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### BREEDING HABITS OF BONAPARTE'S GULL.

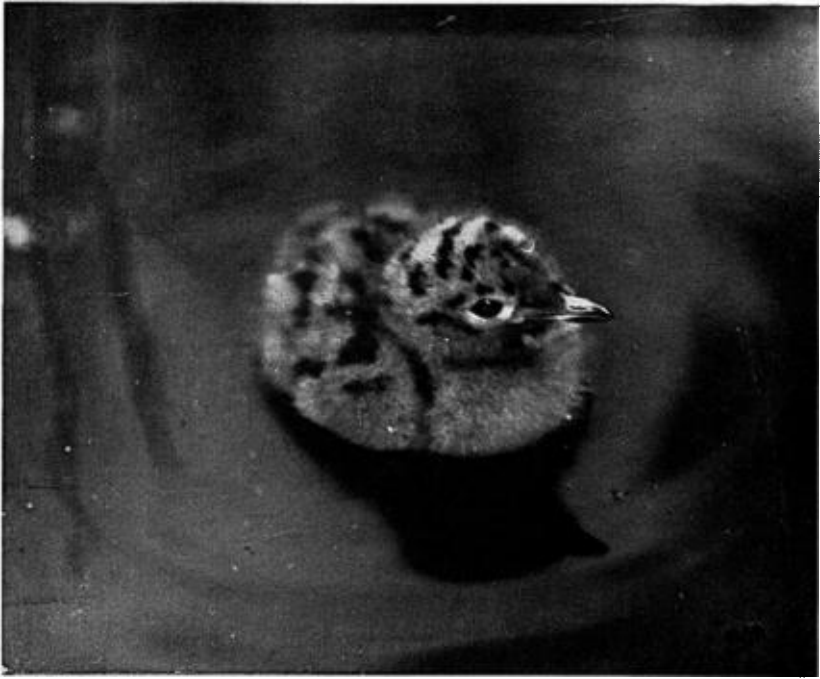
BY ARTHUR C. TWOMEY.

*Plate XIII.*

BONAPARTE'S GULL (*Larus philadelphia*) one of the smallest of our North American Gulls has, in migration, a very wide distribution over the continent and can be found nearly everywhere from Alaska and Hudson Bay, to Yucatan. Its breeding range, however, is confined to the northwestern spruce forest districts of Canada and, although familiar as a fairly common migrant to the greater number of North American ornithologists, but little has been known until lately of its breeding habits.

In the northern migrations of early April these small black headed birds are seen slowly drifting north in small flocks. They arrive at their breeding grounds by the first of May. The first two weeks are spent in locating nesting sites and feeding on the surfaces of the innumerable small lakes which feature their nesting habitats.

The writer has been privileged to be on widely separated breeding grounds of this Gull, on those farthest inland, in Alberta, and on those adjacent to Hudson Bay, a few miles south of Churchill. The Gulls observed inland do not appear to travel in large flocks but seem to gradually drift in, by twos and threes, very quietly and without ostentation. On Hudson Bay, however, they appear in flocks of from twenty-five to fifty and feed on the shoals, apparently without much thought of nesting. As the season advances they become more active and the courting and mating



Photos by Olin S. Pettingill, Jr.

DOWNY YOUNG AND NEST OF BONAPARTE'S GULL  
CHURCHILL, MANITOBA.

begin. This is accompanied by much display and commotion. The birds fly about in twos and threes, swooping and diving at one another and uttering their shrill Tern-like notes or they will suddenly alight on dead branches of spruce trees overlooking small lakes and there continue their gymnastics. The love making is accompanied by a great deal of display as two birds crouch low on the branch of the tree and face each other, bobbing up and down, and at the same time screaming their shrill cries, bill wide open, wings slightly raised, and the feathers along the crown and nape of the neck standing on end. Due to the similarity of plumage in the male and female it is very difficult, if not impossible, to distinguish between the sexes of the adult birds. However, during the above performance, very often one bird is seen to be taking the aggressive and is probably the male. After the two have kept this up for two or three minutes they suddenly stop their cries and sit beside one another without further display or one bird, losing interest, may fly away terminating the performance for the time being.

