

NOTES ON THE LOUISIANA CLAPPER RAIL (*RALLUS  
CREPITANS SATURATUS*) IN TEXAS.

BY GEORGE FINLAY SIMMONS.

## I. INTRODUCTION.

MY observations of the Louisiana Clapper Rail (*Rallus crepitans saturatus*) have been of particular interest to me; and, as it seems there is very little known of this race, it appears advisable to publish the results of these observations in connection with a review of the few published records of Clapper Rails from Texas, in order to work out the range of the bird in that state.

The Rails have always proved somewhat of a mystery, but I did not realize how little was known of the nesting habits of the family in general and of the Louisiana Clapper Rail in particular until I began to search for information on the subject. My observations by no means cover the complete life history of the bird, and they are here given merely in the hope that they will diffuse some light on the habits of a little known species.

I wish to acknowledge my grateful indebtedness to Mr. E. F. Pope of Colmesneil, Texas, for ready answers to my numerous inquiries and for his field notes regarding the species under consideration. Among the others who aided me I wish to mention Mr. R. E. Farley of Port Aransas, Texas, and Mr. John M. Prior of Corpus Christi, Texas.

## II. PREVIOUS RECORDS.

The first record of the Clapper Rail in Texas is that of the late Mr. Geo. B. Sennett, who, in 1877 under the name *Rallus longirostris* Bodd.,<sup>1</sup> states that "A few of this species were seen about Galveston Bay only, and a single bird obtained. 3-♀-14.60×20.00×5.75×2.50. Feb. 28, Galveston." The first number is that of the

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<sup>1</sup> Sennett, George B. Notes on the Ornithology of the Lower Rio Grande, from observations made during the season of 1877. Bull. U. S. Geol. Surv. Terr., IV, No. 1, 1878, p. 61.

specimen; the sign for sex follows; the next four numbers indicate respectively the length, extent of wings, length of wing and length of tail. Date and locality follow.

In making a disposition of two Texas specimens in 1889,<sup>1</sup> Mr. Sennett says: "Two specimens in my collection from Texas, strange as it may seem, are referable only to this form [*Rallus longirostris caribæus*]; moreover, nothing like it has been taken in Florida, which lies almost in direct line between Texas and the West Indies. There is nothing in this country nor in England as yet to show the forms of Clapper Rail prevailing along the immense line of coast extending between the United States and Cayenne, South America. As it is not the habit of these birds to migrate over great expanses of land or water, it would indicate that the Texas *caribæus* found its way thither along the southern coast of the Gulf of Mexico; therefore it would be only reasonable to expect that we shall find this form along the entire Gulf coast of Mexico and the eastern coast of Central America."

It is a well known fact that just before his death <sup>2</sup> Mr. Sennett was contemplating the writing of a book on Texas birds, and in his personal copy of the A. O. U. Check-List he marked the Texas records in a series of initials which show the authority for the record and in most cases the locality. In this index of records he referred all Texas records of Clapper Rails to *Rallus crepitans saturatus*; his records appear to be three in number: (1) The February 28, 1877, record from Galveston; (2) records of the species at Corpus Christi, Texas, during his stay there from April 1 to May 25, 1882; and (3) records of M. A. Frazar "Lower Rio Grande for G. B. Sennett from Jany. '80 to June 1881." By the term "Lower Rio Grande" he probably refers to Corpus Christi as well as to the vicinity of Brownsville, which is the way he used the term in several of his previous papers on birds.

Mr. Sennett, Capt. B. F. Goss, and Mr. John M. Prior composed the 1882 collecting party at Corpus Christi, and it was on this trip that one of the specimens of the so-called Caribbean Clapper Rail

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<sup>1</sup> Sennett, George B. The Clapper Rails of the United States and West Indies compared with *Rallus longirostris* of South America. Auk, Vol. VI, 1889, No. 2, p. 164.

<sup>2</sup> March 18, 1900.

was collected; Mr. Prior tells me that the single specimen collected at Galveston in 1877 was the second specimen referred to by Mr. Sennett in his 1889 disposition. After publishing his revision of the Clapper Rails, and during the middle '90s, Mr. Sennett wrote Mr. Prior to pay particular attention to the Rails as he wished to go further into his disposition of the Texas specimens; evidently Mr. Sennett's death cut short further investigation along this line. As the reader will see, Mr. Sennett apparently ignored his disposition of the two Texas specimens of 1889, in later making his index of records.

In 1889,<sup>1</sup> Mr. J. A. Singley states under the name *R. l. caribæus* as follows: "Marshes near mouth of the Nueces River; only two taken. A West India form found in the United States only in Texas." No dates were given, but in another portion of the same paper he says that collections were made in that locality from March 20 to April 24 and from June 16 to 19, 1889. Mr. Singley evidently read Mr. Sennett's paper, hence the name.

So far as I can find these are the only published records of Texas specimens of Clapper Rails.

In the following pages I give heretofore unpublished records of the nests and eggs, as well as other data which would throw some light on the life history of the bird.

