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THE AMERICAN GULL-BILLED TERN BREEDING IN CALIFORNIA

WITH FIVE ILLUSTRATIONS

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THE American Gull-billed Tern (*Gelochelidon nilotica aranea*) is a bird chiefly of the Gulf coast of the southern United States and Mexico and of the southern Atlantic coast as far north as Virginia. It also breeds on some of the Bahama Islands and Cuba. It has always been found in a salt-water association and never, so far as I know, inland. There is no published or known unpublished record of the bird ever having been found in the breeding season away from the Atlantic coast and its immediately adjacent tide-waters.

It is therefore with great pleasure that I announce the discovery of a large colony of these birds breeding on some small islands in the Salton Sea, Imperial County, California. To Mr. Ozra W. Howard the principal credit for this discovery should go. Mr. Howard is known to Cooper Club members as one of the best posted men in southern California on the breeding grounds and habits of our southern birds. He is indefatigable in running to ground rumors which may lead to new discoveries. Early this spring he asked me to accompany him on a trip to the Salton Sea to look into the identity of some terns which had been reported to him by natives as breeding there.

Accordingly, on May 20, 1927, Howard and I, accompanied by J. Stuart Rowley, arrived about midnight at the home of a friend of Howard. Early the next morning we were out in the tules and willows where we found a multitude of water birds. Black-necked Stilts, Avocets, White-faced Glossy Ibises, Coots, Fulvous Tree-ducks, Redheads, Shovellers, Mallards, Pintails, White Pelicans and Killdeers were noted in varying degrees of abundance; while Ruddy Ducks, Eared Grebes, and Black and Forster terns were now and then seen. We were keenly on the alert for Roseate Spoonbills (*Ajaia ajaja*), and the next day Howard discovered a single bird wading in shallow water in company with ibises and avocets. This bird was collected by Rowley and is now no. 588 in his collection at Alhambra, California. This is apparently the first specimen of this species ever actually taken in California. It proved to be an immature male in probably its second year.

We soon got into boats and made our way a couple of leagues to a small sand island where the White Pelicans (*Pelecanus erythrorhynchos*) were nesting. There proved to be by actual count 350 occupied nests, each containing from one to four eggs. Incubation had not progressed very far, even in the sets of three and four. On two other nearby islands were two additional colonies; the 50 occupied nests in each brought the total number of breeding pelicans to 450 pairs. It is likely, judging from the relatively large number of nests containing only a single egg each, that many

pairs of the birds had not yet laid; and I believe it safe to say that there are at least 500 pairs of breeding pelicans this year on Salton Sea. Grinnell (CONDOR, x, 1908, p. 187) in April, 1908, found 1000 pairs of these birds in the same locality. The nests were simple scoops in the dry sand with a scanty, raked-up rim of dry salt grass and twigs surrounding the shallow depression. The spacing between the nests ranged from four to ten feet.

Before we reached the pelican colony Caspian Terns (*Sterna caspia imperator*) had been noted in small numbers; and a few nests containing one and two eggs were found on a very small sand island. A bad storm of the preceding week had washed away a large part of this island and many nests had been ruined. It is believed that this colony is the southernmost known in the State, two other colonies being known in the middle of California. We found, all told, about a dozen pairs of this bird.

While rowing the boats toward the pelican colony I noted singles and pairs of terns at a distance, which I mentally considered to be Forster Terns. While we were



Fig. 78. WHITE PELICANS RISING FROM THEIR NESTS; SALTON SEA, CALIFORNIA, MAY 21, 1927.

walking on the small island where the Caspian Terns were breeding I first became aware that these small terns were Gull-billed. Neither Howard nor Rowley were acquainted with this species, but we all felt certain that the bird was a new one for California. Rowley collected several of them and one pair, a gift from Mr. Rowley, now reposes in the Museum of Vertebrate Zoology as nos. 50668 and 50669.

The terns were flying in a bee line for some distant spot, and the fact that some of them carried small fishes in their beaks convinced me that we were soon to make the discovery of a breeding colony. My experience with this species in Texas had taught me that the surest and best way of finding the breeding ground was to follow birds carrying fishes. So we hurriedly got into the boats and away on a long pull

toward a dim point of land too far off mid the heat waves to be studied even with a good pair of binoculars. At length the boats drew near the point, which turned out to be an island, and the terns, even as in Texas, came out to meet us with discordant and grating screeches, while over the center of the island were hundreds of hovering birds. We beached the boats and were soon walking up the slope of the island and among the nests.

