

BIRD BANDING NEWS

Conducted by Wm. I. Lyon

BANDING FRANKLIN'S GULLS IN ALBERTA

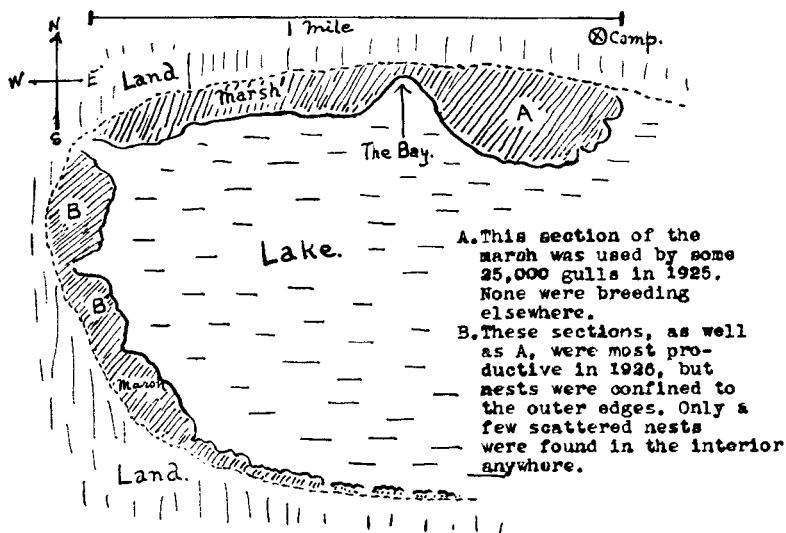
BY WILLIAM ROWAN

Any serious student of migration must have investigated at some time or another the possibilities of the banding method as a means of solving some of the problems of migration. An analysis soon convinces one that some ways of banding are likely to be far more remunerative than others. Examination of the literature, moreover, reveals the fact that systematic banding is superior to promiscuous banding and that the ringing of young of some selected species in large numbers is more likely to be productive of results that can be scientifically utilized than the casual and indiscriminate banding of birds in migration. True, any banding, if properly carried out by qualified individuals who know what they are doing and know the birds they are handling is likely to produce results of one kind or another—sometimes of quite unexpected interest—but a systematic effort with definite objects in view is the method *par excellence*. It was with something of this sort in mind that the writer decided to make an attempt to band 10,000 young Franklin's Gulls from a single colony in a single season. The Franklin's Gull was chosen for a number of reasons. A large gullery, easily accessible from Edmonton, has been kept under observation for some years. The habits of the birds have been studied and records kept of the dates of arrival and departure. The Edmonton district is not far off the northern limits of the species, a fact that is likely to add much interest to the returns. Related species have been intensively studied by the banding method in Europe and have produced results of exceptional interest from the writer's particular viewpoint. From our observations on this colony we have concluded that birds do not breed until they have attained their second year. Returns from banding may throw light on the movements of these immature birds and so contribute to one of the most important of the theoretical aspects of migration. The colony was so large that it offered an exceptional opportunity for utilizing it and it alone for the banding of a number sufficient to be really useful, a great point in its favor. Lastly, the general situation was so unusual and favorable that it looked as though the project could be carried through in a single morning. Although two were finally devoted to it, had it threatened to be a long drawn out affair time could not have been found to attempt it.

It seems a pity that banding is so frequently alluded to as an experimental method, for it is strictly not experimental at all. There is no interference with natural conditions, no interruption of the subject's normal life and activities. It is merely marked and made recognizable, the expected return depending on the vagaries of fortune.

