THE WILSON BULLETIN

A QUARTERLY MAGAZINE OF ORNITHOLOGY

Vol. XXXVIII (Old Series) No. 2

June, 1926

Vol. XXXIII (New Series) Whole Number 135

WHITE PELICANS AND OTHER BIRDS OF CHASE LAKE, NORTH DAKOTA

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With photographs by the Author and one colored plate by George Miksch Sutton.

That curious, low-pitched, resonant booming of the Prairie Hen was coming through the open window where we had slept. A lonely Night Heron "quarked" as it flew by. From the water's edge came occasional "squawks" of a few ducks and by his "peet-weet" a Spotted Sandpiper said he was interested in something different. The landward side of the cottage brought a long drawn out, mournful whistle that never-to-be-forgotten note of the early settler's acquaintance, the Bartramian Sandpiper. And the golden morning sun was just appearing!

Our day had come!

For months prior to June 24, 1924 we had hoped for it. In correspondence with Elmer T. Judd, then State Game and Fish Commissioner of North Dakota and an ornithological authority for that section, he had written of Chase Lake, its island, its wonderful bird life. We had searched literature and books for some stories of it but the lake seemed little known. Yet Mr. Judd wrote that it was a bird paradise, and this was the day we were to go there.

Late the night before we had reached the State Fish Hatchery on the north shore of Dakota's beautiful little Spiritwood Lake and asked for Mr. Judd, but he was away. Our informant was a most genial outdoor character, sleeves rolled up, tanned dark, and smoked an old pipe with a degree of enjoyment that bespoke the same pleasure perhaps for many years before. He was Alf Eastgate, a well known guide and hunter who was then Deputy Game and Fish Commissioner for the state. It was by reason of his insistent hospitality that we were awakening from a restful night.

Our day had come! Armed with a letter of introduction from Mr. Eastgate to Mr. H. H. McCumber of Pettibone, we set out for our goal, Chase Lake. My companion was Mr. Walter M. Rosen of Ogden, Iowa, who enjoyed the honorable appendage of "President of the



Engravings by The Lotz Photo-Engraving Co., Philadelphia

AVOCET Water-color Painting by George Miksch Sutton Iowa Ornithologists' Union." He said the business of banking gave him an interest in birds for he "was always chasing lame ducks."

On our way we passed several more Bartramian Sandpipers, a slough harbored two pair of Willets, probably nesting, and more Prairie Chickens "boomed" their weird notes. It was a dry rolling country whose stony soil was half way succeeding in raising vegetation and whose numerous ponds, sloughs, and "pot holes" were at the time filled with very alkaline water.

Reaching Pettibone we searched for the man to direct us to Chase Lake. Near the end of Main street a small structure carried a sign which read "Cream Station and Real Estate." A man came to the door. Let him introduce himself.

"Are you Mr. H. H. McCumber?" asked by campmate.

"Yes, without the 'mister'," he replied.

"We want to reach Chase Lake," continued Rosen, "and if you will tell us how to get there we will start out."

"I should say not," he exclaimed. "You needn't expect me to stay at home and miss the fun!"

So he went for his car while we waited. Soon he reappeared with, not one Ford, but two, and across the top of each was a small hunting boat. Away we went, the two Fords and rowboats ahead, for ten miles. Once we frightened a pair of peaceful Marbled Godwits from the grassy roadside. The highway became a trail which emptied into a single path and finally we were driving out across the bare, trailless prairie until we viewed the lake not described in our books.

There it was—Chase Lake! It was about two miles long and nearly round. The actual area of the Chase Lake Reservation, according to Dr. A. K. Fisher, Acting Chief of the Bureau of Biological Survey at Washington, was 2,839 acres. Nestled among hills and without an outlet, its waters had become so strongly alkaline that white salts were piled up six inches deep in some places along its shores. No rushes grew in the water, nor were there any trees in sight—nothing but bare prairie and lake.

In it was the island Mr. Judd had described. It was about onefourth mile from shore and about one-half mile long. How this island had escaped the pen of ornithologists was more than we could understand for there could be seen not only hundreds but literally thousands of birds in its bare confines and the noisy hubbub coming from that direction indicated they were all alive.

