

THE MIGRATION OF YOUNG NORTH AMERICAN  
HERRING GULLS.<sup>1</sup>

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The Herring Gull (*Larus argentatus*) as a species is circumpolar in its distribution and has been banded in large numbers both in Europe<sup>2</sup> and America. There is, however, no evidence of one of these birds having crossed the ocean from either side; in fact, individuals following transoceanic liners have been observed to turn back when not more than 25 miles at sea. In Europe these birds breed south to northern France and in North America to north central New York, southern Ontario, central Michigan and Minnesota, southern Manitoba, and central British Columbia.

The data here considered consist of 143 returns from a total of 5,462 banded Gulls including those marked during the present (1926) season. These represent birds banded chiefly by W. S. McCrea, W. E. Hastings, and the writer in the Beaver Island group in northern Lake Michigan; at several islands in the vicinity of Green Bay, Wisconsin, by W. I. Lyon and Harold C. Wilson; at islands in the Straits of Mackinac, by W. I. Lyon and George W. Luther; at Gull Island, Lake Huron, by Dr. R. M. Strong; at Four Brothers Islands, Lake Champlain, by H. F. Perkins; at Matinicus, Maine, by F. H. Allen and Dr. C. W. Townsend; at Bonaventure Island, Quebec, by W. M. Duval; in Temiscouata County, Quebec, by D. A. Dery; in Saguenay County, Quebec, by Harrison F. Lewis; and at Wood Island, Grand Manan, New Brunswick, by Ernest Joy.

<sup>1</sup> Presented at the 44th Annual Meeting of the American Ornithologists' Union, at Ottawa, Ontario, on October 14, 1926, and before the Biological Society of Washington, on December 18, 1926.

Grateful acknowledgment is made to Dr. Frank N. Wilson, of the University of Michigan, Ann Arbor, Michigan, for the loan of his motion-picture film made at the Beaver Islands, which was used, together with lantern slides, to illustrate this paper on both presentations.

<sup>2</sup> An important paper presenting the results obtained from banded Herring Gulls in Great Britain, by A. Landsborough Thomson, in 'British Birds,' vol. XVIII, No. 2, July 1, 1924, pp. 34-44, includes also a summary of European records for this species from other sources. The longest flight for which data were available was a distance of 730 miles.

It is not possible from these data to draw definite conclusions concerning the movements of the species on this continent, because of the fact that almost without exception the banded birds were marked as fledglings. Available evidence indicates that Herring Gulls are not sexually mature until at least their second year, and the probability is strong that they are three or possibly four years old before they breed for the first time. A discussion of their movements based upon the returns from banded birds obviously will be inconclusive until the existing material contains adequate records of fully adult birds. Despite the fact that extensive banding operations with the species have been in progress for four years, there are relatively few recaptures of birds two years or more of age at the time of recovery.

As with many other species more attention needs to be given to the banding of adults. This will present challenging problems to even the most ingenious bird bander, for despite their seeming fearlessness around wharves and fish docks adult Herring Gulls possess an uncanny wariness when it comes to approaching traps. The present paper is not intended as a discussion of ways and means to accomplish this result, but it seems worth while to direct attention to the trap developed by Jack Miner, of Kingsville, Ontario, for the capture of Crows, and to suggest the possible use of this device for the extensive banding of adult Gulls. These birds could probably be captured also by means of powerful flashlights at their breeding colonies during the incubation period.

As the total number of returns includes more than 50 birds banded by the writer at the Beaver Islands in northern Lake Michigan, the data from that point will be used as criteria in the belief that records from other points fill their most important rôle as supporting evidence.

To obtain a true concept<sup>3</sup> of the first movements of these birds it is necessary to consider the returns for each season, taking first those reported as recoveries between the time of banding and the first of the year next ensuing. (See Table I and Fig. 1.)