A description of the breeding ground is essential for a correct understanding of the undertaking. It consists of a marsh some two and a half miles in length fringing a bay, the mouth of which faces approximately east. The marsh attains its greatest width of about 250 yards along the north arm. About three-eighths of a mile from its commencement is a deep bay where the open water comes within 30 or 40 yards of the shore. Beyond this the marsh widens appre-

ciably again but thins out towards its other end, finally dwindling out altogether. In previous years nests have been entirely confined to the section of the northern arm lying to the east of the bay. (A, sketch map). Here some 20,000 birds were breeding in 1924, the estimate being arrived at by a count of the nests over selected and representative areas. In 1925 there were probably over 25,000 adults. At least the same number of young must have been available for banding. The nests were so thickly packed that it was impossible to walk between them in many places without dragging some of them into the mire and upsetting numerous eggs. The lake, which has been dropping for many years, showed signs of rising again in 1924. The following year it had again risen slightly, but even so the water in the marsh was only a few inches deep. Open stretches were limited in extent and barriers of matted reeds occurred everywhere. Twenty-five young



were ringed in 1925. They were picked up in a few minutes without trouble as they could not make their escape through the natural barricades. All the circumstances together, therefore, offered ideal conditions for intensive banding—an almost unlimited supply of birds, shallow water, and the whole marsh an intricate net work that precluded the necessity of lengthy and strenuous chases after the quarry. Arrangements were made with the Biological Survey for a supply of 10,000 bands, provided that the birds returned in their expected numbers in 1926. During the first week of May this year the colony was visited. Although early, the birds were then returning in promising numbers. A report to that effect was sent in to the Survey and the bands ordered for the middle of June.

My plan of campaign was briefly this. In the first place, I had very little time at my disposal and my aim was to get the entire 10,000 banded in one morning. From the time involved in ringing the 25 young in 1925, I estimated that under the same conditions (those just described) any normally active individual should manage to band 100 birds per hour, provided that certain arrangements were made beforehand. (See below). I therefore enlisted 20 willing souls

to join in the fray which was scheduled to last for five hours, every one to dispose of 500 bands in that time. The date finally selected was June 24.

We encountered the first hitch before we left town when nearly half the party for various reasons found that they could not come. Only 13 instead of 20 actually took part. One of these was chiefly engaged in photography, leaving only a dozen active banders. We left Edmonton on the evening of the 23d and motored 60 miles to camp, the cars being very kindly provided and driven by the owners who took part in the activities. It was dark when we arrived and the volume of sound coming from the gullery was much slighter than it should have been and appeared to be spread out over the whole marsh. This was a bad omen, for it meant that the concentration of young, largely depended upon for making time, would prove a myth in the morning. At 5 A. M. we prepared breakfast and aroused the party. The night had been very cold or reveille would have been at least an hour sooner. By six o'clock we were in the marsh and here we received our greatest disappointment. The lake had risen considerably, the water being from knee to waist deep on the outer edge. There were innumerable runways, some of them 100 yards or more in length. The densely matted interior of the usual breeding section (A) was devoid of nests altogether, only the outer fringe in the deeper and more open water being in use. Adults were flying all over the two and one-half miles of marsh and as we had surmised in the dark the previous evening and ascertained for certain later in the morning, they were nesting along its entire length and, moreover, on the outer edge only. It was quite evident, in fact, that our fate was sealed. There was not the remotest chance of banding 10,000 young during the morning. All the ideal conditions of the last two years that had made the proposition so tempting had disappeared.

As we proceeded we became aware of the worst of all the tricks that fate had played us. The actual number of the gulls, all sections included, was probably less than a third of the number that had occupied the limited eastern portion alone the previous year. As though all these troubles were not enough we found the number of two eggs to a clutch extremely high and the rate of mortality excessive. In addition to the usual fate—violent death—that always befalls a certain percentage of young in such a colony, many were suffering from a disease with well defined symptoms of which nothing seems to be known and which we are now attempting to diagnose from preserved material. The total number of available chicks was thus only about a fourth to a fifth of what we had expected to find and they were scattered all over creation with every facility for giving us those exhausting chases that we had reckoned upon avoiding.

At nine o'clock we came in for refreshments and a badly needed rest. A rough tally showed that only some 3,000 bands had been disposed of. Banding was continued from 10 to 12 when the last worker came in so tired out that he could hardly stand. Several had reached the limit of endurance long before. We were then a few hundred short of 5,000. After a long rest, the return to Edmonton was made. Three members (Messrs. Taverner, Harrold, and Laing) stayed on till the next evening to complete the 5,000.

It is of interest to note particularly that five of us, in spite of all the handicaps and unexpected difficulties, placed over 500 bands each in five hours. My original estimate of 100 per hour per bander was therefore not in the least too sanguine and had conditions remained as they were the year before the rate

would have considerably exceeded the estimate. Mr. C. G. Harrold made record time with 600 bands.