Chase Lake should be famous-it will be, as far as ornithologists are concerned, when it becomes generally known as to the colonies of



NEST OF WHITE PELICAN



PELICAN HATCHING

"One egg was pipped and as we watched, the young gradually cracked his shell farther around until he finally fell out into the world."

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birds nesting there. Not only did we find great numbers of gulls, ducks, and shore birds, but here also is the spot said to be farthest east in the Middle United States where the While Pelican nests. In fact, it is reputed to be the only nesting colony east of the Yellowstone National Park.

Our genial guide, Mr. H. H. McCumber, under date of March 20, 1925, writes a most interesting history of this lake and its remarkable island:

"When I came here in 1905 there were probably five hundred pelicans that nested on the island as well as a good many gulls, avocets and terns, also some Canada Geese, cormorants and several species of ducks.

"The pelicans were not considered as of any value whatever, and in an economical sense I do not think that they are. However, we do not want to see any bird now living, or rather any species of birds, exterminated as the Passenger Pigeons and some others were. The settlers did not consider the pelicans of any value and they made a practice of going there on Sundays and seeing how many they could kill by shooting them on the wing with rifles and generally wagered small bets on their shots which they considered great sport.

"I saw that in a very short time they would be wiped out so I began in 1907 to take the matter up with the Biological Survey at Washington to see if we could not make a bird refuge out of the lake which consists of five or six sections of land. The island which serves as a safe nesting place for the birds contains only about forty acres and is at least a quarter of a mile from any shore so it is perfectly protected from coyotes, skunks and other nest robbers who would do great damage if the nests were on the main land. Finally, after investigating and after the number of pelicans had been reduced to about fifty birds, President Roosevelt set it aside as a bird refuge in August, 1908. I was in charge from that date until 1918 when I went to Sully Hill Park, near Devils Lake, which is a big game park under government supervision.

"While the Chase Lake refuge is a great thing for the protection of the birds mentioned above, yet we think its greatest value is in the protection it gives wild ducks and geese in the fall. When they are shot out in all the rest of the lakes they have found safety by going to this refuge and they certainly do go there by the thousands. I have seen hundreds of acres covered on this lake when the other ponds were practically stripped owing to excessive hunting so that otherwise I think our birds would move on south at such times if they did not have this refuge to go to and know they were safe.

"During the last season there were between 2500 and 3000 pelicans on the refuge so it will be always possible to have them if the refuge is kept up and properly protected. I will also say that this is the only place in the state where the pelicans nest and there are few such colonies in the United States, so it behooves us to take care of these reservations if we do not want the birds totally exterminated."



. YOUNG PELICAN WALKING "His head was going forward and backward, as he walked, similar to that of a camel."



GROUP OF YOUNG PELICANS

"It reminded one of the way groups of high school students at football games, with arms, necks and feet in vigorous action, give their school yells." (Note the yell leader at extreme left!)

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Mr. T. Gilbert Pearson, president of the National Association of Audubon Societies, in a letter dated April 14, 1926, states that he visited the Chase Lake Bird Reservation in the summer of 1916. Evidently the numbers of pelicans had not increased greatly for he says, "Of course I distinctly recall the small colony of White Pelicans breeding there at the time, and I think there were a few cormorants. There were also a few ducks and I remember seeing one Canada Goose with her young."

As we came to know this preserve it was evident some of the birds of McCumber and Pearson were not there. The nesting cormorants had gone and there were no Canada Geese to be seen with their young. Yet as we scanned the landscape there were plenty of birds left for our observation and, particularly, the pelicans had increased from the fifty birds of 1908 to at least 2500.

Boats were unloaded and we piled in. So shallow was the lake all the one-third mile to its island and so thick the "moss" in the water that oars had to be used for poling.

As our guides pushed us across we took note of the interesting bird life. A few noisy California Gulls flew out to greet us like the shepherd dog on the farm that comes, jumping and barking, to greet the visitor.

