

NOTES ON THE BIRDS OF AMCHITKA ISLAND, ALASKA

By JOHN KROG

From May 28 to June 17, 1952, Mr. Everett L. Schiller and I had the opportunity to visit the Aleutian Islands in connection with an investigation of the sea otter sponsored by the United States Fish and Wildlife Service. During my stay at Amchitka (latitude 51° 30' N, longitude 179° E), observations were made on the eastern part of the island, from about 15 miles west of Constantine Harbor to East Cape. A few birds collected for parasitological studies were prepared as specimens and were subsequently deposited in the United States National Museum, Washington, D.C. Observations of birds could be undertaken only to a rather limited extent. For this reason no attempt was made to carry out a quantitative or qualitative survey of the avifauna of the island as a whole, and only positively identified birds are reported here.

The abundance of birds and the number of species at Amchitka was at first sight disappointing, as I had expected that large nesting colonies of sea birds would be present and that the many ponds and lakes would be inhabited by considerable numbers of ducks and shore birds. But actually the composition of the avifauna presents some features which are unique. Inasmuch as comparative faunistic investigations in the Aleutian Islands, aside from the comprehensive studies now being published by O. J. Murie, are rather scarce, the following descriptive notes and information, although limited, may be of some value to future workers interested in that area.

BIRDS ON INLAND HILLS

The rolling hills between the many lakes and ponds of the interior of the island were covered mainly with a soft layer of lichens and mosses, interrupted only in places by grassy slopes and higher knolls covered with a heather-like vegetation. The Rock Ptarmigan (*Lagopus mutus*) would be expected to be quite common in such a habitat, but only one pair was seen, in a steep ravine above a creek bed. It is possible, however, that at the time of our visit, they were staying in the higher western part of the island.

Several pairs of Parasitic Jaegers (*Stercorarius parasiticus*) were found nesting on the tundra. A couple that were regular visitors to our garbage dump were taken as specimens on June 5 (♂, weight 365 grams; ♀, weight 521 grams). Both these birds and all others seen on the island were dark-phase individuals. Bent (1912) reported that the jaegers at Kiska were of the dark type and W. Sprague Brooks (1915) found only dark-phase birds at Demarcation Point. Thayer and Bangs (1914) reported a nest on Kodiak at which both birds were dark. Murie (personal communication) says that most of the Parasitic Jaegers observed by him in the Aleutians were of the melanistic type, the only geographic area where he had found this to be true. A number of Parasitic Jaegers observed and collected by me in a six weeks' stay at Anaktuvuk Pass in the Brooks Range in 1950 were, on the other hand, all of the light-phase type. T. Soot-Ryen (1948) states that to the north light-colored birds become more frequent than dark. Thorough investigation would be of interest to determine the frequency of occurrence of dark-phase jaegers in northwestern Alaska and to find out if a stable population of this type is present in certain localities for more than one season.

Gulls and terns were also among the inhabitants of inland areas, although the gulls were not found nesting there. It was, for me, quite unexplainable to see big flocks of up to 100-200 gulls, consisting mostly of immature Glaucous-winged Gulls (*Larus glaucescens*) crowded together on a small knoll. Such assemblies were observed in two different localities about 10 miles apart on June 4 and they were seen again in the same general locations about a week later. At first it was thought, from their actions, that

the gulls were attracted by a carcass, but examination of the spot where they were sitting did not reveal any dead animal or any other apparent reason for the behavior or the gathering of the birds. Murie (MS) reported having seen a similar gathering of immature Glaucous-winged Gulls back in the hills at Unalaska on May 2. He said that they appeared to be pulling up small clumps of grass and regurgitating material that consisted mainly of seeds.