Skins of the Texas birds are being studied in connection with the other races of the genus by Mr. Harry C. Oberholser, ornithologist of the U. S. Biological Survey, who will, undoubtedly, in the near future make a revision of the forms of the Clapper Rail. Therefore, in my paper I have made no mention of plumage, measurements, or differentiating marks of specimens of the Louisiana Clapper Rail.

### III. DISTRIBUTION.

My own observations have, for the most part, been made on the coast prairie southeast of Houston, in Harris County, Texas, and within a seven-mile radius of the court house in that city, this locality being about 25 miles from Galveston Bay and 50 miles

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<sup>1</sup> Singley, J. A. List of Birds Observed at Corpus Christi and on the Lower Rio Grande. Texas Birds, Report of Texas Geol. Survey. Austin, 1893, p. 367.

from the Gulf of Mexico. Then, too, I have studied the birds in the marshes on Galveston Bay and in Galveston County.

Mr. E. F. Pope made numerous observations on Bolivar Peninsula, Galveston Bay, between July 26, 1911, and the latter part of March, 1913. In that year and a half he covered well the extensive marshes from the "Point" to a flag-station called Flake, eight miles up the peninsula. He found the rail to be a common, and at times abundant, resident of these marshes where it breeds.

According to Mr. R. E. Farley, the Louisiana Clapper Rail is resident and breeds on Harbor Island, a small island about three miles north of Port Aransas, Texas. Formerly abundant, now scarce, the birds have always been more common from April to October than in winter.

Mr. John M. Prior's notes refer mainly to the Harbor Island rails; on that island he, too, found the birds resident and breeding. He states that he found them more common in April, May and June than in winter. In addition to finding the rails on Harbor Island, he found them on the marshy flats surrounding Corpus Christi Bay and in the marshes of St. Joseph's Island.

On June 17, 1909, Dr. J. M. Carroll of Brownwood, Texas, made a trip to Harbor Island and found the rails breeding and abundant.

Mr. J. J. Carroll, now of Houston, after writing his paper on the birds of Refugio County, Texas,<sup>1</sup> noted the bird as a rare resident in the tall grass and tule marshes which skirt Copano and Mission Bays. No nests were found, but he felt pretty sure they nested; for on several occasions eggs were brought him which could have belonged to no other bird.

Prof. H. P. Attwater of Houston, while at Rockport, Aransas County, Texas, from 1891 to January 1894, noted Clapper Rails as common in and about the marshes on the mainland and on the small islands in that vicinity. When I questioned him about specimens of the birds, he referred to his journal and found the following note, the identification being by Captain C. E. Bendire: "1 Rail — young bird — ♀ — August 8, 1893, Rockport. *Rallus*

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<sup>1</sup> Carroll, James J. Notes on the Birds of Refugio County, Texas. Auk, Vol. XVII, No. 4, Oct., 1900, pp. 337-348.

*longirostris caribæus* (?), identification uncertain." He was making a specialty of the mammals of that locality and could not spare the time during the nesting season to search for nests.

In his small collection at Galveston Mr. H. P. Nettleton has a mounted group of an adult and a half grown young of the Louisiana Clapper Rail, which he collected on Galveston Island in the summer of 1901. He says that the birds are found throughout the year in the marshes over Galveston Island, in localities where the marsh grass is tall enough to offer shelter.

Mr. Frank B. Armstrong of Brownsville, during his many years of active field work in the Lower Rio Grande of Texas, has never found the rails south of the flats of Corpus Christi Bay or along the coast of Mexico, even in winter, which goes to show that they apparently do not migrate, and that there is no connecting link between the birds in Texas and those of Central and South America.

Over sixty skins of this bird in the private museum of Col. John E. Thayer of Lancaster, Massachusetts, were collected by Mr. Armstrong about Corpus Christi Bay and on Harbor Island.

Thus we find the Louisiana Clapper Rail (*Rallus crepitans saturatus*) ranging in Texas from Louisiana to the marshes surrounding Corpus Christi Bay.

In the humid subdivision, or Austroriparian, of Lower Austral zone of eastern Texas, it ranges from the water's edge as far back in the semitropic or Gulf strip as the marshes extend — in some cases thirty-five miles or more from salt water. From the western edge of this humid subdivision in a southwesterly direction it is confined to the marshes in immediate proximity to the open salt water of the bays.

Throughout this range the bird is a permanent resident.

#### IV. HABITAT.

At the mention of the word "Rail," the thoughts immediately turn towards brackish, sedgy, tide-washed marshes, inhabited by water snakes, water birds and great numbers of crustaceans.

In just such places along the Texas coast do we find the Louisi-

ana Clapper Rail. But those marshes are only found along the shores; the marshes inland are much smaller and of course are not tide-washed.

The extensive marshes on Bolivar Peninsula cover a strip varying from a half mile to nearly a mile wide, all covered with tall marsh grass. This low marsh ground extends along the bay side of the peninsula from the "Point" to Flake. Numerous sluggish bayous cross this strip and connect with Galveston Bay; in places these bayous widen into small ponds or lagoons, the edges of which are thickly covered with tall, rank marsh grass.