TABLE I.—*Returns of Herring Gulls banded at Beaver Islands, Michigan, and Recovered by the first of the ensuing Year.*<sup>1</sup>

<i>Number</i>	<i>Date of Banding</i>	<i>Date of Recovery</i>	<i>Place of Recovery</i>
202213	July 16, 1922	Jan. 18, 1923	Wickliffe, Ky.
202237	"	Nov. 30, 1922	Ennis, Texas.
202248	"	Jan. 12, 1923	Brunswick, Ga.
231343	July 22, 1923	Nov. 11, 1923	St. Ignace, Mich. (40 mi. W.)
231393	"	Sept. 9, 1923	Montreal, Que.
23682-	"	Dec. 12, 1923	East Jordan, Mich.
236807	"	Sept. 10, 1923	Toronto, Ont. (15 mi. E.)
236829	"	Jan. 12, 1924	Angola, N. Y.
236834	"	Nov. 25, 1923	Saginaw Bay, Mich.
236853	"	Sept. 25, 1923	St. Ignace, Mich.
236859	"	Sept. 1, 1923	Northport, Mich.
236861	"	Sept. 27, 1923	Petoskey, Mich.
236925	July 24, 1923	Nov. 3, 1923	Alpena, Mich.
236927	"	Oct. 7, 1923	Houghton Lake, Mich.
236993	July 25, 1923	Nov. 7, 1923	Lake Nipigon, Ont.
237013	"	Dec. 7, 1923	Kenosha, Wis. (20 mi. S.)
237022	"	Dec. ?, 1923	St. Marys River, Mich.
237047	"	Dec. 10, 1923	Near Howland, Minn.
237062	"	Sept. 27, 1923	Port Austin, Mich.
237078	"	Oct. 20, 1923	Manistee, Mich.
237150	"	Nov. 1, 1923	Calumet, Mich.
237170	"	Oct. 31, 1923	Trout Lake, Mich.
321025	July 18, 1924	Dec. 7, 1924	Spring Bay, Ill.
321027	"	Sept. 29, 1924	Bead Id., Lake Superior, Ont.
321041	"	Dec. 10, 1924	Charlevoix, Mich.
321138	July 20, 1924	Sept. 4, 1924	Manistique, Mich.
321148	"	Sept. 15, 1924	Montmorency Village, Que.
321211	"	Dec. 6, 1924	Riverton, Delaware River, N. J.
312884	June 24, 1925	Jan. 2, 1926	Maumee River, Ohio.
378978	July 7, 1925	Fall of 1925	Riv. au Renard, Gaspé Co., Que.
378090	"	Jan. 20, 1926	Two Rivers, Wis. (1 mi. S.)
385520	June 27, 1925	Oct. 11, 1925	Washington Id., Wis.
385537	"	Sept. 26, 1925	Ashtabula, Ohio (4 mi. W.)
385595	"	Oct. 21, 1925	Georgian Bay, Ont.
385656	July 2, 1925	Sept. 4, 1925	Port Hope, Ont.
385661	July 3, 1925	Dec. 9, 1925	Jerusalem, Ohio.
385697	"	Oct. 14, 1925	Copper Cliff, Ont.
385766	"	Nov. 4, 1925	Renfrew Co., Ont.
385785	"	Jan. 1, 1926	Presque Isle Peninsula, Erie, Pa.

<sup>1</sup> In some cases the date of recovery can not be given serious consideration as the letter of advice frequently indicated that the bird had been dead for several days. Dates later than December 31 in this table, are instances of this kind.

TABLE I.—*Continued.*

<i>Number</i>	<i>Date of Banding</i>	<i>Date of Recovery</i>	<i>Place of Recovery</i>
385789	July 3, 1925	Dec. 1, 1925	Sandusky Harbor, Ohio.
385834	"	Dec. 4, 1925	Parent, Champlain Co., Que.
385869	July 3, 1925	Nov. 23, 1925	Lake Big Butte des Morts, Wis.
385946	"	Dec. 18, 1925	Metuchen, N. J.
386086	July 8, 1925	Sept. 22, 1925	Montreal, Que.
386154	"	Aug. 18, 1925	Alpena, Mich.
386159	"	Dec. 9, 1925	Holbrook, Pa.
386240	"	Sept. 1, 1925	Detroit Harbor, Wis.
386249	"	Nov. 11, 1925	Ludington, Mich.
386299	"	Dec. 18, 1925	Alvin, Tex. (25 mi. S.)

