 9 and 12, whereas no observation of copulation between individuals of *U. aalge* was made and no eggs were found. The two species do not segregate into separate colonies, but any given nesting shelf was usually occupied by only one species at a time, and there was some evidence that with the progression of the breeding season each nesting site becomes the particular property of one species only. Murres also preferred the precipitous clefts in the rock for their nesting sites. They also used pinnacles jutting out of the water near the shore line.

Cepphus columba. Pigeon Guillemot. This species was fairly common in the water about the cliff rookery, but it was never seen on land. As the guillemot is a late breeder, it probably does not assume its place in the rookery until sometime after July 1.

Cyclorrhynchus psittacula. Paroquet Auklet. A single pair was found inhabiting a burrow under loose rocks which had fallen down from the cliffs and piled up in a mass near the edge of the water. They were flushed out of the burrow on June 9, and one was seen to enter it on June 12. There were no eggs.

Fratercula corniculata. Horned Puffin. This bird was very common about the cliff rookery and the pinnacles on either side of the basaltic ridge and in the water all about the island. It seemed to

prefer to perch high on the crests of the ridge or on the columnar pinnacles along the southwest and east shore lines. It was seldom seen in association with the other cliff birds, except in the water where they all mingled freely.

Lunda cirrhata. Tufted Puffin. Slightly less common than the preceding species, this puffin was found in association with the murres, kittiwakes and cormorants. Like the cormorants this bird preferred to perch just below the lower edge of the grassy slopes where the rocky precipices drop off. Their burrows were almost entirely in such locations. This species was not nearly so shy as the Horned Puffin.

Asio flammeus. Short-eared Owl. One was seen on top of the island on June 14 by Mr. George Schumann, who accompanied the writer.

Hirundo erythrogaster. Barn Swallow. One was observed flying over the sandspit on June 14.

Corvus corax. Raven. On June 12 one was seen flying along the southwest shore line, and four were heard and later seen about the cliff rookery on June 14.

Motacilla flava. Yellow Wagtail. This bird was seen nearly every day in flocks of a dozen or so, mostly on the western slope among the rock stripes. Mr. Schumann caught one by hand at a little spring near the sandspit on June 9. There was nothing apparently wrong with it.

Anthus spinoletta. Pipit. Mr. Schumann found a nest containing five eggs on the west slope on June 10. Several single individuals were seen on succeeding days and a specimen was collected on June 11.

Acanthis sp. Redpoll. A flock of half a dozen was seen on the sandspit on June 13.

Passerculus sandwichensis. Savannah Sparrow. Four pairs of this species inhabited the sandspit in the vicinity of the drift wood shelters. Two of the males used these structures for song perches. Apparently territories were being established.

Calcarius lapponicus. Lapland Longspur. One was seen on the sandspit on June 14.

Plectrophenax nivalis. Snow Bunting. This species was common everywhere in the rock stripes along the slopes and on the basaltic ridge. Pairs had been formed, and territories were well established; but no nests were found.

Junco hyemalis. Slate-colored Junco. One was seen on the sandspit on June 10.

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