A marshy bayou flows through Port Bolivar, on the "Point," to the bay, forming quite a pond near the bay shore. About three-quarters of a mile up from the mouth of the bayou it again widens into something of a pond or lagoon, known locally as "Horse Shoe Lake." The edges of both ponds are also thickly covered with tall, rank marsh grass.

Harbor Island, where Messrs. Farley, Prior and Carroll studied the Rails, has about twenty-five acres well covered with tall marsh grass and boggy with salt water, indeed a typical salt water marsh.

Vast marshes extend from Nueces Bay ten miles up the Nueces River. They are bordered by reeds and sedge, and dotted with numerous small ponds.

From the timber of the Brazos River bottoms northward and eastward along the coast is the low, nearly level coast prairie of Texas. The only vegetation of this prairie is the tall grass, usually burned brown by the hot summer sun and killed by the cold "northers" which sweep over Texas in winter; here and there a huisache (*Vachellia farnesiana*) and an occasional 'motte' of three or four scrubby oaks serve to break the monotony. A few slowly winding bayous cross this plain, but the water in them rarely ever flows; these bayous are generally skirted by timber, but many of them contain marshy spots overgrown with tall grass, reeds and sedge. At the mouths of these bayous the country is usually so flat and low that the water spreads over a considerable area, forming innumerable marshy flats and salt water marshes, where tall grass, reeds and sedge grow in abundance.

In winter large numbers of ducks and other water-fowl attract

the hunter, but in summer these marshes are abandoned to the rails, Mottled Ducks and Herons.

Further inland from the coast, throughout this strip of coast prairie, are numbers of shallow ponds overgrown with reeds and sedge, and spots where tall grass and reeds grow over several inches of water. The few persimmon trees that are found on this prairie grow in such wet spots and offer admirable nesting sites for numbers of the smaller birds of the locality.

My favorite spot for the Louisiana Clapper Rail is a small Red-winged Blackbird colony about six miles south of the court house in Houston, being a mere damp spot on the prairie covering about two acres, and overgrown with tall grass and sedge. Two small clumps of persimmon trees grow in this marsh, one at either end. About fifty yards east is a railroad track, which here runs southward for a short distance and then westward across Texas to San Antonio. Though trains rattle and snort past several times a day, the birds do not seem at all disturbed.

In the persimmon trees nest the Scissor-tailed Flycatcher, Kingbird, Orchard Oriole, Florida Red-wing and Western Mourning Dove, with more Red-wings and a nesting pair of Maryland Yellow-throats in the tall marsh grass. Though fully twenty-two miles from Galveston Bay and fifty miles from the Gulf of Mexico, this salt marsh might be termed a typical salt marsh, for here nested a pair of Texas Seaside Sparrows, and not a mile off to the south a nest of the Mottled Duck with eleven eggs was found in another such a marsh. The pestiferous Dwarf Cowbird completes the list of breeding birds of this marsh, for never a year passes but what the nest of the Orioles contains one or two eggs of this bird.

## V. GENERAL ACTIVITIES.

Throughout the coast region of Texas the Clapper Rails are known as "Marsh Hens," and are well known to the more experienced hunters as denizens of the marshes and rice fields. Even when common in a locality they are often overlooked on account of their secretive habits and reluctance to taking wing to escape danger.

When pursued they run swiftly through the grassy jungles and well-worn runways, nimble runners you must admit, running with outstretched neck and erect tail. Their nimbleness and ability to dodge pursuers reminds the Westerner of the actions of the Road-runner when surrounded on all sides by men. This way and that they dart, and disappear before the very eyes of the enemy, fading away into a small clump of the tall marsh grass.

They swim well, with neck erect and sitting high on the water; they do not swim fast, and when wounded and closely pursued they dive and hold to the marsh grass beneath the water, head downward, to keep from rising.

They take to wing when pursued only as a last resort. Their flight is slow and labored, and with dangling legs they soon drop back into cover. In fact, their flight is so slow and awkward that it would be difficult for any sort of marksman to miss them.

Doubtless the reader will be surprised that the Rail has ever been known to perch; indeed, I was more than surprised. On one occasion, in August 1912, I was surprised to see a Clapper Rail flap up out of the marsh and light on a flat-topped post of the barbed wire fence, where it remained for some few minutes, standing there on the small flat surface as unconcerned as if on its marshy home ground.

From November 20, 1912, to the latter part of March 1913, Mr. Pope encamped in a deserted two-story building located on the bay shore of Bolivar Peninsula, at a point almost due north of Flake. The front of the building was over water at mean tide, and was built on piles.

Within a stone's throw of the rear of this building was a cove with an unknown depth of silt which was often left bare after a blow from the north. Around the edges of this cove was a favorite haunt of the Rails and when the cove was left bare there were seldom less than a dozen to be seen almost any time wading about in the silt, and feeding.