During the first season (1922) a relatively small number of birds were banded and only three returns were reported. These are, however, from such widely separated localities (Texas, Kentucky, and Georgia) as to leave but little doubt that there was a more or less general southward movement of Gulls from the Beaver Islands in the fall of that year. The next season (1923) a large number of birds were marked, and 19 returns were reported before or around the first of the succeeding year. Thirteen of these were from points in Michigan, the most southern being a locality in Saginaw Bay. Of the remaining six, one was from near Lake Nipigon, Ontario; one from the north shore of Lake Superior; one from the vicinity of Kenosha, Wisconsin; one from near Toronto, Ontario; one from the St. Lawrence River near Montreal, Quebec; and the other from the shore of Lake Erie near Angola, New York. These show for that season a decided absence of southerly movement, the majority of the "gray" Gulls evidently wandering about in the general area where they were banded, while a few others drifted off to almost all points of the compass.

On account of an early season the number of birds banded during 1924 was small, the majority of the young birds being on the wing at the time banding operations were begun. Six returns, obtained before the first of the year, seem to indicate an easterly or north-easterly movement, although one was taken on the north shore of Lake Superior in Ontario and another at Spring Bay in north-central Illinois. The easternmost records in this group are for two birds, one of which was reported from the St. Lawrence River at

Montmorency Village, Quebec, and the other from the Delaware River, west-central New Jersey.

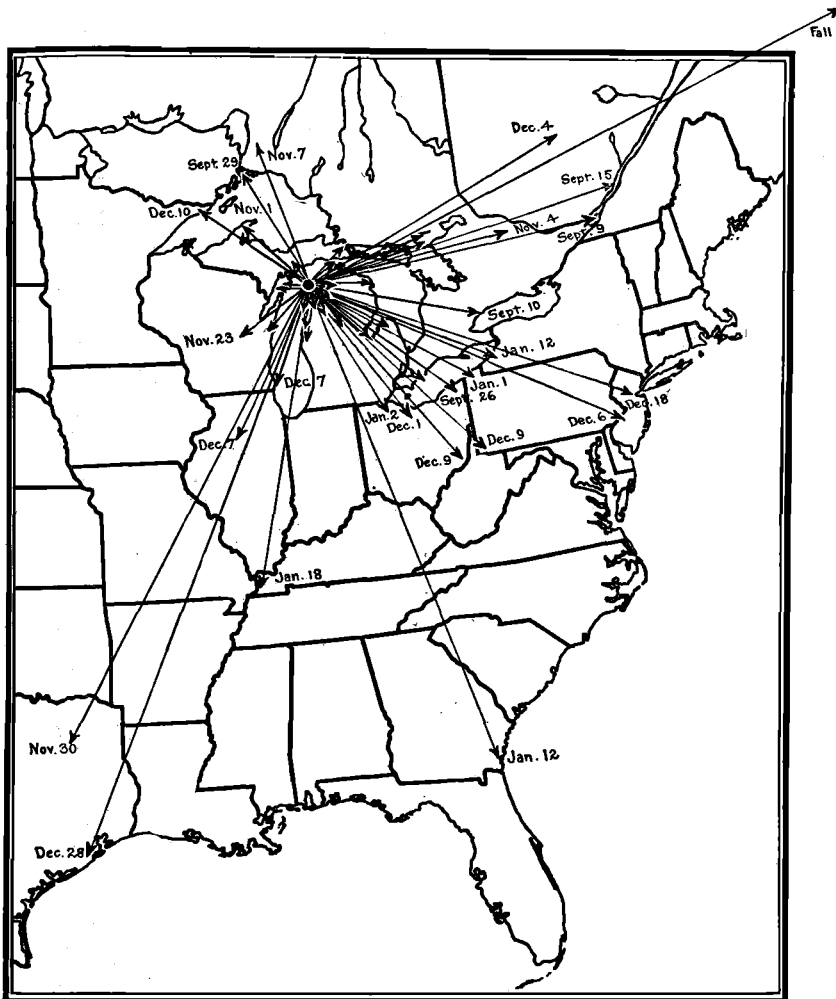


FIG. 1.—Map showing dispersal of young Herring Gulls from the Beaver Islands, Michigan, between the time of banding and the first of the ensuing year.

