

ON THE YELLOW-BILLED LOON

GEORGE MIKSCH SUTTON

THE Yellow-billed Loon or White-billed Northern Diver (*Gavia adamsii*) breeds in fair numbers in parts of Victoria Island, the largest island in the western part of the Canadian Arctic Archipelago. In the summer of 1962 one pair (perhaps two pairs) nested on a large lake near the eastern foot of Mt. Pelly, not far from our party's headquarters at the village of Cambridge Bay, and several pairs nested on large lakes north and northwest of Mt. Pelly.

The species arrived from the south on or about 9 June, when David F. Parmelee saw one flying over the lake-dotted area east of Cambridge Bay. On 13 June, at about 1 AM, while Dr. Parmelee and I were on Mt. Pelly, we heard a Yellow-billed Loon calling in the wild country off to the north. The cries were like those of the Common Loon (*G. immer*) in that they had a piercing, quavering, far-carrying quality. Later that day we watched a Yellow-billed Loon as it rose from the shore-lead of a big lake just south of Mt. Pelly.

On 17 June, J. G. Hunter, of the Fisheries Research Board of Canada, brought us a fine male Yellow-billed Loon he had found dead in a fish-net at the west end of Ferguson Lake, a very large lake not far north and west of Mt. Pelly. The bird weighed $11\frac{3}{4}$ lb; was $34\frac{3}{8}$ inches long from bill-tip to tail-tip ($39\frac{1}{2}$ inches from bill-tip to toe-tip); and had a wingspread of $60\frac{1}{2}$ inches. The bill was dull ivory white, faintly tinged with bluish olive-gray throughout the basal half of the mandible. The eyes were rich chocolate brown, not red, and the iris was encircled by a narrow, pale bluish-gray ring that did not show unless the eyelids were pushed back. The tarsi were very dark gray on the outer side and grayish-white, with a faint bluish-olive cast, on the inner side. The specimen was extremely fat, the stomach empty. The left testis measured 27×6 mm, the right testis 16×2 mm. I made a water-color sketch of the head before skinning. Since the bird had been taken from the net two days before, the colors of the fleshy parts may have changed slightly.

On 8 July, at a large, deep, irregularly shaped lake just south of the east end of Mt. Pelly, Dr. Parmelee and I had a never-to-be-forgotten look at a Yellow-billed Loon as it popped to the surface not far from a long, narrow, rocky island, whose low-lying, nearer end was about a hundred yards from shore. In 1960, a friend of Dr. Parmelee had found one pair of Yellow-billed Loons nesting on this island and another pair on a similar island in a wholly different part of the lake. We had a portable boat with us, but the wind was far too strong for safe use of so high-riding a craft. As we were watching the whitecaps, a vast sheet of ice broke free of the island and bore down upon us. The near edge hissed as it scraped against the shore and broke into hundreds

of cubes so similar in size and shape they looked almost machine-made. The loon did not call, nor did it move closer to the island.

On 18 July, H. A. Stephens of our party and I put the portable boat to use. As we approached the island's low eastern tip, we realized that many birds were nesting there. Sabine's Gulls (*Xema sabini*) and Arctic Terns (*Sterna paradisaea*) began diving at us even before we touched shore and followed us wherever we walked. Presently we found two nests of the Oldsquaw (*Clangula hyemalis*) a few yards apart and not far from the scattered gulls' nests. The loon's nest was along the north shore, only a few rods from the island's tip and within a few yards of all the other nests mentioned. It was a shallow, moist, unlined depression in an 8-inch high turf-mound at the island's very edge. Near it the water was deep. In it were two eggs about an inch apart, one of them pipped, the hole up. We could see the bill of the chick moving. After a considerable search with our binoculars we located one of the parent birds in the water several hundred yards away.

I wanted to draw a newly hatched Yellow-billed Loon direct from life. Since paper and paints were several miles away in the village, we decided to take the eggs to the incubator we had at our tent and hatch them there. We rowed to shore, put the eggs in my collector's creel under two chick Parasitic Jaegers (*Stercorarius parasiticus*) we were taking back alive, and walked to the village as rapidly as possible. We knew that the pipped egg was in good order for we could hear the cheeping of the chick inside. Another cry, given infrequently by the unhatched chick, was a faint, high, long-drawn-out wail that was curiously like one of the cries of the adult.

The pipped egg hatched during the night. On the morning of 19 July, I helped the chick out of the shell, noting, as I did so, that a considerable mass of gelatinous "after-birth" remained in the shell. While replacing the incubator's lid, to the inner side of which a thermometer was attached, I bashed in the other egg from end to end, but, clinging to hope that the chick might survive, I covered the egg with wet paper and began drawing.