Just across this cove was a stranded two-masted schooner, "The Two Brothers," which had dragged her anchors and stopped with her prow just in the edge of a bayou. By taking hold of a line which dangled from her bowsprit and walking one of the anchor chains he could cross the bayou, and this was his regular route



when he visited that part of the marsh. He says that he went that way at least a hundred times, and he does not think he ever crossed without seeing from one to six Rails scuttle under the after part of the schooner, which rested on the ground in the tall marsh grass.

When the wind was high enough to keep the mosquitoes from bothering, Mr. Pope would clamber on the deck of the schooner and remain motionless till the Rails came out to resume their feeding, which they would do in about five minutes, if he kept perfectly still.

Here I quote the following from his notes: "I knew their runways leading under the schooner, and by watching these I could see them creep out, very slowly and cautiously, turning their heads side ways to look up. If I so much as flicked an eyelid, they would dart back. Eventually, however, they became so tame that they took little notice of my presence.

"Some one has said that a Rail which is quite at ease is very different in appearance from one that is frightened or at all nervous. Here I had the chance of a life time to verify the above statement. When filled with apprehension or frightened, the bird changes from its normal plump form to one of slenderness, with lowered and extended head, while the tail twitches or jerks with nervousness at every step. At ease they assume easy graceful attitudes, with tail at rest and slightly drooped."

The game scent of the birds is not very strong. A bird dog will 'point' them, but when the scent is once lost it is not easily regained.

Ask a hunter if he knows the marsh hen. He will tell you that it is a bird "like a chicken, and when closely pursued it runs through the marsh like a rat."

From the 9th to the 27th of June, 1913, I was encamped at Seabrook, on the Bay shore in Harris County, and every day one or more Rails were seen in a small marsh near the bay shore. On one occasion I stood for some time with three companions and watched one of these birds on the edge of the sedge; the bird was standing on dry bare ground with the tall reeds at its back, and seemed not at all shy as we stood there forty yards away watching it. Finally one of the other campers threw a tomato can at the Rail and it darted back into the marsh.

## VI. SOCIAL RELATIONSHIP.

Though not strictly gregarious, the birds to a great extent live in colonies.

During the breeding season on the Bolivar Peninsula Mr. Pope found that one locality in particular, near Flake, appeared more tenanted than other portions of the extensive marshes; there he found numbers of nests, scattered along the marshy edges of a small slough or bayou. Indeed, it might have been termed a scattered colony of nesting birds.

During late summer and early fall the families keep together; but at the beginning of cool weather there appears to be a general mixing and scattering of the individuals.

During winter the birds were seen almost every day in small groups in the marshes and around the edges of the coves near Flake. In the latter places Mr. Pope often observed as many as a dozen scattered along a short stretch of silt, wading about and feeding.

He says that "early in March the birds became very noisy, especially late in the afternoon and about dusk. At this time the birds appeared to congregate in flocks of from four to eight, preparatory to mating; by the first of April the first pairs were observed."

The twenty-five acre marsh on Harbor Island was especially noteworthy for its abundance of Rails. So abundant were they that on three collecting trips at various times Mr. Armstrong secured about one hundred and fifty specimens.

On his trip to this marsh in June 1909, Dr. Carroll examined six or eight sets during the day. Besides this there were nests with incomplete sets and nests with young. In the one day he could not have covered the marsh thoroughly and probably missed numbers of nests.

The two-acre marshy spot just south of Houston contained two nests, less than a hundred yards apart.

## VII. BREEDING HABITS.

*Nesting Period.*—On Bolivar Peninsula the birds were mating during March, the first pairs being seen about the first of April. After that the birds were all apparently mated; but, though the

marshes were carefully searched, no nests were found until the 15th of that month. The first eggs were found in the nests on the next trip, April 26 (1912), one nest containing four and another five. So that the first egg must have been laid about the 20th of April.

These two sets were later destroyed by some small mammal before they were complete and Mr. Pope did not have an opportunity to learn at what date the birds first began setting.

For the first brood, fresh eggs were found in the nests up to the middle of May. The first young were observed on the 26th of that month, already out of the nest and running around, though evidently newly hatched.

The first egg at Houston was noted on April 17, but that was unusual, for the dates in that vicinity are practically the same as those at Bolivar. One nest of eggs at Houston was pipped and hatching on May 27, while still another nest had already yielded its quota of young by the 31st of that month. No second broods were noted at either Houston or on Bolivar Peninsula.

On Harbor Island nests were found on the 15th of April, and the first eggs were noted on the 20th. When Dr. Carroll made his visit to the marsh on June 17, 1909, the birds had just started on their second nesting; nests with both full and incomplete sets were found. Mr. Farley says that he thinks the birds sometimes lay a third set, as he has found eggs as late as the last of August.

*Nesting Data.*—My best descriptions of the nests of this bird are contained in my journal for May 27, 1912, and I quote as follows:

“I entered the Red-wing colony about 10:00 A. M. and began a search for nests of the birds which I usually found breeding there. The ground was cracked and hard, the marsh being no longer a marsh, and the vegetation was burned brownish buff by the hot summer sun. The two small clumps of persimmon trees at either end of the marsh were the only groups of timber for miles, and offered the only shade to be found. The thermometer was ranging about 89° and I wondered how marsh-loving birds like the Red-wings could stand the heat and lack of water.