When the nest building begins the two mated birds work together. Though the nest is not large, having an outside diameter of ten inches and inside depth of about one inch, much time seems to be demanded in its construction. The two birds seem to continue their mating antics as mentioned above, but at this time only when one of them has brought in a twig or piece of lichen. The bird with the material is received with a great clamor by its mate. Considerable ceremony seems to accompany the laying of the material in place on the nest. When finally the nest is completed it is only a matter of three or four days until the full set of three eggs is laid, although nests have been found containing two well incubated eggs.

All this time the proud male sits on the top of a nearby spruce tree and watches or goes off to feed on the little muskeg lake that the pair has taken possession of. From the egg-laying time onward both birds strenuously resent any intruder. If a Crow appears the bird on guard immediately goes into action, diving straight at the interloper who departs without seeming to pay much attention to the swift-winged nuisance. If a man appears both birds at once take up the fight by diving straight down from

fifty feet or so at his head, at the same time expressing their excitement by sharp notes of disapproval "Te-er" and the resounding swish of their wings.

These performances were observed within a group of small muskeg lakes in northern Alberta during the latter part of May, 1929, when these Gulls were found nesting in isolated pairs, usually a pair to each muskeg lake. All the nests were in spruce or tamarack from ten feet to twenty feet high. A lone one forty feet above the muskeg is the only nest built more than twenty feet up so far encountered. The nests are usually made of dead tamarack and spruce twigs closely held together by lichen, lined with the outer bark of spruce trees, and placed within a foot of the trunk of a spruce or tamarack tree. Due to the material of which the nest is made and the large branches on which it is built it is extremely hard to locate. The difficulty is enhanced by the fact that both birds are in the habit of flying right at the intruder even if the nest be a quarter of a mile away.

At the colonies visited the writer has rarely found a nest that was not either over the very edge of a lake or some fifty or sixty feet back from the water. The one exception to this rule, however, was in the Churchill district of Manitoba, where nests were found in densely wooded sections with lakes not nearer than two or three hundred yards. At no time has the writer found more than one nest in the same tree. The birds that have come to his notice have all been nesting separately and never less than a hundred feet from one another. In some cases, in central Alberta, the birds were scattered over the margin of small lakes at intervals of a half mile or more. Sir John Richardson, however, stated that at Great Bear Lake he encountered these Gulls "nesting in a colony, resembling a rookery, seven or eight in a tree, the nests being formed of sticks laid flatly."

Roderick MacFarland gives an interesting account of the nesting of this Gull in 1891. "Thirty-seven nests are recorded as having been taken with eggs in them, between the tenth of June and the tenth of July in the wooded country in the neighborhood of Fort Anderson and on the Lower Anderson River. They were all built in trees at various heights (from four to fifteen and even twenty feet) from the ground, and with one exception were composed of

down and velvety leaves and twigs held together by stringy turf. They were made of small sticks and twigs lined with grass and moss. The parents always fly about in close proximity to the nest and scream vehemently when explorers in the interest of science, are obliged to deprive them of their eggs or young and not infrequently shoot one of them. They seldom lay more than three eggs."\*

While at Churchill, Manitoba, on Hudson Bay, in the summer of 1931, the writer noted large numbers of Bonaparte's Gulls feeding in the harbor and along the shores of the Bay. They were adults in full spring plumage, and moved about in scattered flocks of twenty-five to fifty. This sight was very familiar until about the twentieth of June after which the flocks were noticed going inland every evening while in the morning they would be seen coming back to continue their feeding on the tide flats.