On the occasion of this first visit it was quite evident that the usual large second instalment of hatching would not be available this year, for nearly every egg had already hatched. It was therefore imperative that a second attempt should be made inside ten days. While not a single youngster was flying on June 24, a few were getting well grown. Our hopes of ultimate success by means of a second onslaught rested chiefly on the western end of the marsh (B. B.) where we had banded but few chicks on the first trip and where they were comparatively abundant.

My efforts to raise a party for the week-end of July 3-4 were abortive. It was a universal holiday week-end. Every day now lost meant some hundreds of birds less available than the previous day could offer. I attempted to arrange a party for the middle of the week but this was equally futile. On July 10, however, nine of us left Edmonton after lunch and two more came in from Camrose in the evening. The week's delay was fatal. Thousands of young had learned to fly and had left the marsh for good. We worked for a couple of hours that evening and from 7 to 11 o'clock on Sunday, the 11th. The total for both trips finally proved to be only 6,725. Words cannot describe the labor of that second visit. Every step in the sticky ooze that makes the marsh bottom was an effort to begin with, but towards the end it felt as though 50-pound weights were tied onto our feet. All the birds were on the verge of flying. To race them through the open water was well nigh impossible. Each band placed that day involved mental as well as physical effort and one bander after another dropped out from sheer exhaustion; and by 11 o'clock the effort had automatically come to a conclusion. The last bander was played out.

At the very end, those of us who still survived, attempted a drive round the margin of the home end of the marsh, hoping to get the chicks onto dry land and into rough, tall grass where catching and banding would have been relatively simple operations. A hundred yards from shore we had at least 2,000 birds before us and virtually had them in our hands. And just at this point the whole maneuver failed through lack of co-operation. It was unfortunate, but could not be helped, for two of the herders guarding strategic points, collapsed in the reeds, incapable of moving another yard. The birds just seeped away and we only landed three or four hundred. The behavior of the young in the grass was quite interesting. They could not see the marsh, nor even the lake on account of their short legs and the height of the herbage, yet they waddled off in a bee line for home as soon as released. They no doubt took aural bearings from the parental hubbub in the marsh. All these birds were large and nearly able to fly or we should not have adopted these tactics.

With regard to the second visit, there is one point of special interest. On our first trip we had refrained from banding the very small chicks, the diseased and the injured. On the second occasion not a single banded bird was found dead. The point is well worth special mention in view of the criticisms so often leveled at the banding of chicks in such colonies.*

*Mr. J. A. Munro, Chief Federal Bird Officer of Western Canada, later made a trip through the marsh and found one banded chick dead. Since then we have had several duck shooting trips to the marsh and the adjacent shore lines and on occasion have hunted particularly for dead gulls. Including Munro's bird, four only have been found.

In conclusion, a word of explanation on the subject of the preliminary arrangements referred to above. The type of band used was, at my request, the simple split ring. These were specially made for the occasion of extra heavy metal at the instigation of the Biological Survey. They arrived strung in numerical order on wires, a thousand to a string. On account of their stoutness they were quite difficult to open with the fingers. It was evident that if any reasonable rate of banding was to be kept up the bands would have to be opened beforehand. This was imperative from the psychological viewpoint also. With one or two exceptions none of my volunteers was interested in banding. Had the "chore" of opening the bands been thrust upon them all enthusiasm would have died an inevitable death at the outset. The bands were therefore supplied ready opened. The opening gave two people a long day's work at the best speed they could make. Tough paper bags, numbered from 1 to 200 in large figures on the outside were used to hold the bands, 50 going into each bag, the first 50 into No. 1, the second 50 into No. 2 and so on. When camp was reached and the first sortee made bags 1 to 13 were first distributed, one bag to each bander. A second round was then given out, bags 14 to 26, and so on till each bander had five bags containing 250 rings. After instructions had been issued as to how and where to place the band, etc., each bander was particularly requested to use up the bags in numerical order. No attention had to be paid by the workers to the actual numbers of the bands. The bag in current use was emptied into a convenient pocket and the bands drawn out at random. When the first return to camp was made the majority had used all five bags, but some had one or two over complete while others returned with broken fifties. Before the second sortee was made these odd bands were collected up and redistributed into the pockets of all for immediate use. More bags were served out as well, a few extra going to the more active members. At the end of the morning, when all came in for good, the broken fifties were set aside to be disposed of first thing the following day by those remaining. And so the irregularities, inevitable in using such methods, were smoothed down. On the second trip, which proved so wearisome, breaks in series were more serious and the used numbers toward the end were freely interspersed with those unused. This has unduly complicated the returns, but then the difficult situation we had to contend with was wholly unexpected. My original intention was to collect up the odd bands as soon as the party came in and return to the marsh with a couple of helpers and dispose of them then and there and so irradicate the breaks. As it was we were stiff, aching, completely exhausted, suffering from cramp and barely able to lift our own legs, even on *terra firma*. And so the breaks were regretfully left as they were and the ragged records returned. This unforeseen contingency has suggested improvements on the method employed which would be adopted on a future occasion.