In 1925 the colonies were reached early in the season so that many young were banded and 21 returns were reported before the first of the ensuing year. These records indicate that the movement away from the breeding area was much more general in that season than in the preceding year. Fully three-quarters of the returns were reported from distances more than 200 miles from the point of banding, while this group also contains the largest number of long-distance returns.

Four are from points in Ontario, three from Quebec, four from Ohio, two from Pennsylvania, one from New Jersey, and one from Texas. Almost all these distant records were obtained during December. Only two returns were for more or less local points in Michigan while three others are for Wisconsin.

The evidence of these fall records from the Beaver Islands seems to justify the statement that southward migration of young Herring Gulls in their first year is limited to a part of the birds, although the flight made may be of great length. Returns obtained from birds marked at other points appear to support this statement. (Fig. 2.)

For 1923, only three such records are available, the most noteworthy being two for birds banded at Bonaventure Island and recovered on the coast of New Jersey. It will be recalled that the Beaver Island Gulls showed almost no southern movement for 1923, such flights as were extensive being to the northeast or southeast.

The 1924 records from other points outnumber those for Beaver Island birds, but in the main they tend to support the statement that in that season only limited movements were made. Birds banded in Saguenay County, Quebec, were recovered on the coast of Labrador and in Newfoundland; one marked on Bonaventure Island was found in Nova Scotia, while those marked in the vicinity of Green Bay and the Straits of Mackinac were recovered at comparatively short distances as late as the following January 13. The bird upon which this last record is based was caught at Milwaukee, Wisconsin, as it was eating a mouse on a garbage truck. It was turned over to the local zoological park.

In this group of records there are, however, three that showed long-distance flights, all from the Green Bay area. One was to

southwestern Illinois; the second to Lumberton, Mississippi; and the third to Lake Iamonia in northern Florida.

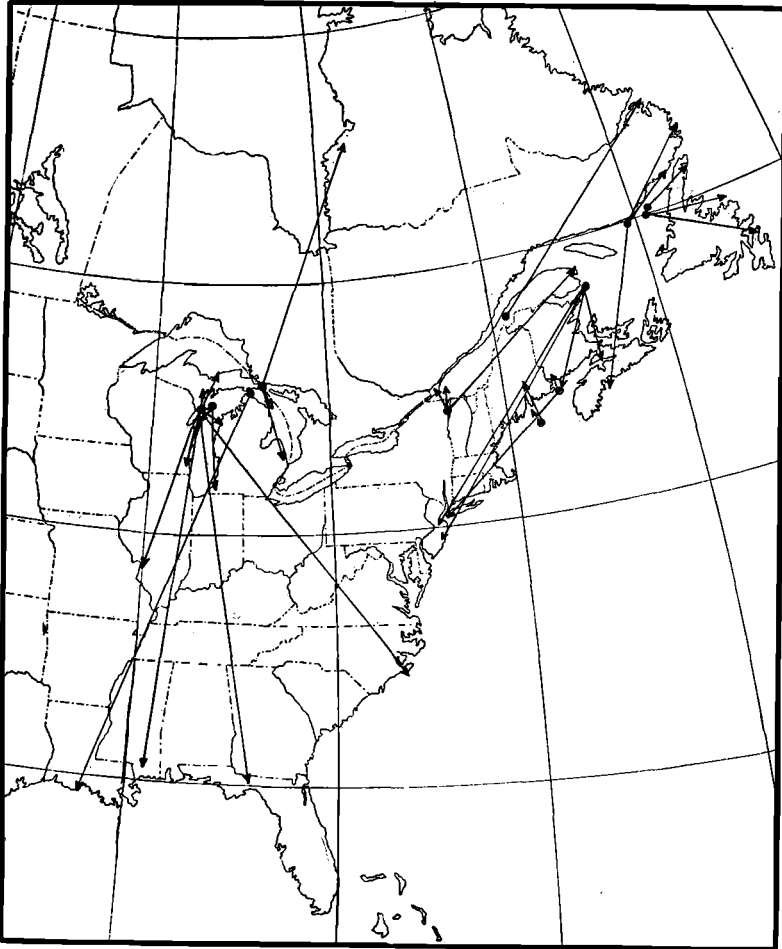


FIG. 2.—Returns of young Herring Gulls, banded at points other than the Beaver Islands, and recovered by the first of the ensuing year.

