

two mated (?) pairs and one well-grown juvenile bird at Little Duck Island, Mt. Desert, Maine, on July 15, 1931.

From the foregoing, it is highly probable that the Black-backed Gull within a very few years, if not in 1931, has made the first definite southward extension of its breeding range since Audubon's time. In all likelihood, this may be attributed to a marked increase in the Gull population in northeastern United States.—RICHARD J. EATON, 53 State St., Boston, Mass.

Breeding of the Great Black-backed Gull and Double-crested Cormorant in Maine.—During an inspection of the bird colonies on the coast of Maine, made under the auspices of the National Association of Audubon Societies, from June 23 to July 14, 1931, we found the Great Black-backed Gull (*Larus marinus*) breeding at ten different stations along the coast. With but one exception these breeding places were islands upon which there were also nesting colonies of Herring Gulls (*Larus argentatus*). The exception was Egg Rock, in West Penobscot Bay, where one pair of *Larus marinus* and two young of that species were found. On this same rock, a tiny island less than 100 yards in length, we counted 9 nests of the Eider (*Somateria mollissima dresseri*). The usual number of these Gulls breeding at each of the ten stations was one pair, two breeding pairs being found on only three islands: the Brothers, Cone Island, Little Duck Island. In all 13 pairs of breeding birds were observed. The nests always occupied elevated positions, commanding a view of the surrounding land and sea. The young were more advanced than the majority of young Herring Gulls, and in every instance were in early juvenal plumage. All of them could run with considerable speed, in spite of a certain awkwardness, and many took to the water upon being disturbed, swimming short distances off-shore with great facility. In one instance, at Hardhead, one which had swum well off-shore was seen to rise against the light breeze and fly to windward to join its parents, which persistently kept still farther up-wind, evidently encouraging the young one to overcome the leeward drift until it could reach shore and land once more.

According to our observations, the station farthest west upon which *Larus marinus* was found breeding was Northern White Island, belonging to the town of Boothbay, in Lincoln County. One young Gull of this species was discovered hiding among the rocks close to shore. When released he took to the water, and as he swam off-shore the two adults followed, flying in circles and zig-zags over him, sounding their characteristic low, hoarse notes, and an occasional high, screaming *ki, ki*.

Following is a list of the islands where *Larus marinus* was breeding: Double-headed Shot; the Brothers; Cone Island; Little Duck Island; Green Island (off Swan's Island); Hardhead Island; Spoon Ledge; Egg Rock (West Penobscot Bay); Yellow Ledge; Northern White Island. These islands are scattered from the region of Machias Bay to the western proximity of Pemaquid Point, roughly a distance of about 140 miles. It is very likely that *Larus marinus* is breeding on Elm Island, in Casco

Bay, but we did not find sufficient proof to allow us to claim this record.

To the best of our knowledge these instances, and the like discovery recently made farther west by Mr. R. J. Eaton, of Boston, Massachusetts, constitute the first definitely established breeding records for the species in the United States.

It is probable, however, that the bird has been breeding on the coast of Maine for a few years previous to the present.

April 19, 1923, one of us saw a Gull of this species on the grassy ground of Double-headed Shot, evidently guarding a nesting claim against the Herring Gulls, which were beginning to assemble for the breeding season. A report was made to one of us, by a man well acquainted with the Gulls of the region, and their habits, of an unusually large nest with large eggs, near which a pair of these Gulls showed much solicitude. This was on Little Spoon Island, Jericho Bay, about the year 1916.

A careful consideration of early reports shows them to be dubious. Audubon's statement, that, "None breed south of the eastern extremity of Maine"¹ is too vague to be of use as a possible record.

In 1862 Boardman stated: "A few breed about the Islands."² His use of the term, "the Islands" was made without regard to political boundaries, and cannot be used as a basis for a State record.

Professor Verrill's statement,³ made the same year, that, "A few appear to breed on the Islands in the Bay of Fundy—G. A. Boardman" removes any question of the possible pertinence to Maine that might be attached to Mr. Boardman's statement. Yet it clearly was upon this that Dr. Coues based his claim for the breeding of the species in New England in 1868.⁴

Harold Herrick,⁵ writing of the birds of Grand Manan, New Brunswick, in 1873, said of that region and time: "Used to breed with the Herring Gulls, but being of a wilder nature, it was the first to move in the direction of new and more secure breeding grounds." It thus appears that early in the seventh decade of the nineteenth century, this Gull had retired from the vicinity of the eastern part of the Maine coast.

Ten years later, "New England Bird Life" by Stearnes and Coues, was published, wherein appears a statement that "Some individuals breed on the coast of Maine."⁶

It seems extremely probable that Dr. Coues in editing the work in question, truly an excellent work, had drawn upon his earlier list, where his data were taken from the 1862 Boardman statement; and equally probable that his heated debate with Dr. T. M. Brewer over the subject of New England birds, led him to add force to the claim for the breeding

¹ Audubon, *Orn. Biog.*, III, 306, 1835.

² Boardman, *Proc. Boston Soc. N. H.*, IX, 131, 1862.

³ Verrill, *Proc. Essex Inst.*, III, 159, 1862.

⁴ Coues, *Proc. Essex Inst.*, V, 306, 1868.

⁵ Herrick, *Proc. Essex Inst.*, V, 40, 1873.

⁶ Stearnes and Coues, *New Eng. Bird Life*, II, 347, 1883.

of this bird, since Dr. Brewer¹ had mentioned it only as a winter resident.