A gathering of about 24 Bald Eagles (*Haliaeetus leucocephalus*) was also reported by Murie (*op. cit.*), on June 23, on some grassy slopes of Segula Island. The birds were a mixture of both young and old. Search of the place for a carcass or other reasons for the assembling of the birds was unsuccessful. The possibility that the eagles as well as the gulls were attracted to those places by certain kinds of edible plants might offer an explanation for these assemblies, although the new vegetation was barely evident on Amchitka at the time my observation there was made.

The only tern observed on the island was the Arctic Tern (*Sterna paradisaea*), which was found nesting quite commonly on dry places in the interior of the island.

The Lapland Longspur (*Calcarius lapponicus*) was by far the most numerous bird on the tundra, and several pairs could often be seen at the same time. Nesting seemed to be well along at the time of our arrival on May 28.

BIRDS OF INLAND PONDS AND LAKES

The many ponds and lakes of the island should furnish an excellent habitat for water birds. Although the bird fauna in that habitat at the time of our visit was not particularly varied, a fair number of individuals of a few species were always found scattered about the lakes. Two pairs of Red-throated Loons (*Gavia stellata*) were seen, and from their behavior they were believed to be nesting, although no nests were found. A female taken and examined by Mr. Everett L. Schiller contained in the oviduct one fully developed egg and one with only the soft shell present. The Northern Phalarope (*Lobipes lobatus*), on the whole a rather scarce bird, was seen on small ponds. Mallards (*Anas platyrhynchos*) were observed only once, and no sign of nesting was detected. The most common duck was the Green-winged Teal (*Anas crecca crecca*) which was present singly or in pairs on almost every pond visited. Among the teals collected, none of the American form was found, and no birds were observed that were thought to belong to this race. Greater Scaups (*Aythya marila*) were also usually present on the bigger lakes in flocks of up to half a dozen birds. Both teals and scaups seemed to be nesting on the island. Harlequin Ducks (*Histrionicus histrionicus*) were seen only on the first days of our stay, and it was assumed that they were in migration at that time.

Along the many small brooks and streams connecting the lakes and along their drainages to the ocean, Lesser Yellow-legs (*Totanus flavipes*) and Wandering Tattlers (*Heteroscelus incanus*) were occasionally found throughout the period of the study.

BIRDS ALONG THE SHORE

Bald Eagles were quite numerous on the island and were nesting in the steep cliffs above the shore line. Golden Eagles (*Aquila chrysaetos*) were also seen, but only occasionally, and no nest was found. Along the rocky shore the Black Oyster-catcher (*Haematopus bachmani*) was commonly seen in pairs and was believed to be nesting. The Rock Sandpiper (*Erolia ptilocnemis*) was common in flocks along the beach on the first days of our stay, but was not observed in any numbers later. A specimen of the Bar-tailed Godwit (*Limosa lapponica*) was collected on June 2 on the beach near Constantine Harbor (male, weight 303 grams), but no others were seen. Kittiwakes (*Rissa tridactyla*) were seen also from time to time along the shores but no nest was

found. The Rosy Finch (*Leucosticte tephrocotis*) was found nesting in considerable numbers together with the Snow Bunting (*Plectrophenax nivalis*) in the steep cliffs above the shore line. The latter was also commonly found nesting in the many cut banks and gravel pits in the construction area around Constantine Harbor. From examination of crop contents, Snow Buntings and Rosy Finches were found to feed mainly on several different kinds of insect larvae.

BIRDS ON OFFSHORE ROCKS AND ISLANDS

Although occasionally found nesting in inaccessible places above the shore line, most of the sea birds were nesting on offshore rocks and islands where, in places, small colonies could be found. On a little island at the entrance to Constantine Harbor a colony of Pelagic Cormorants (*Phalacrocorax pelagicus*) was found nesting together with Common Eiders (*Somateria mollissima*), Glaucous-winged Gulls, and Tufted Puffins (*Lunda cirrhata*). A single specimen of the Pigeon Guillemot (*Cepphus columba*) and one of the Crested Auklet (*Aethia cristatella*) was found on the island, but no nesting of these species was observed. A Lesser Canada Goose (*Branta canadensis leucopareia*) was collected on June 10 at this locality (male, weight 1954 grams). The specimen is now deposited in the United States National Museum. Delacour's conclusion from his study of Canada Geese (1951) that this race is probably extinct, therefore seems premature.