The 1925 records in this class closely parallel similar returns for

that year from the Beaver Islands, in that they show great dispersal and a few long flights. Three Herring Gulls, banded at Lake Champlain, flew north, one reaching the Gaspé Peninsula; those banded on the coast of Quebec were taken on the Labrador coast, in Nova Scotia and Newfoundland; two banded at Matinicus, Maine, were recovered from more northerly points on the mainland; while two from the Green Bay region and the Straits of Mackinac were taken on the coast of North Carolina and in the Vermilion Bay area of Louisiana.

From the foregoing accounts of young Herring Gulls banded at the Beaver Islands and at other points and recovered between the time of banding and the first of the following year, the evidence of migration indicates erratic flights during the early part of the season, when the most remarkable feature is the tendency of some of these birds to drift northward in a manner comparable to the well-known post-nuptial migrations of certain Herons. The records for the last month of the year, however, indicate a more or less general southward movement.

In the next group of returns, those received between the first of the year and the following midsummer, there is definite evidence of spring and fall migrations. (See Table II and Fig. 3.)

TABLE II.—*Returns of Herring Gulls banded at Beaver Islands, Michigan, and Recovered between the first of the ensuing Year and the following Midsummer.*

<i>Number</i>	<i>Date of Banding</i>	<i>Date of Recovery</i>	<i>Place of Recovery</i>
237035	July 25, 1923	Apr. 2, 1924	Maple Id., on Mississippi River near St. Louis, Mo.
237151	"	Apr. 20, 1924	Grand Rapids, Mich.
321168	July 20, 1924	Apr. 10, 1925	Tampico, Mex. (30 mi. N.).
312893	June 24, 1925	May 12, 1926	Gasparilla Id., Fla.
321003	July 18, 1924	June 20, 1925	Chanderleur Id., La.
378071	July 3, 1925	May 16, 1926	Waseca, Minn.
378095	July 8, 1925	May 22, 1926	Coin, Iowa.
385667	July 3, 1925	Mar. 27, 1926	Victoria Co., Tex.
385728	"	Jan. 17, 1926	Tuxpan Bar, Vera Cruz, Mex.
385786	"	Feb. 10, 1926	Alvarado, Vera Cruz, Mex.
336047	July 8, 1925	Apr. 3, 1926	Ottumwa, Iowa.
386090	"	Apr. 9, 1926	Hurricane Id., Ill.
386106	"	Mar. 1, 1926	New Madrid, Mo.
386191	"	Apr. 6, 1926	Niagara River, N. of Youngstown, N. Y.



