

Biscay. He asks, "Is there a vast area in mid-Atlantic from which they are absent?" My experience gives a decided negative to this question.

On the 17th, 18th, and 19th of July from a couple to a score of Greater Shearwaters (*Puffinus gravis*) played about the steamer, but the thrill of the voyage was experienced on the 16th, when, at eight in the morning and at noon, two Great Skuas (*Megalestris skua*)—"Seahens" the sailors call them—appeared about the ship for a few minutes each time. These great birds are dark brown, almost black, in color and marked with white patches on the extended wings.

We entered Boston Harbor on July 23d in a fog and were greeted by American Herring (*Larus argentatus smithsonianus*)* and Laughing Gulls (*L. atricilla*) and Common Terns (*Sterna hirundo*).

SOME TRANS-ATLANTIC RETURNS OF BANDED BIRDS†

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AMONG the most interesting problems upon which the bird banders are at work, are those which lead toward the solution of some of the mysteries of bird migration. Much has already been learned of the travels of certain species, but there is still a great deal to learn before we can accurately map out the migration routes followed by some of our best known birds.

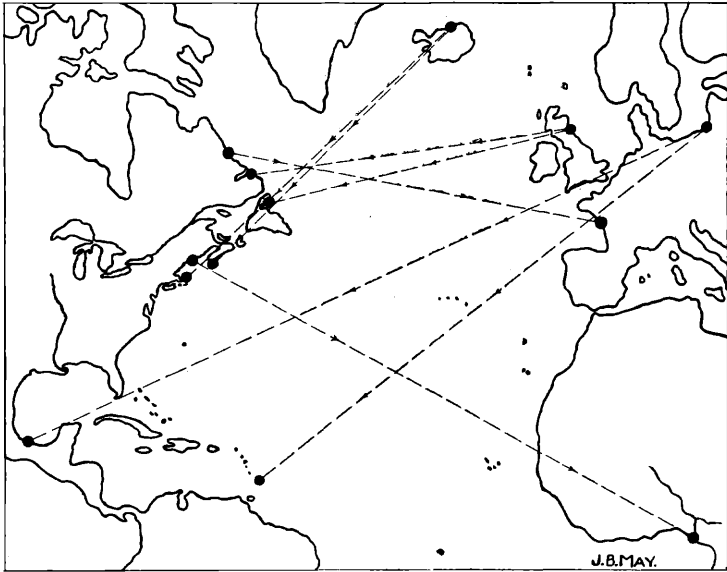
Young herons of several species have been noted, during their first fall, at points north of their supposed breeding range, but it was not until we had recorded the recoveries of some seventy Black-crowned Night Herons, banded at the heronry at Barnstable, that we had real proof of the striking northward dispersal of these birds. Almost exactly half of the recoveries of these herons were from points north of Cape Cod, some of them being from points approximately four hundred miles due north of the birds' birthplace.¹

Many of our seabirds breed near or within the Arctic Circle, making a long migration to the Southern Hemisphere, but in

* Dr. Townsend follows Dr. Jonathan Dwight, Jr., in believing that the American Herring Gull is sub-specifically distinct from the European Herring Gull—Editors.

† Read at the Annual Meeting of the Northeastern Bird Banding Association at Boston, January 19, 1928.

¹ May, John B., Bul. N. E. B. A., Vol. II, April, 1926, pp. 25-28.



Outline Map Showing Places of Banding and of Recoveries of Arctic and Common Terns, Kittiwake and Black-headed Gulls, European Widgeons and their Trans-Atlantic Migrations.

most cases our knowledge of the routes traveled is entirely theoretical. Recently, however, banding recoveries have thrown a little light upon some of these routes, and among them, no less than eight show journeys across the Atlantic Ocean as part of the migration course.

The little town of Rossitten, on the shores of the Baltic Sea in eastern Prussia, has long been the site of banding activities of a group of German ornithologists, and here, in July, 1911, a number of the graceful Black-headed Gull (*Larus ridibundus*) were banded as nestlings. These birds are very much like our Bonaparte's Gull in appearance but the adult has a brown head. Four months later, in November, one of these Gulls was recovered on the island of Barbados, British West Indies, and during the following February another was recovered near Vera Cruz, Mexico.²

About a year and a half later a Common Tern (*Sterna hirundo*), which was destined to make history, was banded by Dr. John C. Phillips, at a tern colony in Muscongus Bay, Maine. With its brothers and sisters and its many cousins, it disappeared into the wide open places, and no one of them was ever heard from again until, four years later, in August, 1917, a native picked up a dead bird floating on the River Niger in western Africa, and carried it with its little aluminum band, to a missionary, who in turn reported it to the officers of the old American Bird Banding Association.³

The Farne Islands, off the coast of Northumberland, England, have long been known as a breeding place of the hardy little Kittiwake Gull (*Rissa tridactyla tridactyla*), and our next trans-oceanic voyages are credited to birds from this colony. A Kittiwake banded on June 28, 1923, was recovered on August 12, 1924, at Horse Island in the district of St. Barbe, Newfoundland, and another, banded June 30, 1924, was recovered at Gross Water Bay, Hamilton Inlet, Labrador, in October, 1925. Both these birds were a little over a year old, while the two Black-headed Gulls were between three and six months old when recovered.⁴

For a number of years we have been wondering as to the location of the breeding areas of the specimens of European Widgeon (*Mareca penelope*), which occur with considerable regularity on the coast of North America. We are indebted

² Lincoln, F. C., Auk, Vol. XLII, July, 1925, p. 374.