The nests and eggs of the Gull-billed Tern proved rather hard to find until a person was within a few yards distance, when they became very obvious. The eggs were nearly the same color as the brown sand on which they lay, and the nests were depressions in which the eggs were partially hidden, as a result of which the most careful search was needed to locate all the nests. The nests contained from one to four eggs each, with the exception of one nest which held a single young bird perhaps only a day old. Incubation was far advanced in most of the full sets of three and four (only one nest contained four eggs), but nests containing one or two eggs held incomplete sets in some cases.

All the nests were depressions in the caked sand and many of them must have been made by the birds. The sand of these islands is wind-blown dune sand, but it



Fig. 79. NEST AND EGGS OF THE CASPIAN TERN; SALTON SEA, MAY 21, 1927.

has become incrustated to a depth of an inch or two by salt which has been left after evaporation of spray blown over the sand in periods of strong winds. The severity of the winds I believe to be the most serious obstacle met by these birds in nesting here. The scouring action along the sides of, and off the breast of, the sitting bird was sufficient in many cases to wear deep grooves in the sand. Many eggs were found at random places about the island, these having doubtless been blown from the nests. Some 25 dead birds were found, and we believed they had been killed by exposure to the severe wind.

We found three groups of nests, each upon a separate island. All of these islands, situated close together, were separated from the mainland by deep water, and I assume that roving coyotes do not molest these birds. There were by actual count

in part of the colony, and by estimate over the remainder, 500 nests containing eggs. The nests were not arranged closely together but were scattered rather loosely about the island at perhaps an average distance apart of twenty feet. In some areas the



Fig. 80. NEST AND EGGS OF GULL-BILLED TERN, SHOWING ORNAMENTATION WITH BITS OF SAND SLABS AND A SMALL TWIG; SALTON SEA, CALIFORNIA, MAY 21, 1927.



Fig. 81. NEST AND EGGS OF GULL-BILLED TERN, SHOWING SIMPLE DEPRESSION IN HARD SAND AND EFFECT OF WIND ON THE SAND NEAR THE NEST; SALTON SEA, MAY 21, 1927.

nests were as close as ten feet apart. Very few nests contained any ornamentation whatever, the exceptions having a slight rim of white, salt incrustated sand chips, or small bits of salt grass.

As to coloration, the eggs run truer to a certain type than do those from Texas in my collection. They are on the whole browner than Texas specimens. They also average a bit longer, the average of 27 eggs being 48.5x34 millimeters, while the average size of the same number of eggs in my collection from Texas is 47x34. Bent in his *Life Histories of Gulls and Terns* gives the average for all eggs which he measured, from both the Atlantic and Gulf coasts, as the same, 47x34.

It is interesting to speculate a little as to how this colony of Gull-billed Terns came to be established in Salton Sea. While the species has not been known to stray inland and away from the Atlantic, we here find it inland a distance of nearly a hundred miles from pelagic waters. The birds of course must have originally crossed from the Atlantic to the Pacific during their winter migration—most likely following



Fig. 82. NEST AND EGGS OF GULL-BILLED TERN ON AN ISLAND IN SALTON SEA, SHOWING CUTTING EFFECT ON THE SAND OF WIND EDDIES OFF THE BREAST OF THE SITTING BIRD.

the Panama Canal. They then followed the Pacific shore northward into the Gulf of Lower California. I imagine that when they came to the end of this body of salt water they were confused and instinctively pressed on farther northward until they realized they were lost and so settled on the Salton Sea, as being a perfectly good camping ground anyway. If these birds migrate southward in winter they may reunite with their Atlantic flocks and never return to Salton Sea.

However, the natives say that the Salton Sea colony has been active for several years; so it is doubtful, of course, that the birds now go south in winter as far as the Panama Canal. The birds are certainly well established here, know the country well, are able to withstand the tremendous heat of the Salton Sink, and have learned to eat fresh-water fish; for they do all their fishing at the mouth of the New River where it debouches into the Salton Sea.

The Salton Sea has existed since 1907. Neither Grinnell in 1908, nor Dawson (*Birds Calif.*, iv, 1923, p. 1947) in January, 1913, noted the presence there of the

Gull-billed Tern; so we may assume that the colony is aged less than fourteen years. Howard and I believe it may be six years old. During this time it has escaped the ravages of egg collectors until this year.

Now, whether the birds really got lost and located in the Salton Sea in desperation, or whether they were lured there either by our climate or by real estate subdividers, I hope that the birds get a square deal from now on from the egg collectors, and that they will not be forced to move back to Texas where all the colonies are rigidly protected by both State and Federal authorities and collecting is not allowed under any circumstances. This band of a thousand Gull-billed Terns is the newest addition, in any quantity, to the Californian avifauna; they are unique birds and will well reward any one paying them a visit—but be sure and treat them as honored guests.

Beverly Hills, California, August 4, 1927.