

RETURN OF HERRING GULLS TO NATAL COLONY

BY JAMES PINSON LUDWIG

Over a period of 32 years, F. E. Ludwig, C. C. Ludwig, C. A. Ludwig, and I have banded 60,000 downy young Herring Gulls (*Larus argentatus*) in colonies in Lakes Huron, Michigan, and Superior. I have grouped the colonies according to geographical location in seven areas (See Table 1). From these colonies as of July 1961 we have recovered 47 adults (See Tables 2, 3, and 4 for each recovery) which were banded as chicks. All of these adults were in full adult plumage, and I have assumed that they were breeding in the colonies where we found them. Six questionable recoveries have been noted.

TABLE 1. THE AREAS AND THEIR COLONIES

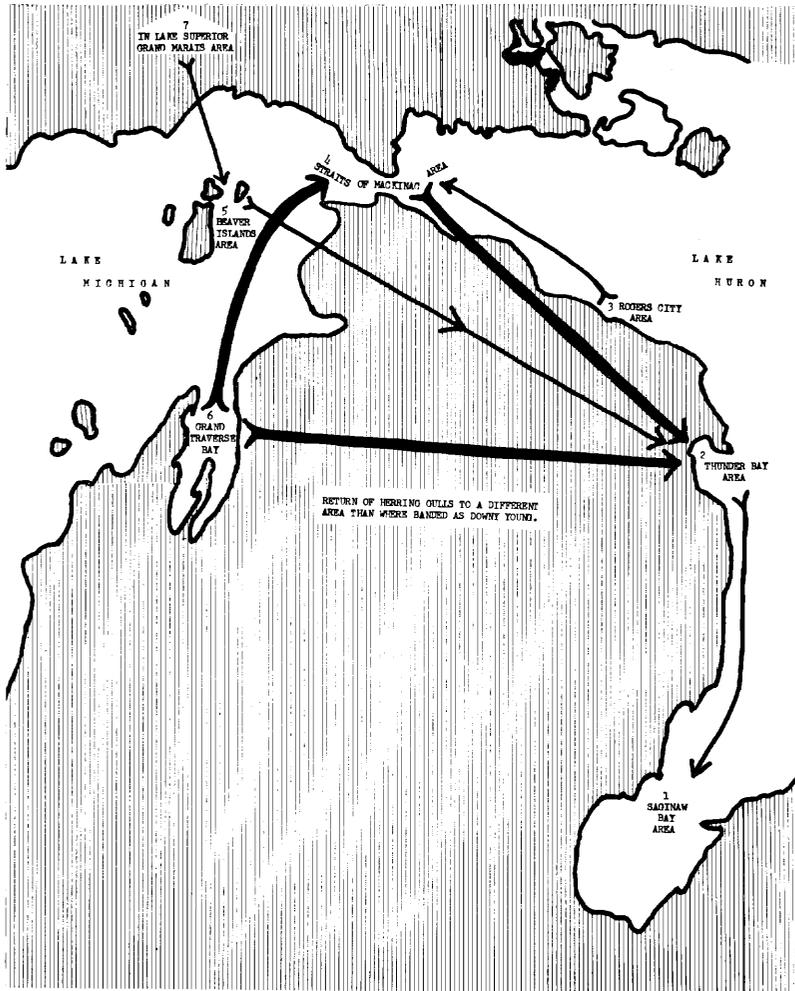
<i>In Lake Huron</i>	
1.	Saginaw Bay area— Little Charity Island 4404-08328
2.	Thunder Bay area— Black River Island 4440-08318 Scarecrow Island 4450-08320 Sulphur Island 4500-08322 Grassy Island 4504-08325 Sugar Island 4506-08318 Thunder Bay Island 4506-08317 Gull Island 4506-08318
3.	Rogers City area— Calcite Pier colony 4530-08350
4.	Straits of Mackinac area— Goose Island 4555-08426 St. Martin's Shoal 4557-08434 Green Island 4551-08440
<i>In Lake Michigan</i>	
5.	Beaver Islands' area— Hatt Island 4549-08518 Shoe Island 4548-08518 Pismire Island 4547-08527 Grass Island 4547-08528 Big Gull Island 4545-08540
6.	Grand Traverse Bay area— Bellows' Island 4506-08534
<i>In Lake Superior</i>	
7.	Grand Marais area— Grand Marais Island 4640-08600

Latitude - Longitude

These numbers (e.g. 4500 - 08320) are the geographical coordinates of the islands.