³ Lincoln, F. C., Bul. N. E. B. A., Vol. III, April, 1927, p. 28.

⁴ Nelson, E. W., National Geographic Mag., Vol. LIII, January, 1928, p. 94.

to the Danish bird banders for at least a partial solution of this problem, for in December, 1926, a bird of this species was captured at Hawk Point, Cape Sable Island, Nova Scotia, which had been banded at Hraunsland, Iceland, the preceding June,⁵ and in November, 1927, a second European Widgeon was killed at Eastham, on Cape Cod, which had been "ringed" at Husavik, Iceland, last July.⁶

Perhaps the most interesting of all these trans-oceanic recoveries, is one of an Arctic Tern (*Sterna paradisaea*), which was banded with about five hundred others, on a little island in Turnavik Bay on the Labrador coast, July 22, 1927, by Mr. Oliver L. Austin, Jr. This species nests principally close to or within the Arctic Circle and less abundantly on the American continent as far south as Maine. Wells Cooke has made the Arctic Tern famous as the bird which enjoys the greatest amount of daylight during the year, of any living creature. Nesting close to or within the Arctic Circle, it makes a journey of approximately eleven thousand miles in reaching its southern wintering place within the Antarctic Circle, and for nearly eight months of each year it lives within the region of the midnight sun. But how its long journey is made, along what routes and with what guides, no man could say. A few birds occasionally straggle down our eastern coast as far as New Jersey in the fall migration, but beyond that they are practically unknown until we reach Brazil and Argentina. Being circumpolar in its breeding range, it is also found in migration in Europe, Asia and Africa, and along our Pacific Coast. It was natural for us to suppose that birds raised north of Canada would follow our own coasts south, and that those found in Europe were birds which breed in northern Europe. But ten weeks after Mr. Austin banded his young Terns, one was reported from Port Dauphine, on the Bay of Biscay, France, having made this journey of at least four thousand two hundred miles, across uncharted seas, at this tender age.⁷

The above migration records are indicated on the accompanying map as lines lying in a single plane drawn from the place the different species were banded to the points they were recovered. Of course the details of their journeyings are quite unknown.

Recoveries of this kind, while answering some of our questions, cause other queries to arise. How did this little tern,

⁵ Lloyd, Hoyes, Canadian Field-Naturalist, Vol. XLI, October, 1927, p. 171-172.

⁶ Windeler, G. Herbert, and Skovgaard, P. *in litt.*

⁷ Austin, Oliver L., Jr., *in litt.*

fresh from its nest, make this long journey? Was it straight across the North Atlantic, or by easy stages of a longer route via Greenland, Iceland, and the islands north of Great Britain, to France? Do all our American-bred Arctic Terns cross to Europe en route to their wintering resorts in South Africa, South America, and the Antarctic Circle? Some day, perhaps, with increased interest in bird banding resulting in a great mass of records, we may be able to solve these and other perplexing but exceedingly interesting questions.

Cohasset, Massachusetts.

BIRD-BANDING AT SUMMERVILLE, SOUTH CAROLINA

BY WILLIAM P. WHARTON

Summerville, South Carolina, is situated on the coastal plain about twenty-four miles back from the coast at Charleston. Through the wise foresight of the founders of the town, a large part of the original pine forest has been preserved, and under this have been planted many ornamental shrubs and vines, which in the spring make the town a fairyland of beauty. The combination of old timber with thickets offers attractive conditions for many kinds of birds. On the outskirts of the town to the southwest, construction of a large golf-course has created many open areas which are inhabited by species preferring such conditions, while the adjacent woods and natural thickets harbor some birds not often seen in the more thickly settled district.

It was in this section that the writer lived during the first four months of 1926 and of 1927, and carried on banding operations. In the first season, 425 birds of 17 species were banded, and in the second 407 birds of 18 species. During the four months (January, 1927 to April, 1927), a total of 25 returns from the previous season's banding were taken.

The first year the following traps were used: one self-adjusting sparrow-trap, one auto-trip shelf trap, one funnel-type warbler-trap, and one automatic tree-climber trap, all products of A. W. Higgins, of Rock, Massachusetts. In addition to these, during the month of April, a five-foot by five-foot pull-string drop trap, made locally after specifications of the Biological Survey, was used. Since the latter came late upon the