My model (Fig. 1) was surprisingly agile. It made no attempt to stand upright, but, shoving vigorously with its feet, it moved in rapid jerks across the table-top, refusing to remain quiet unless I held it in my hand. I could hold it in my left hand and work with my right, but the tips of my fingers continued to annoy or attract it for it jabbed at them repeatedly with its bill. It cheeped frequently but not incessantly; occasionally it gave the long-drawn-out wail described above. It proved, on being prepared as a skin, to be a male. It weighed 89 grams. The testes were very slender, the right being 3 mm long, the left a little less than 1 mm long.

From time to time we examined the bashed-in egg. Sounds from inside the shell assured us that the chick was alive but we did not hear any cheeping until

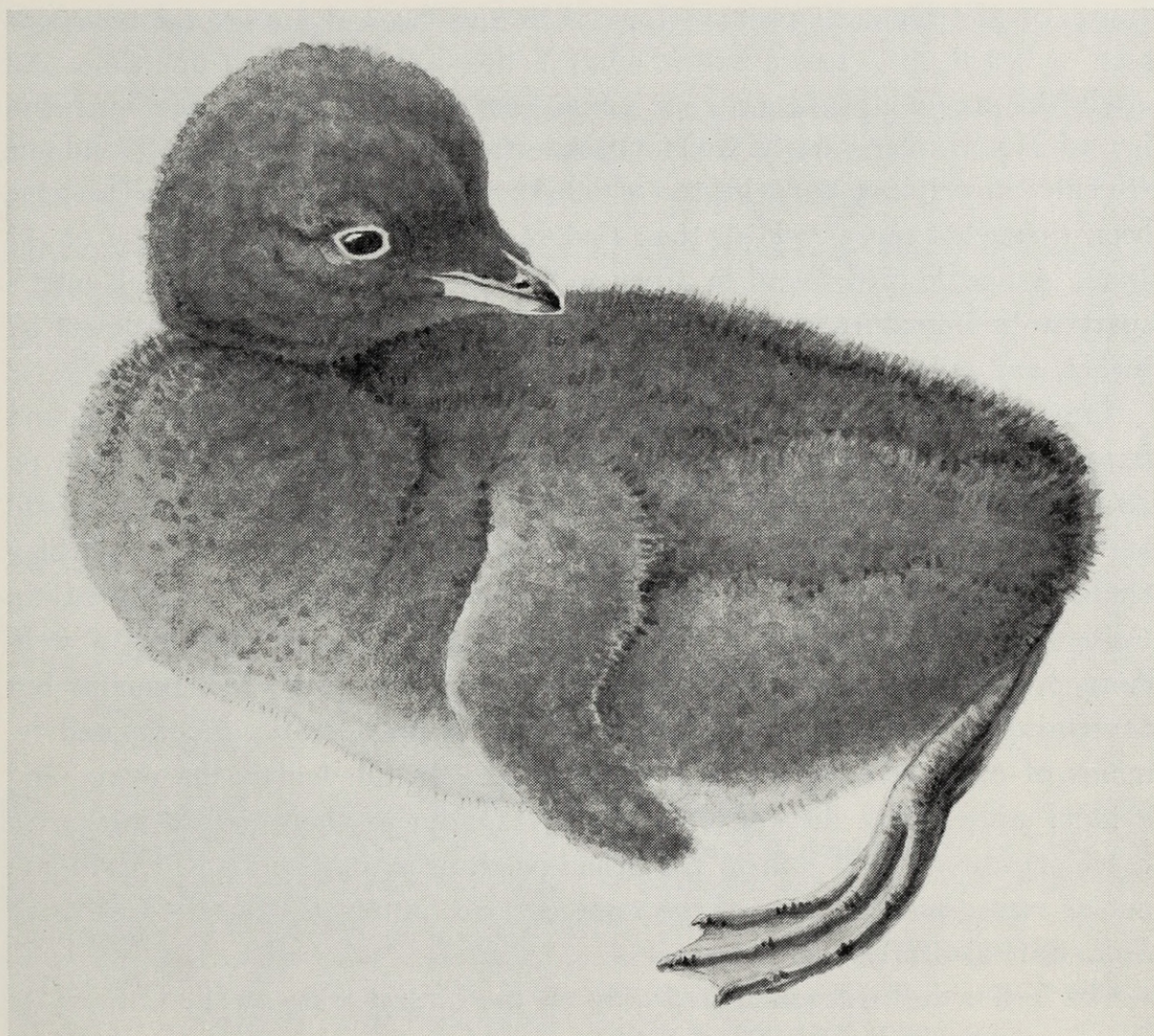


FIG. 1. *Gavia adamsii*, day-old chick direct from life. Painted 20 July 1962 at Cambridge Bay, Victoria Island, by George Miksch Sutton.

about 7 o'clock on the morning of 21 July. The chick hatched successfully before noon that day and again I made a direct-from-life drawing. This chick was a female (weight 85 grams; ovary 3.5 mm long, 2 mm wide at widest point).