An analysis of the recoveries reveals that 19 (40.4 percent) of the adults were banded in the same colony as recovered, 15 (32.1 percent) more recovered in the same area as banded, and 13 (27.5 per-

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cent) in a different area. Of the 13 recoveries in a different area, eight birds had chosen an area in a different lake, and all but one chose a colony lying east of the natal colony. Eighty percent of all the recoveries were from the Grand Traverse Bay and Thunder Bay areas where the banding activities have centered.

At least three investigators, Gross (1940), Paynter (1947), and Tinbergen (1953), have noted a strong tendency for Herring Gulls to return to natal colonies for breeding, but their observations are based on studies of single colonies. They do not report having searched neighboring colonies for recoveries of breeding birds banded by them as chicks. Thus we have no way of knowing whether any of the birds hatched in these colonies later nested elsewhere.

TABLE 2. RETURN OF HERRING GULLS TO THE SAME COLONY WHERE BANDED AS DOWNY YOUNG

Band No.	Date Banded	Colony & Area	Date Recovered	How Recovered
*34-632600	7-4-34	Hatt Island (5)	7-12-38	Band Found
34-636875	6-25-35	Sugar Island (2)	6-22-39	Found Dead
35-538083	7-8-35	Green Island (4)	7-4-46	Found Dead
41-642165	6-23-41	Gull Island (2)	6-24-48	Found Dead
41-644424	6-26-46	Black River Island (2)	6-28-51	Found Dead
44-603794	6-18-48	Black River Island (2)	6-21-52	Found Dead
44-719535	6-19-49	Black River Island (2)	6-21-52	Found Dead
34-659289	6-25-35	Bellow's Island (6)	9-9-54	Found Dead
506-72667	6-13-51	Black River Island (2)	6-14-58	Found Dead
536-99225	6-8-54	Black River Island (2)	6-16-58	Found Dead
*636-00901	6-22-53	Bellow's Island (6)	8-29-58	Found Dead
*516-27054	6-13-52	Bellow's Island (6)	9-17-59	Found Dead
*536-01722	6-9-54	Bellow's Island (6)	9-17-59	Found Dead
566-24673	6-10-56	Scarecrow Island (2)	7-10-60	Found Dead
566-24671	6-10-56	Scarecrow Island (2)	7-10-60	Found Dead
508-32847	6-15-53	Scarecrow Island (2)	7-10-60	Found Dead
536-01995	6-9-54	Bellow's Island (6)	6-3-60	Found Dead
506-71199	6-9-54	Bellow's Island (6)	6-3-60	Found Dead
**39-718180	6-23-39	Scarecrow Island (2)	7-3-61	Found Dead

* = Questionable recovery owing to time of year recovered or the manner in which recovered. Some of these questionable recoveries may be actually wandering birds arriving at the colony after the nesting season is completed and there dying.

** = The oldest recovery of a Herring Gull banded by the Ludwigs.

It is entirely possible that our studies show a *normally occurring wider dispersal* than would be found on the sea islands on which the above named investigators worked. For example, the Kent Island colony where Gross and Paynter worked is well above the high tide line and rarely damaged by storms. Furthermore, it is a sanctuary, owned by Bowdoin College. These circumstances, coupled with the island's general isolation from human traffic, contribute to the year-to-year stability of the colony. A high percentage of returns to this colony would be expected. On the other hand, the islands in our study area are smaller, generally low lying, and close to water level. They are consequently subject to topographical changes due to storms, ice action, and marked yearly fluctuations in water levels of the lakes. They are not sanctuaries. Some are near the mainland and easily accessible to people during the nesting season. Mammalian predators may reach them in certain areas by swimming or by passage on winter ice.

Whereas the Kent Island colony and the Dutch colonies studied by Tinbergen, though large, do not occupy all of the available nesting space, many of the Lakes colonies are as large as space permits. Many birds hatched in these colonies must nest elsewhere in order to nest at all. Furthermore, when a Lakes' island is reduced in size by a storm, ice action, or a rise in water level, the occupant colony is necessarily reduced in size. This makes it extremely difficult for birds hatched in the colony to return for nesting.