The eider ducks occupied the lower part of the island while the gulls and the puffins frequented the higher areas. One eider, however, was found nesting among the gulls, which was a surprising occurrence in view of reported predation by gulls on the young of eiders. All but the eiders were well along with their nesting by June 15, when the colony was last visited; only the eider nest among the gulls contained eggs at that time. Puffins were nesting mainly in holes in the ground, but a few nests were found in rock crevices and under big boulders. Other colonies of cormorants and puffins were found on the south side of the main island.

Almost all the nests of sea birds were found on offshore rocks and other rather steep and inaccessible places. This distribution may be related to the introduction of rats and foxes on the island. During my stay no foxes were seen and, from the relatively few tracks observed, I gained the impression that the fox population at that time was very low. It is possible, however, that they were frequenting the higher western end of the island at that time. A scarcity of rats was also noticed. Signs, however, showed that both species must have been abundant previously. Their scarcity at the time of our visit might be attributed to a successful poisoning program carried out shortly before by the Fish and Wildlife Service.

OBSERVATIONS ON FOOD HABITS OF BALD EAGLES

Three nests of Bald Eagles were found, one with two young and two with one young each. One of the nests found near Constantine Harbor was observed for about a week. The nest had, when found on June 10, one young about 1½ to 2 weeks old. Piled up in the nest was a large amount of food and, among other things, three young sea otters (see figs. 1 and 2). One of the young sea otters weighed 1137 grams. The carcass, lacking head, was in good condition; its length was 24 centimeters. Of the two other otters only the skins were left. The skin had been removed in one piece from the abdominal side, the legs turned inside out and the tarsal bone cut to loosen the meat from the skin in a very "professional" manner (see fig. 2). The possibility that the sea otters were found dead on the beach by the eagles seems very unlikely, as no animals were found which had died recently even after considerable time was spent looking for carcasses for other reasons. An autopsy performed by Mr. Everett L. Schiller on the freshly killed

sea otters revealed no immediately visible pathological changes, and the freshness of the blood and meat support the assumption that the animal was a healthy one, captured and killed by the eagle the very morning it was found. All three sea otters found in the



Fig. 1. Young Bald Eagle in nest east of Constantine Harbor, Amchitka, June, 1952.

nest were decapitated, and no fragments of skulls were present, a fact which suggests that decapitation occurs before the captured animals are brought to the nest.

The list of all food items found in an eagle nest on June 6, 1952, is as follows:

- 1 Fulmar (*Fulmarus glacialis*), whole bird.
- 1 Eider (*Somateria mollissima*), partly eaten.
- 1 Glaucous-winged Gull (*Larus glaucescens*), wing.
- 1 Black Oyster-catcher (*Haematopus bachmani*), young, whole bird.
- 1 Pelagic Cormorant (*Phalacrocorax pelagicus*), partly eaten.
- 1 Duck (unidentified), skin.
- 1 Loon (unidentified), young, whole bird.
- 3 Rats (*Rattus norvegicus*), whole animals.
- 3 Sea otters (*Enhydra lutris*), all young, two skins and one recently killed.
- 12 Kelp greenling (*Lebius superciliosus*), whole fish.
- 1 Atka mackerel (*Pleurogrammus monoptyerygius*), partly eaten.
- 1 Cod (*Gadus macrocephalus*), whole fish.
- 1 Liparid (unidentified), whole fish.