During this period no returns were reported for the regions con-

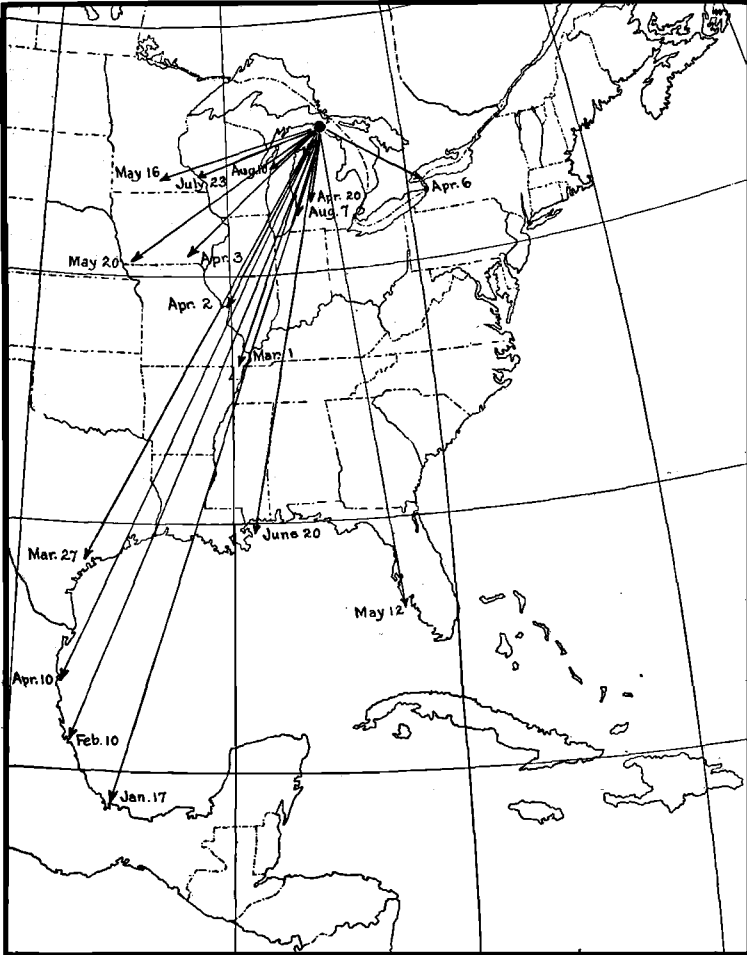


FIG. 3.—Map showing recoveries of young Beaver Island Herring Gulls, reported between the first of the ensuing year and the following midsummer.

tiguous to the breeding areas before the first of April. One bird from the Beaver Islands passed south to Tuxpan Bar, Vera Cruz,

Mexico, where it was taken on January 17. Another was killed at Alvarado, also in the State of Vera Cruz, on February 10. Between these southern extremes and the latitude of the Beaver Islands, there are eight records of recovery before the first of May, with two others taken close to the middle of that month. The period of greatest colonizing activity at the Beaver Islands is from the first of June to the middle of August, but, as will be seen from the map, none of the birds of the previous season's hatch had at that time reached latitudes as far north as their birthplace. This is further supported by observations in the field. During the seasons of 1924 and 1925, the author made numerous trips with fishermen out from St. James, in order to watch for banded Gulls. As is well known, these birds will follow such boats to obtain discarded bait or other refuse, frequently approaching to within a few feet. From a post of observation on the stern there was ample opportunity to scrutinize closely a large number of Gulls, but not one was seen that was wearing a band.

The records from other colonies for this same period are of a similar nature: one from Gull Island, Lake Huron, banded on July 11, 1924, was taken at South Chicago, Illinois, on May 5, 1925; one from Big Sister Island, Wisconsin, banded on July 17, 1924, was found (but recently dead) near Beaumont, Texas, on April 7, 1925; another from Big Sister Island, banded on June 25, 1924, was shot by mistake for a Hawk, at New River, Tennessee, about May 12, 1925; one from Gravel Island, Wisconsin, banded on July 20, 1924, was found dead (a victim to crude oil on the water) at Seaside Park, New Jersey, about August 8, 1925; and one from Muskeget Island, Massachusetts, banded on July 9, 1925, was found dead near Woods Hole, Massachusetts, on August 7, 1926.

The returns received for banded birds much more than a year old at the time of recovery are so few that any deductions would be most premature. The oldest Herring Gull thus far reported is one banded on August 24, 1923, at Wood Island, Grand Manan, New Brunswick, and found dead near Quogue, Long Island, New York, about July 7, 1926. A few Gulls, which at the date of recovery would be about a year and a half old, were taken in the general vicinity of their original colony, but the dates are all well after the close of the breeding season.

CONCLUSIONS.

From the foregoing account, the following conclusions regarding the movements of young Herring Gulls, seem to be warranted:

1. The first distance flights of the young birds after leaving their colonies can not be considered as true migration; they are more nearly comparable with the northward post-nuptial movements of certain Herons. The dispersal is, however, in all directions.

2. Later in the season, about the first of the year, many of these birds move south, probably covering long distances in short periods of time. The extent of such flights may be as far as east-central Mexico.

3. The return movement for the first spring likewise is erratic, some birds traveling north toward the colony sites and others remaining in the south.

4. There is no evidence that any considerable number of young Herring Gulls return to their original colony sites to breed before they are at least three years old.

*Biological Survey, Washington, D. C.*