“While beating around in the tall grass near the center of the marsh I nearly stepped on what I at first took to be a nest of

Gallinule eggs, but which on closer inspection proved somewhat different from any Gallinule eggs I had ever seen; I was indeed puzzled to make out what they were. The nest was built of flags and long marsh grass of the same hue as the eggs (brownish buffy), and was built up solid from the ground about seven inches in a green clump of the tall marsh grass which in some manner had withstood the heat of the summer sun. There were four dirty, cracked eggs in the nest, a few pieces of shell on the ground, and about ten feet away was a dead young bird half out of the shell. I picked the latter up to examine it, but dropped it immediately to take a firm hold on my nose and return to the nest, more interesting to me just then. Taking the four eggs up one at a time and placing them to my ear, I listened and heard in two of them faint squeaks like the note emitted by a newly hatched domestic chick. On the ground about the nest and in the nest were a few small breast feathers which attracted my attention by their oddity. Each feather was brown on the tip for a half inch, the remainder of the feather being of an ashy hue. A typical water bird feather, each vein being separate and apart from the next vein, and not joined as in a quill. They certainly were not Gallinule feathers; what were they?

“Still puzzled as to what bird the nest might belong, and not once thinking of the rails which I had seen feeding in the vicinity on previous trips, I went on west across the tract to where the second clump of persimmon trees grew about a hundred yards away. A barbed-wire fence separated the two clumps, running diagonally across the marsh.

“About twenty feet away from the nearest persimmon tree in the second clump and still about ten feet from the fence, I flushed a large, brown, and slow-flying bird which I saw at once was a Louisiana Clapper Rail. Flying about a hundred yards, she (for I took it to be the female) lit in the tall grass without uttering a sound. After following her flight with my eyes I turned my attention to the ground from whence she flew and saw a nest similar to the one containing the four eggs. This nest, however, contained eleven eggs, duplicates of the first four but having a much cleaner and fresher appearance. The nest was a mass of material ten inches high, cunningly concealed in a tall clump of the high marsh grass, and built of the same material as nest No. 1.

"Leaving this nest I circled towards the spot where the Rail had disappeared, but though I searched for some time I was unable to find her. I then went on east to the railroad, after having been in the marsh about a half hour, and continued on my day's trip.

"On my way home I stopped at the Red-wing colony again to try and get a look at the Rail on the nest. Slowly I drew nearer and nearer to the nest, but I could not tell whether there was a bird on it or not, so still did she sit and so perfectly did she blend into the background that I was unable to see her until I was within about three feet of the nest.

"Sitting on one heel while using the opposite knee as an improvised table, I checked down a few descriptive notes and sketches in my note book, although I feared she would leave the nest while I was doing so. However, she did not, but remained on the nest eyeing me ascant, her slightly curved bill nearly sidewise to me. Dropping my note book and other paraphernalia, I arose until I was half over the bird on the nest; I could easily have caught her and might have stroked her as she sat on the nest, had I not been so slow. But as I remained in that position for several minutes without moving, she began to get nervous, and while I stood there watching her she stepped off the nest into a well defined little runway or path leading away from it. So slowly did she go and such time did she take to lift her feet at each step that I could have counted a second or two between each stride. About twelve feet away she stopped and half turned to watch me as I examined the nest and eggs.

"The nest was eight and a half inches across the top from rim to rim; the cavity was two and a quarter inches deep, being a gradual slope from rim to rim, with the reeds firmly and smoothly packed inside. For the most part the nest was composed of reeds and fragments of reeds or marsh grass from one inch to over a foot in length; a few were somewhat longer, being the standing blades of grass which had been bent flat against the ground and folded back again. The lining was of small fragments of the same buffy, broad-bladed marsh grass, and packed flat against the body of the nest.

"The majority of the eggs were cracked and pipped and the young in them kept up a constant twittering and faint squeaking, and continually stuck the tips of their bills through the small

openings they had made; in the morning none of the eggs had been pipped and I had had no idea how near the eggs were to hatching. Luckily I carried a pocket set of instruments which included an egg measure, and hence I was able to take the measurements of this set before proceeding with further investigation.

"Taking one of the eggs in my hand I enlarged the opening with the point of my pencil, with which help the young bird emerged. This newly hatched chick had black feet and a black body, with the exception of the stomach and rectum which were a rich orange-pink or salmon color; as is the case with all newly hatched water birds it was almost all feet. All the while it kept up a constant, but very faint twitter, punctuated now and then with a tiny *cheep*, reminding me, as stated before, of a domestic chick. Its feet and toe nails were black, as was its bill with the exception of a small spot over each nostril and at the tip; the spots over the nostrils were a dirty china white, while the tip of the bill was a dirty white with a faint pinkish tinge. The pip on the tip of the upper mandible was a brilliant china white. The down was still wet and clung to the bird's body in places; it was long and black, and very coarse and straight, resembling black horse hair. Ten of the eggs were pipped so I opened each in its turn, the healthy young in each case being taken out and placed with the others on the nest.