The sibling chicks resembled each other closely. In each of them the bill was pale bluish gray, palest toward the tip but nowhere ivory white except for the egg-tooth. The eyes were dark brown. The legs and feet were gray, paler on the inner side of the tarsus than on the outer, and on the webs than on the toes themselves.

On 4 August, Mr. Hunter reported that he and his party had, during the preceding six weeks or so, caught several Yellow-billed Loons and Red-throated Loons (*Gavia stellata*) in their nets at Ferguson Lake. The nets had been near the surface. Several loons found alive had been set free. René

Jones, of Mr. Hunter's party, informed us that he had on several occasions seen or heard up to ten or twelve adult Yellow-billed Loons at one time. An adult bird found alive in a net on 5 June was photographed by another member of Mr. Hunter's party, John Olson, who was good enough to send me recently an original kodachrome which shows the eye of this bird to have been somewhat more reddish than that of the dead specimen I drew on 17 June. A female bird found in a net on 9 July, and thought by Mr. Hunter's party to be immature, weighed 4,510 grams, had a wingspread of almost 57 inches, and was almost 32 inches long from bill-tip to tail-tip.

Two adult birds brought us by René Jones on 3 September were a male and female in excellent condition. The male, which had been taken from a net on 28 August, weighed 11¾ lb, was 33½ inches long from bill-tip to tail-tip, and had a wingspread of 57⅝ inches. The female, which was obtained on 3 September, weighed 9½ lb and was 30½ inches long from bill-tip to tail-tip (wingspread not recorded). In each specimen the ventriculus was a well-defined, muscular gizzard fairly well filled with gravel and fish remains but containing no feathers. In the male I found the considerably decomposed remains of one testis but no sign of the other. In the female the ovary and oviduct were easily discernible. In both specimens there was evidence of vascularization of the skin in the brood-patch area, but no sign of dropping out or replacement of any of the remiges (see Sutton, G. M., 1943. *Wilson Bull.*, 55:145-150).

The Yellow-billed Loon nested only on the largest lakes in the Cambridge Bay area. On smaller lakes both Red-throated Loons and Arctic Loons (*Gavia arctica*) nested. During a brief stay on Jenny Lind Island, in Queen Maud Gulf, well off the southeastern shore of Victoria Island, we observed many breeding pairs of Red-throated and Arctic Loons but saw the Yellow-billed Loon only once—two adults, 28 June, in the narrow shore-lead (H. A. Stephens).

The Yellow-billed Loon chicks discussed above I have compared directly with a three-day-old chick of the Common Loon courteously lent by Dwain W. Warner of the Minnesota Museum of Natural History. The Common Loon chick is a great deal darker than the Yellow-billed Loon chicks on the upper parts, and the under side of its wing is white, in sharp contrast to the dark gray of all the surrounding plumage, whereas in the Yellow-billed Loon chicks the under side of the wing is of about the same shade of gray as that of the surrounding plumage. The chick of the Common Loon, a male, weighed 52.2 grams at time of preparation. Its exposed culmen measures 12.5 mm, whereas that of the less-than-one-day-old male Yellow-billed Loon measures a trifle over 13 mm. From the evidence before me, I should say that the newly hatched

Yellow-billed Loon is considerably larger than the newly hatched Common Loon.

I wish to thank Dr. Parmalee for inviting me to accompany him to Victoria Island. His expedition was made possible by grants-in-aid from the National Science Foundation and The Arctic Institute of North America.

DEPARTMENT OF ZOOLOGY, UNIVERSITY OF OKLAHOMA, NORMAN, OKLAHOMA,
6 FEBRUARY 1963

NEW LIFE MEMBER



Gordon M. Meade, of Washington, D.C., an active member of the Wilson Ornithological Society since 1938, has become a

Life Member. He received his baccalaureate and M.D. degrees from the University of Rochester, and is now Clinical Director of Miners Memorial Hospitals of the United Mine Workers Welfare Fund. Dr. Meade's ornithological interests include banding, bird diseases and pathology, and birds of the Adirondack Mountains; his papers have been published in *The Auk*, *Bulletin of New England Bird Life*, and *The Wilson Bulletin*, and currently he is preparing an extended paper on birds of the central Adirondacks. A member of the AOU, founder and first president of the Federation of New York State Bird Clubs, and Vice President and a past director of the District of Columbia Audubon Society, Dr. Meade's hobby is ornithology, and trying to stimulate and develop interest of teen-age boys and girls in it.



Sutton, George Miksch. 1963. "On the Yellow-Billed Loon." *The Wilson bulletin* 75(1), 83–87.

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