They were beautiful big birds pictured clean white against an azure blue sky background, a new species to us. At the time our books were not comprehensive enough to enable an identification but we made notes, knowing they were different; later we decided they were undoubtedly the California Gull, a bird of the interior. For several days we had been studying at close range and from concealment the Ring-billed Gull in island colonies on Stump Lake and it was immediately evident that this new acquaintance was considerably larger. The color of its bill was the first and most striking characteristic we noticed. It was put down in our notes as "a bright reddish orange, brighter than that of the Ring-bill and perhaps proportionately a little larger." According to A. C. Bent (Life Histories of North American Gulls and Terns, page 129) "the bright chrome yellow of the upper mandible and the vermillion of the lower mandible are characteristic of the breeding season." In the distance this would give the appearance we recorded. Also, those we saw had no black band near the tip of the tail, which was plain white.

They scolded us mercilessly. Soon we discovered the reason, for we landed at the end of the island right among their nests. There



A FEW OF THE PELICANS "One of the most impressive and most majestic fliers among American birds."



NEST OF CALIFORNIA GULL "There were perhaps forty nests . . . with only an occasional tuft of straggling grass to help hide them."

were perhaps forty nests rather close together on this narrow sandy point with only an occasional tuft of struggling grass to help hide them. There may have been others, as we estimated there were about one-fourth as many California Gulls as Ring-billed Gulls on the island. When compared with those of the latter, eggs of these California Gulls averaged about 2.8x1.9 inches or fully a fourth inch longer. They were beautiful and strikingly colored eggs.

On shore was a pair of Avocets flying at us and trying to draw us away from their nest. When we wouldn't follow, they would dart down to within a few feet—beautiful birds, almost too beautiful to be found in such a realistic world as ours. They would fly over the water, alight and swim gracefully back to shore, their rich cinnamonrufous head and neck, pure white and jet black body and the blue background of lake water giving us one of Nature's finest color combinations. Once on shore, they would run over the sands, finally flying back at us before withdrawing to the lake to repeat the performance. Their nest, too, was finally located with its three eggs which hatched the next day into three downy, runaway youngsters and a most interesting set of movies and graflex pictures of the adults and nestlings were secured from a blind. (See *Bird Lore*, March-April, 1925, pp. 86-91).

But as noisy gulls and screaming Avocets were trying to "manage the occasion," a flock of several hundred immense White Pelicans were flying up from the opposite, or southeast, corner of the island and were gracefully and majestically soaring about. The first glimpse of this scene brought a tingle to my own hopes for I had long cherished a desire for a closer study of these birds.

Perhaps Frank M. Chapman, when he wrote the chapter in "Camps and Cruises of an Ornithologist" entitled, "The White Pelican," never realized what an inspiration he was undoubtedly giving other naturalists. His narrative is undoubtedly one of the most interesting and fascinating stories among all ornithological literature, partly because of the peculiarities of the White Pelican itself and partly because it is Chapman's magnetic style of writing at its best. He has made us love the bird, admire its majesty, respect its dignity, and enjoy its antics.

As we approached the pelicans thus greatly interested, they flew up from their nests in tumultuous flocks. It was about the most awkward attempt to fly that one could ever see. They would violently push themselves off the ground between each wing beat with both feet at once and made ridiculous sights when they continued "pushing" with their feet long after they were in the air. At such time their bodies would at one instant look like the letter "U" and the next moment like the same letter upside down. It was most awkward. Then feet would be drawn up and the pelican would soar forth, wings motionless, with the rest of his flock of beautiful snow white creatures as one of the most impressive and most majestic fliers among American birds.

Closer, nests could be seen among the dead stalks of last year's ragweed grouped in two colonies not far apart. They were forty to fifty feet from shore and about four feet above the lake level. Hundreds of them were close together, merely piles of weed stems, sticks and grasses with shallow hollows in top. Some were merely a hollow in which one to four dirty white eggs were laid. A few very shapely nests were found. Many eggs had already hatched, some recently and others earlier, while many were incubating and about ready to give forth their young.

The northern colony had young just hatched and very few eggs left. The group of nests further south was in the unusual condition of having many eggs still being incubated and about two hundred young that were perhaps three weeks old. There were no intermediate stages.

One egg was pipped and as we watched, the young gradually cracked his shell farther around until he finally fell out into the world. He was very much in need of the good old fashioned grandmother that is always making clothes for the children, because he was absolutely naked. His shape was just as ungainly as that of his parents and his head was so heavy he could hardly lift it off the nest. His color was perhaps a little better, being a flesh tint with a sort of bluish bill. But at that he was far from beautiful and he must have had queer ambitions if he enjoyed being a pelican.