"In each case the bird's head was tucked under the right wing with the tips of the mandibles or pip coming up by the side of the flank directly under the section of the egg usually covered with a wreath of spots, nearer the larger end of the egg, but from the scant markings on the eggs and their being somewhat scattered over the whole of the surface it was difficult to locate even an apparent wreath. Every young came out of the egg with its eyes open although it had entered the world prematurely.

When I held up the eleventh egg, uncracked, to the sun it was as clear as could be, so I packed it away to be blown when I reached home. It was infertile, but in perfect condition.

"While I was examining the nest and eggs the parent bird now and then uttered a note which sounded like the *leck* of the Red-winged Blackbird, and several times I looked up to find her within four or five feet of me as I squatted by the nest, her long bill and bright eyes pointing my way through the blades of grass.

"The eggs in the first nest I packed away, for on my return no sounds were coming from them, and a little later, on opening the eggs, I found the young in them to be stiff and dead in the shells."

As soon as the young are dry they leave the nest, sometimes within a few hours after they are hatched. When about ten days old the black begins to shade to brown, the feathers peeping out amid the down. By the time they are half as large as the adults they are apparently fully fledged.

May 31, 1913, I visited the locality mentioned above in company with Mr. R. A. Sell, a naturalist friend of Houston, and we located a nest from which the young had already gone. There were several half shells in the nest, and by following the runways through the tall grass we found several more shells about ten feet away and one fragment at a distance of twenty feet or more, which leads me to believe that the parents help the young out of the shell and carry the shells away as fast as they are cast off. By the time the last three or four eggs are hatching the first young are dry and out of the nest, thus keeping the parent busy so that she is unable to help the last few youngsters.

From Mr. Pope's voluminous notes I quote the following references to nests and eggs: "April 15th I again sallied forth in quest of nests and on this trip was rewarded by finding two nests evidently just completed but without eggs. Both nests were in the thick marsh grass near bayous and were located by flushing the birds. The nests were of marsh grass blades, which were the only available material in the vicinity, and were placed in the middle of thick clumps of the same grass. The first nest was a rather flat affair, about ten inches across with the inside depth of about three inches; the second was elevated some ten inches in the middle of a clump of marsh grass that was very thick, completely hiding the nest so that it could not be seen except by looking down through the tops of the grass. These two nests were not more than a hundred yards apart. All around the nests were numerous well-beaten paths which the birds used.

"April 26th I again visited the two nests; nest No. 1 contained one broken egg, while on the ground nearby lay three more, also broken, which had the appearance of having been sucked. The work was credited to a raccoon as tracks of this animal were in

evidence in the immediate vicinity of the nest. Nest No. 2 contained five fresh eggs, which were later destroyed by some animal, either raccoon, mink or opossum, as tracks of all three animals were in evidence. The eggs were so badly broken up that I could not ascertain how many the nest contained when robbed, as I did not visit it again until May 2nd.

"On May 2nd a new nest was discovered, about two hundred yards from the above site. It was on the same bayou as the two last described nests and was built of marsh grass blades, on the ground amid thick grass stems, and contained two fresh eggs.

"On May 9th I took a set of ten eggs from this last nest. The majority of the eggs were fresh while a few showed signs of incubation. On this date two more nests were located, the first containing a set of eight eggs, incubation about one-fifth; nest of marsh grass blades in slight hollow in thick marsh grass on bank of bayou. This nest was of rather poor structure as compared with some others found, being quite flat and rather loosely put together, what there was of it.

"May 12th, my wife found nest on bank of pond near the Point. It was in thick marsh grass and composed of dry blades of marsh grass, built up about eight inches. It contained one egg, which three days later was found lying on the ground about two feet from the nest and broken in the manner of the others mentioned previously.

"May 15th I found a nest with seven fresh eggs; visited the nest on the 18th to find it deserted and no sign of eggs.

"May 26th the first young were observed, as they crossed a small open glade among weeds and bushes growing near the concrete wall of the Fort Crockett reservation, which is situated near the extreme point of the peninsula. There appeared to be at least eight young in this lot, and they were quite black and quite lively, easily evading my attempts to catch them. At later dates at least four other flocks of young in different stages of development were observed, but I never was able to secure any of the young."

Mr. Farley says that the nests in the vicinity of Harbor Island consist of reeds and tall marsh grass, and frequently the reeds and tall grass surrounding the nest are drawn together as though the tops had been platted or tangled so as to make a snug shelter from rain and sun.



The number of eggs per set in that locality varies greatly, as he has found the birds brooding on from four to thirteen eggs. He says that the period of incubation covers about twelve or fourteen days.

*The Eggs.*—The four eggs in Nest No. 1 of May 27, 1912, south of Houston, were cracked and pipped, but measured as follows:  $1.68 \times 1.24$ ;  $1.69 \times 1.24$ ;  $1.68 \times 1.24$ ; and  $1.67 \times 1.23$  inches.