Finally I should like to express my heartiest thanks to the members of my parties who worked like Trojans and did all in their power to make the undertaking a success. The parties were made up as follows:

June 24—Mr. P. A. Travener and his field workers, Messrs C. G. Harrold and Hamilton Laing who travelled 120 miles by road to participate; Mr. B. Lawton, Game Commissioner of Alberta; Dr. R. A. Rooney, President of the Northern Alberta Game and Fish Protective League; Professors E. H. Strickland, D. A.

MacGibbon, and O. J. Walker; Messrs. D. E. Cameron, E. Stansfield, H. P. Mullet, and B. J. Mair.

July 10 and 11—Professor Strickland (the only repeat); Messrs. R. B. Sandin, G. F. K. Buckley, J. Lehmann, W. H. Kutz, A. Mail, A. Revell, L. Wise; Messrs. F. L. Farley and A. Twomey, both from Camrose.

Although this account of our banding is strictly a record of failure rather than of achievement, we can confidently look forward to returns of a particularly valuable kind, for all the birds were banded as young, i. e., at the beginning of their life's journey as well as of their first migration, in one season and from a single colony. Although we fell short of even seven thousand, it is a useful number, for a four per cent return may legitimately be expected from gulls. Our first distance record (about 30 have since come in) is in itself sufficiently remarkable for on July 14—two days after we had banded the last of them—No. 446128, (one of the first five thousand), was picked up near Tioga, N. D., crippled. On June 24 there was not a chick in the marsh that could fly. Not one was as advanced as the largest non-fliers handled on the second trip. No. 446128 could not have been a-wing for two weeks, yet it had covered nearly 600 miles of its long trip to the southern hemisphere, a truly noteworthy performance.

UNIVERSITY OF ALBERTA,
EDMONTON, ALBERTA.

PROCEEDINGS OF THE WILSON ORNITHOLOGICAL CLUB

Thirteenth Annual Meeting

The Thirteenth Annual Meeting of the Wilson Ornithological Club was held at Chicago, Illinois, on Friday and Saturday, November 26-27, 1926. The Inland Bird Banding Association met at the same time and place in conjunction with the W. O. C. During the day the sessions were held in the lecture room of the Chicago Academy of Sciences; on Friday evening a session was held in Fullerton Hall of Chicago Art Institute especially for the public, though all sessions were open to the public. On Saturday the annual banquet was held at the Parkway Hotel. On the following day, Sunday, two parties were formed by those who remained over the week-end; one group assembled at the Field Museum of Natural History; another group visited the new sanctuary, located on reclaimed ground, which is now a part of Lincoln Park.

THE CHICAGO PROGRAM

FRIDAY, NOVEMBER 26, 1926

Forenoon Session, 9:30 O'clock.

Lecture room of the Chicago Academy of Sciences.

Address of Welcome. Dr. Henry C. Cowles, President of the Chicago Academy of Sciences.

In extending a cordial welcome to the Academy Dr. Cowles referred to the fact that the Wilson Ornithological Club held its initial meeting in the same room just thirteen years ago.

Response in behalf of the Wilson Ornithological Club and the Inland Bird Banding Association. William I. Lyon.