As we came up groups of these latter young, now covered with grayish down, were all huddled together in a wriggling mass, their wings, necks and feet continually in motion. It reminded one of the way groups of high school students at football games, with arms, necks and feet in vigorous action, give their school yells. The scene was made more ridiculous by the awkward manner in which each young tried to walk. His body was so heavy and his legs so weak he could not stand erect but he would drag his sharp breastbone along over sticks and rubbish as if he always intended to do that. He kept his balance with both wings as does a tight rope walker, touching the ground with them when he fell over too far to one side. And all this time his head was going forward and backward, as he walked, similar to that of a camel.

As for manners the young pelican is disgusting, particularly before strangers. As we came up to one young fellow he started going into backsliding contortions as if he were having an epileptic fit. Sprawled out and with beak wide open, not in the spirit of combativeness, but of misery, he was far from an attractive sight. The exchange of greetings ended with his disgorging right there on the ground in front of us a dirty, slimy looking fish meal that sent forth an odor far more rank and foul smelling than one of our well known black and white mammals is famed for—and his new acquaintances, with hands grasping noses, left immediately!

Later, and knowing pelican ways better, we came to realize this was probably the young bird's protection. He had taken us for enemies instead of friends, and that was his successful way of getting rid of us.

Experience with this colony so far had shown that the White Pelican is a bird of exceptional interest to the ornithologist, for few birds of the Middle West have such unusual ways and peculiar adaptations.

For the real sportsman and hunter the White Pelican can also be most highly recommended. True, it is an easy mark with a gun; but the real sportsman is not one who has for his object the killing of some animal or bird, but one who enjoys the mental stimulation in attempting to approach and study it. There is no more genuine sport either, in my opinion, than photographing the White Pelican. It requires more skill, more careful thinking and more particular study of the birds' life than ninety per cent of other species. Even if unsuccessful in obtaining pictures, if one could enjoy the life activities of a colony of 2500 or 3000 pelicans it would be time well spent.

Other ornithologists have given the White Pelican a reputation of being most difficult to photograph. Frank M. Chapman tells a story of a colony of twenty-seven nests at Shoal Lake, Manitoba, over which he expectantly watched to snap the returning parents, only to see them fly off, never to return to eggs or young. Mindful of his experience, we knew our present task was difficult. It we disturbed the birds too much they might desert their homes. If we should not properly conceal ourselves while studying them our effort might likewise fail.





"Some still had horny knobs on their beaks while from others they had already been discarded."

The vegetation of this barren island offered no concealment. There were only a few patches of low bushes and the dead five-foot stalks of last year's ragweed. As the pelicans themselves had chocen the latter for their habitat we diplomatically decided to use the same. Selecting a location which had the older young on one side of us and the colony of well incubated eggs on the other, we erected our khaki-colored umbrella blind and placed many dead ragweed stalks about it. Without any leaves these did not in the least offer concealment but because the birds were already familiar with ragweeds they might sooner accept our blind as part of the scenery.

As I entered the blind Rosen withdrew to the other end of the island. The birds were exceedingly wary and kept themselves at a great distance out on the lake. They studiously and suspiciously watched the blind every minute. During the first half hour they could not see it move and so began sending our scouting parties which flew past, every bird alert as to what might be going on. After a while the whole flock very deliberately swam closer and all landed at the point of the island some distance away and watched. A sharp gust of wind blew the blind in spite of its carefully placed anchors and the whole flock was off with a tremendous and awkward commotion.

Since our blind seemed inanimate they again returned and swam about the lake nearby. Being further reassured they all lined up on shore and with heads up stood at "attention" with every eye on the blind. Yet even then they seemed so wary and shy that it hardly looked as if any good photographs could be taken.

While thus despairing of closeups, I happened to look out of another hole and saw about fifty beautiful white adults standing with their young only one hundred feet back of the blind. Their presence was indeed a great surprise. If they had flown there they would have certainly been heard, so they must have gradually waddled up from the shore. There were a few ragweed stalks between them and the blind which may have given the latter slight concealment.

They were striking creatures as they stood there. Their legs and feet were bright orange, beak and pouch yellowish-orange slightly duller than the feet, top of head frequently gray and rest of plumage almost pure white. Some still had horny knobs on their beaks while from others they had already been discarded. We were as greatly mystified as others have been to find a reason or purpose for this part of their anatomy.