The eleven eggs in nest No. 2 of the same date measured:  $1.68 \times 1.24$ ;  $1.69 \times 1.24$ ;  $1.68 \times 1.24$ ;  $1.68 \times 1.23$ ;  $1.69 \times 1.25$ ;  $1.68 \times 1.24$ ;  $1.68 \times 1.24$ ;  $1.68 \times 1.23$ ;  $1.67 \times 1.24$ ;  $1.68 \times 1.25$ ; and  $1.69 \times 1.24$  inches. In shape they were considerably like the eggs of the Gallinules, and were of a decided buff tint, a color that might be described as light brownish buff, and were speckled and spotted sparingly with different shades of brown and cinnamon and a few tiny specks of lavender, most of the larger spots being scattered around the largest circumference of the egg; some of the eggs, however, had not the least perceptible wreath.

The set of eight eggs collected by Mr. Pope and referred to in the foregoing notes under date of May 9, 1912, is now in the writer's cabinet. The eggs are very irregular in both size and shape, measuring:  $1.76 \times 1.23$ ;  $1.73 \times 1.20$ ;  $1.83 \times 1.22$ ;  $1.79 \times 1.22$ ;  $1.71 \times 1.20$ ;  $1.76 \times 1.22$ ;  $1.81 \times 1.20$ ; and  $1.82 \times 1.20$  inches. They vary in coloration from almost white to faint buff, with the larger markings in the form of a wreath nearly at the extremity of the larger end of the egg; these markings consist of small splotches, spots, specks and streaks of cinnamon and reddish brown, and a few clouded spots of light lavender. Some of the spots were underneath the outer layer of lime of the shell, which is of a rather smooth texture. Several of the eggs have a few small protuberances rising from the shell, resembling tiny warts. These eggs are much longer and narrower than the set described from nest No. 2.

The set of ten eggs collected by Mr. Pope on the same day as the last mentioned set (May 9) is of a trifle richer coloration than the set of eight, but otherwise does not vary to any appreciable extent.

On June 17, 1909, Dr. Carroll examined numbers of nests in the Harbor Island marsh, each nest containing from seven to ten eggs.

The eggs varied from "quite pale with large markings to beautifully marked specimens with large and small markings and quite dark."

### VIII. VOICE.

The voice of the Clapper Rail is peculiar indeed, its loud, harsh cackling resembling that of a Guinea fowl or the sound produced by some automatic toys. This harsh cackling might be likened to the sound of: *chack-chack-chack-chack-chack-chack-chack-chack*, rapidly repeated. This call is usually heard about the break of day and again about dusk; sometimes, however, it is heard during the day time or at night, though rarely.

On Bolivar Peninsula Mr. Pope says that he could always tell when a "norther" was due by the clatter of the Rails, as they invariably heralded its approach several hours before its arrival.

During the mating season in March, at which time they congregate in small flocks, Mr. Pope says that the birds became very noisy, especially late in the afternoon and about dusk. At the start of the nesting season, however, they quieted down.

While I was examining nest No. 2 the parent bird now and then uttered a note which resembled the *keck* of the Red-winged Black-bird.

At times during the early part of the breeding season I have stopped to watch adult Rails which appeared very ill at ease. The note uttered under these conditions is a hoarse grunting noise sounding like *bruck* or *gruck*.

The newly hatched young have a constant, but very faint twitter, and a note reminding me, as stated before, of the *cheap* of a tiny domestic chick.

### IX. FOOD.

The food of the Clapper Rails consists of small crabs, slugs, snails, aquatic insects, grasshoppers, and occasionally a few seeds.

Mr. Farley writes me that the food of the Rails in the vicinity of Harbor Island consists of "insects and shells, which they find in the marsh, and the moss of the salt beach."

Mr. Pope's notes on the food and feeding habits are especially

interesting. He found that the best time to make observations on the feeding habits was shortly after a "norther," which blew a great deal of water out of the bay into the Gulf, thus causing low water in the bayous and sloughs which ran into the bay. At such times the Rails would wade out in the mud and silt where the water had receded, to gather the small crustacea (minute crabs, etc.) left stranded.

He says that "At one point I squatted on my heels and remained stationary for a few moments and was rewarded by seeing a Rail walk out of the grass into the mud and begin feeding, which it did by thrusting its bill into the soft mud and feeling around and stirring its food to the top, now and then securing a shrimp or small minnow. I was advised by an old fisherman who lives on the bay shore about three miles from Flake, that he had often seen these birds feeding on young Diamond-backed Terrapin, which were once quite plentiful in this part of the bay and which deposited their eggs in the shell banks along the shore, the eggs hatching and the young taking to the adjacent marsh and bayous, probably to escape their numerous enemies in the bay. There they fell before the Rails."

The contents of the stomachs of six of the birds secured on a trip to the marshes on October 12, 1911, were mostly shrimp, minnows, a few water bugs and slugs, and two had fragments of small crabs.