TABLE 3. RETURN OF HERRING GULLS TO DIFFERENT COLONY - SAME AREA WHERE BANDED AS DOWNY YOUNG

Band No.	Date Banded	Colony & Area	Date Recovered	Colony	How Recovered
B669648	7-8-32	Gull Island (2)	6-26-38	Sugar Island	Found Dead
B666050	6-28-32	Sugar Island (2)	6-27-40	Black River Island	Found Dead
36-718621	7-12-36	Sugar Island (2)	6-27-40	Black River Island	Found Dead
34-636588	6-25-35	Sugar Island (2)	6-27-40	Black River Island	Found Dead
34-659952	7-4-35	Sugar Island (2)	6-27-40	Black River Island	Found Dead
37-718049	6-29-38	Green Island (4)	7-12-43	Goose Island	Found Dead
*38-647482	6-26-38	Gull Island (2)	8-27-43	Black River Island	Found Dead
34-659250	6-25-35	Gull Island (2)	7-12-49	Thunder Bay Island	Found Dead
39-641710	6-28-40	Sugar Island (2)	6-24-46	Black River Island	Found Dead
39-641667	6-28-40	Sugar Island (2)	6-26-46	Gull Island	Found Dead
38-651570	6-22-39	Sugar Island (2)	6-24-46	Black River Island	Found Dead
*41-644339	6-24-46	Black River Island (2)	8-7-49	Scarecrow Island	Found Dead
44-605172	6-16-50	Black River Island (2)	7-16-58	Sulphur Island	Found Dead
41-645218	6-26-46	Gull Island (2)	6-29-56	Sulphur Island	Found Dead
606-59607	6-28-58	Sugar Island (2)	6-9-61	Scarecrow Island	Found Dead

* = Questionable recovery owing to time of year recovered or the manner in which recovered. Some of these questionable recoveries may be actually wandering birds arriving at the colony after the nesting season is completed and there dying.

It is my conviction that Herring Gulls normally attempt to return to their natal colony for breeding. In this respect they may be like the Common Tern which initially returns to its natal colony but departs if this site is unsuitable or saturated with established adults (Austin, 1940). However, the group adherence behavior of Common Terns (Austin, 1951) is apparently not present in Herring Gulls as they do not usually move en masse from site to site as the terns do, and thus the breaking up of Herring Gull colonies is followed by a dispersal of the displaced birds rather than a group movement to a new site. If forced to another site for their initial nesting, I believe that Herring Gulls return to that site on successive seasons, or until they are forced to move by a change in the conditions of the site.

In summary, forty percent of this sample of Herring Gulls banded as chicks on the Great Lakes return to their natal colonies to breed. I believe this low percentage is due to factors which prohibit return rather than a tendency among Herring Gulls to select new colonies for their initial nesting.

TABLE 4. RETURN OF HERRING GULLS TO DIFFERENT COLONY IN DIFFERENT AREA WHERE BANDED AS DOWNY YOUNG

Band No.	Date Banded	Colony & Area	Date Recovered	Colony & Area	How Recovered
41-643585	6-27-41	Pismire Island (5)	6-24-46	Black River Island (2)	Found Dead
35-538083	7-8-35	Green Island (4)	7-4-46	Black River Island (2)	Found Dead
40-652862	7-6-40	St. Martin's Shoal (4)	7-18-52	Sugar Island	Found Dead
39-718271	6-24-39	St. Martin's Shoal (4)	6-13-54	Black River Island (2)	Found Dead
44-719962	6-16-49	Bellows' Island (6)	6-25-54	Green Island (4)	Found Dead
44-604709	6-20-48	Bellows' Island (6)	6-24-55	Thunder Bay Island (2)	Found Dead
516-26313	6-11-52	Black River Island (2)	7-14-56	Little Charity Island (1)	Found Dead
606-01923	6-9-58	Calcite Pier Colony (3)	7-2-61	St. Martin's Shoal (4)	Found Dead
566-03865	6-28-57	Grand Marais Island (7)	6-28-61	Hatt Island (5)	Found Dead
616-25791	6-16-51	Bellows' Island (6)	7-2-61	St. Martin's Shoal (4)	Found Dead
516-25791	6-16-51	Bellows's Island (6)	7-2-61	St. Martin's Shoal (4)	Found Dead
536-99534	6-9-54	Bellow's Island (6)	6-2-61	Black River Island (2)	Found Dead
566-25038	6-12-56	Bellow's Island (5)	6-2-61	Black River Island (2)	Found Dead

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