Then other pelicans flopped down to their young only sixty feet away and right in front of the blind. Those with eggs were last to



"Above were outlines of a few flying birds, perhaps mindful of the dangers to their race, for the sunset time has come for the White Pelican of the middle western states." arrive and even then they refused to come closer than sixty feet from me. But finally there were pelicans on all sides living their home life normally.

It was a fascinating life, too!

One could easily see why they had chosen an island for their nest city. Since young pelicans cannot fly for at least two months they need protection. Wolves, foxes, skunks, and other predatory animals would kill off a whole colony of young in one night on the mainland. It would be easier for man to reach them, too. But with a body of water on all sides they are protected as was the old castle of mediaeval times safeguarded by its surrounding moat.

There is no question but that they regarded me with fully as much curiosity as I did them, but doubtless they did not enjoy my presence as much as I did theirs. Some of the pelicans became occupied with feeding young and incubating eggs but a certain part of the flock evidently felt in need of amusement. It is always fun for the children of a neighborhood to form a circus parade and march past their homes. That's what these idle pelicans did! Forming in single file, they engaged in a continual circus parade of pompous, queer looking, dignified pelicans past the blind! It was one of the funniest sights I ever saw!

Their yawning was also laughable. It is a bit of human nature to always make fun of a person yawning and the wider the mouth is opened the more it attracts another's interest. When a pelican yawns, his mouth is open very wide. It exposes a cavity of enormous proportions and one cannot help but enjoy the oddity of the performance.

Another incident that gave us one good hearty laugh for ten minutes was the manner in which one pelican backed up to another and kicked like a regular Missouri mule! Think of it—from a bird!

The garbage disposal plant of this pelican city was located a short distance away. It was a colony of several hundred nesting Ringbilled Gulls who kept the pelican nests clean of any fish or other bits of food which might be dropped as the young were being fed, for a pelican will never eat anything from the ground. It is another of Nature's queer but well planned arangements.

During all this time I had been excitedly taking photographs that were to become unusual and "rare" in my collection, showing all phases of the home life of these interesting birds. The graflex yielded fast flight pictures, the graphic took still life views of nests and young, several hundred feet of movies were successfully taken and particularly of the "circus parade," while perhaps for the first time natural color pictures were made of pelicans on their nests by the Paget method. It was a rare opportunity and appreciated fully.

From the blind we also saw several Forster's Terns flying, a late Pintail duck's nest was afterward located near the pelican colony, and on the other side of the island was an attractive Blue-winged Teal's nest in the grass one hundred feet from shore, full of soft down and twelve eggs.

Of such interest was the bird life of Chase Lake and so successful the growth of its White Pelican colony from fifty birds in 1908 to at least 2500 in 1924, that it is hoped the reservation can continue to have the best of protection in the future. White Pelicans, Avocets and other birds, once so plentiful on the lakes of Iowa, Minnesota and the Dakotas, are now too uncommon to be overlooked in our conservation program. The Chase Lake Reservation has produced splendid results under a resident Federal game warden. It is hoped our good Biological Survey at Washington can continue to give it the best of attention as it has in the past, else the Middle West will lose its only remaining colony of nesting White Pelicans.

Our parting picture of this pelican colony was emblematic of this. It was a sunset scene with beautiful clouds, a colorful sky, and quiet water. At the shore many pelicans were silhouetted against the western light while above were outlines of a few flying birds, perhaps mindful of the dangers to their race, for the sunset time has come for the White Pelican of the middle western states.

SIOUX CITY, IOWA.

COLOR REPRODUCTION OF BIRD ILLUSTRATIONS BY HARRY G. LOTZ

[EDITOR'S NOTE. It is at our request that Mr. Lotz has prepared the following article on the process of reproducing bird paintings in color. It deals with a phase of ornithological technique which we ordinarily take for granted with little understanding.]

The bird artists of this country are relatively few in number, although during latter years the group has increased considerably. The artist who specializes in this work must make a life study of his subject in order to properly display his art and knowledge on paper through brush and color. He must know the anatomy of birds; and he must sense acutely the tints of the plumage that make birds such beautiful creatures. So it is also with the engraver, who takes the