From the deck of the schooner, "The Two Brothers," mentioned previously as being near Flake, on Bolivar Peninsula, Mr. Pope had an excellent opportunity to watch the Rails feeding. He says: "On warm days the 'fiddler' or fighting crabs would crawl out of their holes around the old schooner and were eagerly devoured by the Rails. After catching one of the crabs they would usually remove the large claw before swallowing the victim. This was often accomplished with the assistance of a neighbor who would hold the crab in his beak while the other wrenched off the objectionable limb; but this method was not always satisfactory to the bird that removed the claw, as the one that held the crab usually proceeded to bolt it while the other was left to hold the claw, or rather to drop it. On one occasion when the crabs were not plentiful, a Rail found and tackled an unusually large 'fiddler,' which it mauled around in the mud for some time without apparent effect.

Suddenly, as if getting an idea, it left the crab and disappeared on the other side of the schooner, to return a moment later with a companion, the two soon disarming Mr. Crab. Now, I presume the same Rail came back; they are so much alike it is impossible to tell one from the other under such conditions, but from the way the birds went straight to the spot where the crab was left, I did not doubt the bird in the lead being the one that found the crab. Which one got the crab I cannot say, as after scuffling over him, they disappeared from my sight in the tall grass."

Though chiefly carnivorous, subsisting as they do on small univalve shell-fish and crustacea, the Rails never probe the mud like snipe, nor strain it as do the ducks. The food they gather is always in view and never secured from deep in the mud or silt.

Near Houston, inland from the seaside marshes, the food of the Rails is chiefly the small snail forms so abundant in the marshes.

#### X. FATALITIES.

Once common, the birds are rapidly becoming scarce. If protection is not afforded them at once they will soon be wiped out entirely. Hunters kill numbers of them during the hunting season. In fact, it is one of the easiest of the water birds to secure on the wing, and therefore is one of the first to be shot by the amateur marksman.

Mr. Pope observed that numbers of them fell victims to steel traps which he had set in the pathways of the mink in the marshes near Flake. These Rails caught in the traps were usually devoured by mink if caught in the night, and most of those caught were taken then.

The majority of the nests located by Mr. Pope in the Bolivar marshes in 1912 were usually found destroyed before the sets of eggs were complete, probably by mink, raccoon or opossum, as tracks of these animals were in evidence in the immediate vicinity of the several nests. The eggs remaining in the nests or on the ground nearby had the appearance of having been sucked. On Harbor Island Mr. Farley found that the Rails were comparatively safe from such enemies, there being no raccoons or other small

animals there to disturb them. Both Mr. Farley and Mr. Prior commented on the large number killed by hunters and dogs, and stated that some of the negroes consider the birds quite a palatable delicacy and gather numbers for the pot.

The Harbor Island Rails face extinction at this very time. A railroad has been built to the island from the mainland and improvements are being made. In addition to this the birds have been almost wiped out by collecting.

Probably the greatest factor the Rails have to contend with in their fight for existence is the flooding of the marshes, both from high tide and from heavy rains. At such times the birds are much exposed and bewildered and many drown. In the seaside marshes they build their nests on the banks of the sloughs or bayous instead of the higher parts of the marsh, and in rainy spells numbers of nests are destroyed.

They are naturally very delicate birds and sensitive to the cold of the more severe winters; many freeze to death where they are unable to secure shelter.

During November and December 1913 Texas was visited by one of the most destructive floods of its history, two of the largest rivers of the state rising and overflowing miles and miles of the lowlands towards the coast. During that time numbers of the Rails left the marshes and took to higher ground until the waters receded. One of these birds was caught in a bewildered condition in Mr. Farley's yard in Port Aransas in October.

## XI. WINTER.

Most of the winter habits of the birds have been given in the two preceding divisions of this paper.

In the colder weather they haunt drifts of logs or trash in the marshes, where they take shelter from the cold north wind and from rains. But as the thermometer rarely falls below freezing in this semitropical coast country, the birds are rarely forced to seek shelter, and their actions and habits then are not noticeably different from other times of the year.

In winter in the marshes on Bolivar Peninsula Mr. Pope says

that the birds were fully as common in winter as in summer, if not more so. In travelling through the grass the birds had well-beaten paths about six inches wide, and from the way these paths were beaten out in the vicinity of the bayous, it would appear that the birds were much more common.

Marshes inhabited by Rails are always intersected by numerous well-worn pathways leading through the tall grass, the grass being pushed to either side and the "marsh hair" being trampled and beaten down into the mud. These pathways are usually about five inches wide at the bottom.

## XII. DISCUSSION.

The Louisiana Clapper Rail is fairly common and resident from Louisiana to Corpus Christi Bay. It is apparent that the Caribbean Clapper Rail rarely, if ever, appears in Texas.

The only records of the latter in the United States are the two specimens from Texas in 1889 (Sennett) and two specimens mentioned in Mr. Singley's 1893 paper. Undoubtedly Mr. Singley merely followed the lead of Mr. Sennett, as stated before. So the reader can see that 211.2 *Rallus longirostris caribæus* is included in the A. O. U. Check-List of North American Birds on the record of Mr. Sennett's two specimens from Texas, the identification of which he himself later questioned and virtually changed. Would it not seem best to drop this bird from the Check-List and extend the range of *Rallus crepitans saturatus* to include Texas?