That this New England Bird Life claim was not based upon new data is apparent from a consideration of the contemporary works of Everett Smith, 1883, and Baird, Brewer and Ridgway, 1884. Mr. Smith had been stationed at Machias in the service of the U. S. Coast Survey, and had corresponded and traveled extensively on the coast in gathering the material for his 'Birds of Maine.'² Prof. Baird, who read the proof of the great work cited, had been at various places along the coast of Maine in the capacity of superintendent of the U. S. Fish Commission Surveys, and had on his force several young men keen in exploration and interested in ornithology. Moreover, he had an extensive correspondence with the best informed men of that time, at points all along the coast.

Smith² stated positively that none of these Gulls bred in Maine, and the 'History of North American Birds'³ stated that none bred west of the Bay of Fundy. We have reviewed these early reports and the data upon which they rest at some length, since there seems to be a need of having them fully considered and disposed of correctly in this connection.

Another observation of interest had to do with the extended nesting area of the Double-crested Cormorant (*Phalacrocorax auritus*), as well as a decided increase in the numbers of breeding birds. More than 1700 breeding adults were found in five distinct colonies. The largest of these contained 1000 adults, and the smallest eight. All except those on Old Man Island, the largest colony, were nesting flat upon the rocks and ledges. On the Old Man the nests were built high in dead spruce, with from one to seven nests in a single tree. Eggs and young were found in all stages of development. A summary of the breeding colonies that were observed, follows: Old Man Island, 1000 adults; Pulpit Rock, 100 adults; Spoon Ledge, 40 adults; Marblehead Rock, 600 adults; Old Hump, 8 adults.

The nesting of the Eider (*Somateria mollissima dresseri*) seems likewise to be on the increase along the Maine coast. In the course of our inspection, 165 adults, 25 broods, and 27 nests were counted. These nests, like those of *Larus marinus*, were built on commanding elevations. Most of them had hatched, but a number contained incubating eggs.

Conditions with reference to other breeding species may be summarized as follows:

- Puffin (*Fratercula arctica arctica*)—Breeding on two islands.
- Black Guillemot (*Cephus grylle*)—Breeding generally along the coast.
- Razor-billed Auk (*Alca torda*)—Breeding on Machias Seal Island.
- Herring Gull (*Larus argentatus*)—Breeding in 77 separate colonies.
- Laughing Gull (*L. atricilla*)—Breeding in one colony.
- Common Tern (*Sterna hirundo*)—Breeding in 20 colonies.

¹ Brewer, Proc. Boston Soc. N. H., XVII, 449, 1875.

² Smith, Forest and Stream, XX, 204, 1883.

³ Baird, Brewer & Ridgway, Hist. N. Am. Bds., Water Bds., II, 227, 1884.

Arctic Tern (*S. paradisea*)—Breeding in 6 colonies.

Roseate Tern (*S. dougalli*)—Breeding in 3 colonies.

Leach's Petrel (*Oceanodroma leucorhoa leucorhoa*)—Breeding generally along the coast, but not as numerous as previously.

Great Blue Heron (*Ardea herodias herodias*)—Breeding in 7 colonies.

Black-crowned Night Heron (*Nycticorax nycticorax naevius*)—Breeding in 1 colony.

For the last 27 years the National Association of Audubon Societies has employed wardens to guard the more important bird colonies on this coast. It is interesting to view the changes that have been wrought through the protection thus afforded. Herring Gulls have increased to such numbers that they are now a menace to the Terns, and in many instances have usurped their breeding grounds. The first definite records of the breeding of the Great Black-backed Gull, and the very great increase in the number of breeding Cormorants, are both significant facts. Under protection the Eider is coming back, but the same care seems of no benefit to the little Leach's Petrel, which appears to have decreased even more alarmingly than have the Terns, and for no apparent reason. Conditions in general, show that much may be accomplished through the combining of protective laws and warden service. We found breeding colonies of water birds on one hundred and eleven of more than two hundred islands inspected.—ARTHUR H. NORTON and ROBERT P. ALLEN, *National Association of Audubon Societies, 1775 Broadway, New York, N. Y.*

Bird Predators of Common Tern.—A male Snowy Owl, *Nyctea nyctea*, was shot at Lone Tree Island, Michigan, on June 11, 1931. This bird was sighted at dusk on June 10, leaping at intervals of a few hundred feet. Apparently, the bird stayed on the island the whole night preying on Common Terns as the head and the tips of the wings of the latter were recovered from its stomach at 4:30 A.M. The Owl was thin and together with its unusual docility suggested that it was sick. This record of capture appears to be unusual for this region.

On June 12, a Crow, *Corvus brachyrhynchos*, was killed at about the same spot. Egg shells and albuminoid materials suggestive of those of the Common Terns were recovered from the stomach. This solved the mystery of the punctured eggs observed almost every morning during the last three nesting seasons.—C. G. MANUEL, *Museum of Zoology, University of Michigan.*

Water-Turkey Nesting in North Carolina.—While on a recent field investigation trip to various bird colonies for the National Association of Audubon Societies, the following observation was made.

On May 24, 1931, at Crane Neck on Orton Pond, situated about fifteen miles below Wilmington, N. C., a Water-Turkey (*Anhinga anhinga*) was flushed from a nest containing three eggs, about fifteen feet above the water in a small cypress. The only other record of an actual nest of this