On July 5 I decided to take a trip inland and see just where they were nesting. Ten miles south of Churchill, I commenced hunting for them and had barely entered the spruce forest when my hat was nearly knocked off by a sudden dive of a Bonaparte's Gull. I did not see the bird so was entirely taken off my guard. A thorough search for a nest was made but no trace of one could be found. However, by this time, at least a dozen birds were swooping and screeching forth their protests. First one would take the aggressive and after it was tired another would appear from nowhere, to dive at my head.

Finally, after much wading through wet muskeg and climbing a dozen trees, a nest was found in a spruce about fifteen feet from the ground. It contained three downy young, apparently not more than a day or two old, and still too weak to stand. As this investigation was proceeding the parents were much excited, screaming and swooping at me in such a manner that it was almost necessary to duck my head.

No more young Gulls were found that day but on July 12 a return visit was made in search of other nests. The adult birds as usual came out of their way to let me know that there were many

\* See also a detailed account of the nesting of the bird in 'The Auk' 1926 pp. 288-294, by A. D. Henderson; and in 'The Canadian Field Naturalist,' September, 1931, by F. L. Farley.

more young birds in the vicinity. Another search was at once started but after two or three hours of tiresome tramping it began to look as if it were utterly hopeless to continue the quest in that particular area. However, at this juncture, a single bird suddenly dropped down and began to scream for a minute or so and then was off as though nothing in the world worried it. I noticed it making straight for some scattered spruce about half a mile away, and watched it with my glasses. It soon dropped out of sight, not to appear again. This seemed unusual, so I decided to work over towards it. Before reaching the place, two birds appeared and began the battle. The closer I approached the more determined were they that the intruder should be driven away. This performance of course was all the more evidence that there must be a nest of young in the vicinity. After climbing every spruce tree within a radius of two or three hundred yards, search was again given up. Just about ready to discontinue, I chanced to notice a slight movement in a small pool of water, nearby, where a downy Bonaparte's Gull was found floating around gayly in the middle of the pool. On further investigation a second bird was discovered. With the water only two or three yards in diameter, it was not difficult to secure the birds. They were, however, frightened and had no difficulty in hiding themselves in the tundra which their coloration so much resembled. These two birds were larger than the first young taken and looked as though they were five or six days old. This suggested that the young leave their nests very early, spending the first part of their existence in the small muskeg sloughs. Just how they managed to leave their nest and reach the water was puzzling. Were they carried by their parents or did they tumble out of their nests and make their way to the water? A further unsuccessful search for their nest proved that it could not be closer than two hundred yards. If they tumbled to the ground they would certainly have a very difficult, if not impossible task to make their way over the rough surface of the tundra to water. I did not succeed in obtaining an answer to this problem.

Following is a description of a downy Bonaparte's Gull which I collected, the basis of colors being Ridgway's 'Color Key':—  
Specimen No. 200, July 5, 1931; Churchill, Manitoba, Canada.

*Back:* vinaceous-cinnamon clouded and spotted with irregular blackish brown blotches.

*Head:* a little lighter, about light pinkish cinnamon; an irregular semi-circular blackish brown patch extending from nape to each side of lower part of crown; remainder of crown is covered with uneven blackish brown spots at base of upper mandible and at each side of throat. Blackish brown line running through eye is broken a little behind base of upper mandible.

*Underparts:* unmarked except for the dark-brown spot on each side of throat; throat and lower portions of breast light pinkish cinnamon; upper part of breast has a distinct vinaceous-cinnamon band. Flanks and posterior region are of an indistinct gray due to the basal gray of the down. Wings resemble the back except that the forearm has a blackish brown patch at its proximal and as a whole has a darkish tinge, again due to the basal gray of the down. The phalanges are whitish cinnamon.

*Bill:* in life, dark blue-black with a dull gray flesh-color at base; in skin, brownish tip and beyond the angle brownish flesh; egg-tooth whiter.

*Legs and Feet:* in life, fleshy-buff with a grayish caste; in skin, dark yellowish brown.

*Iris:* dark brown.

*Camrose, Alberta, Canada.*