Murie (1940) examined 28 nests of the Bald Eagle in the Aleutians in 1936-1937 but did not find any sign of predation on the sea otter, although he did mention that natives reported its occurrence as prey. I would, of course, not state that predation of the Bald Eagle upon the sea otter is a rule, as only one of the two nests that could be closely examined had sea otter remains in it. But with the present abundance of sea otters at Amchitka it is not at all unlikely that sea otters are taken, as predation within certain limits quite naturally is directed toward the easiest available among the species that can serve as a source of food. There is also a possibility that one member of this pair of eagles had "specialized" in preying on sea otter, as it was noticed that when one of the pair was taken as a specimen for study of parasites, no more sea otters were

found in the nest in the following days when I had an opportunity to visit it. Specialization of that sort is known to occur among birds. Hair of sea otter was recovered by Schiller from the stomach of the adult eagle that was killed.

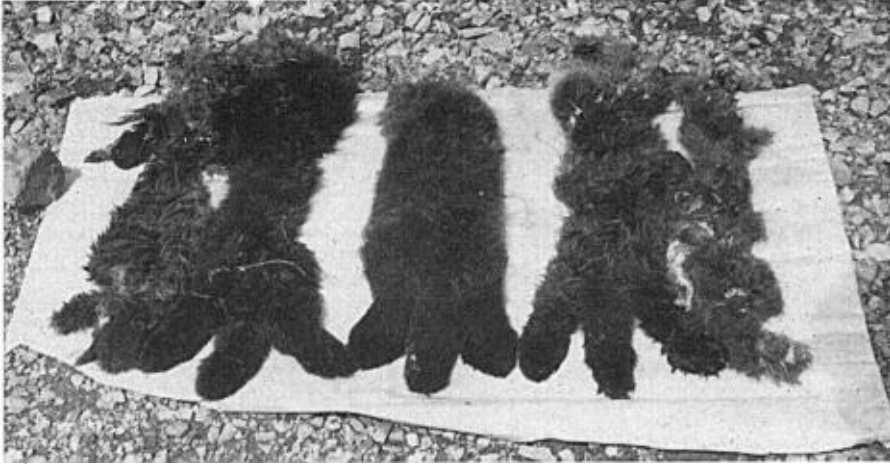


Fig. 2. Sea otter young found in the nest shown in figure 1.

It is interesting to find that at Amchitka fish make up a large part of the diet of the eagles' young, whereas Murie (1940) found that fish made up only 6.7 per cent of the foods accumulated in their nests. He discusses the possibility that the fish may easily be picked up on the beaches. That the fish examined by me were really caught alive was obvious although not observed directly. Fresh greenling (*Lebius superciliosus*) were found in both nests checked for prey, and those just recently brought to the nest had conspicuous claw marks on both sides of the back showing that they were caught alive in the ocean.

Further investigations of eagles' nests on Amchitka are needed to determine the degree of predation by Bald Eagles on the sea otter. The instance reported here could, as mentioned above, well be an exception to the rule. But it seems always wise to look upon predatory relationships among animals as variable, and hence subject to changes according to the relative occurrence of the prey species involved. From this point of view it is not surprising that my findings differ from Murie's, because at the time of his study the population of the otter was quite low. Last summer's unofficial estimate of the number of sea otters in the Amchitka colony, made by the Fish and Wildlife Service, was 1500. If in error, this estimate is probably too low rather than too high. As the populations of rats and of birds in general were low, predation on sea otters is understandable and to be expected. High mortality among sea otters from different causes, due to possible, if not probable, incidence of epidemics (Rausch, 1953; Schiller, MS) as well as to predation, such as that reported in this paper, may indicate that the number of sea otters at Amchitka has now reached a level where natural regulation of the population is in operation and hence that the size of this sea otter population is now approaching or has reached its natural density limits. If future investigations should show a continuation of the present situation in the sea otter colonies at Amchitka, an attempt to transplant some of the animals to localities formerly known to be inhabited by otters, as earlier undertaken by the Fish and Wildlife Service, might be worth reconsidering.

This would relieve the area around Amchitka from possible effects of overcrowding and also help reestablish this interesting species in parts of its former distributional area.

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