

alfalfa fields of the ranch. No other Indigo Buntings were seen, but the specimen collected was to all appearances a breeding bird (testes 10 mm. long), and the duller colored female, if present, might easily have been overlooked through its similarity to the female Lazuli Bunting.

In the present paper two species are added to the list of Arizona birds, the Bendire Crossbill (*Loxia curvirostra bendirei*) and the Indigo Bunting (*Passerina cyanea*). In this connection it may be of interest to review the present standing of the Arizona bird list. In my "Distributional List of the Birds of Arizona" (May 25, 1914), 362 species are included. Two additional species had been recorded in publications issued so shortly before my own paper that they were unavoidably omitted. Ridgway (Birds of North and Middle America, 6, April 8, 1914, p. 57) added the Red-bellied Woodpecker (*Centurus carolinus*). In the same volume (p. 695) the Aiken Screech Owl (*Otus asio aikeni*) is tentatively given as from an Arizona locality, but the true status of the specimen cited seems open to doubt. Oberholser, in his "Monograph of the Genus *Chordeiles*" (U. S. Nat. Mus., Bull. 86, April 6, 1914, p. 50) records the Pacific Nighthawk (*Chordeiles virginianus hesperis*).

Shortly after the appearance of my list, Cooke (*Auk*, 31, July, 1914, p. 403) added seven species: Pacific Loon (*Gavia pacifica*), Ross Snow Goose (*Chen rossii*), Black Vulture (*Catharista urubu*), Harris Sparrow (*Zonotrichia querula*), Sprague Pipit (*Anthus spraguei*), Western Golden-crowned Kinglet (*Regulus satrapa olivaceus*), and Sierra Hermit Thrush (*Hylocichla guttata sequoiensis*). Then Gilman, in *THE CONDOR* (vol. 16, Nov., 1914, p. 260) added the Ring-necked Duck (*Marila collaris*) and Sierra Sapsucker (*Sphyrapicus varius daggetti*).

To summarize, we find species added to the Arizona list as follows: Ridgway 1, Oberholser 1, Cooke 7, Gilman 2, Swarth 2, in all, 13 additions. These added to the former list of 362 give a total of 375 birds for Arizona.

*Berkeley, California, December 12, 1917.*

## A RETURN TO THE DAKOTA LAKE REGION

By FLORENCE MERRIAM BAILEY

### I. BACK TO THE SWEETWATERS

THE LURE of the water fowl! How can one who has caught only tantalizing glimpses of the beautiful birds on their northern breeding grounds escape from it, "when the Red Gods make their medicine again"? To me the call of North Dakota was so strong that after four years, the last of which gave a field season in the mountains of Oregon, I answered the call by returning to the lake region of the prairies, prepared to devote the summer to the study of water birds. Realizing full well the limitations of a woman bent on the study of water birds, I went intending to be satisfied with what came my way, hoping that such casual experiences might in some part supplement the more thorough work of less handicapped field students.

On the way out, after leaving behind the beautiful spruce and tamarack swamps of northern Minnesota, the sign *Manitoba Junction* stirred my blood. How good it would have been to follow the straight northward pointing rails

that seemed headed for the top of our world! But my own field was rich enough for one season. During the summer I visited five lakes, and while working on the Sweetwater chain, where I spent most of the summer, in spite of my very local, restricted work and the fact that in my absorption in water birds I paid little attention to land birds, I listed about eighty resident and summer resident species, including twelve or possibly thirteen species of Ducks, and five Grebes—all that occur in the United States except the Mexican one found only in southern Texas.

The Sweetwater chain numbers some five or six lakes, varying with the height of water that floods or leaves dry their connecting links. The northwest lake of the chain, on which I was fortunate enough to find a real farmhouse home for the greater part of the summer was one of the largest, being about seven miles long by three wide. Across the lake could be seen the grain elevators of the small towns of Webster and Sweetwater, both on the line of the short Farmers' Railroad, running north from Devil's Lake. A hunting pass at the foot of the lake with a lodge leased at one time by Louis Hill, now president of the Great Northern Railroad, separated this lake from the next of the western series, or more strictly connected it, for the three western lakes were connected by ditches cut through their passes.

#### 1. ALONG OUR SHORE LINE

Our lake, with a sandy beach for the main northern and eastern shore line and a marshy border below us through which large herds of pastured horses and cattle waded about at will, was less popular than others of the chain, and the birds seen were generally too far out or too wary to be watched to advantage; but occasionally I was amply repaid for a visit to the shore.

The afternoon of my arrival, June 19, on crossing the pasture on my way to the lake, I caught sight of sandy "Flicker-tails" or ground squirrels which with piping whistles and a flash of bright eyes disappeared down their holes before me as if announcing that I was now in the "Flicker-tail state"; and on following the cowpaths through a high growth of snowberry I was greeted not only by the songs of Maryland Yellow-throats, but those of my old Dakota friends, the Clay-colored Sparrows.

Crossing the broken line of trees that accentuated the sandy ridge bordering the lake shore I looked out over the water, and to my astonishment the first Ducks I saw were a pair of the big northern sea Ducks, the White-winged Scoters, whose southern breeding limit is Stump Lake. While they also breed at Devil's Lake, they had not been recorded from the Sweetwater chain and I had contemplated returning to Stump Lake to watch them. Here they were with all their ear marks, big bodied, flat headed, one black, one dark brownish, characteristically lying prone on the water; and as if to make assurance doubly sure, one of them flipped up a wing so that its white patch showed.

The next day I discovered a black Scoter in a tule bay by himself, and while I looked a second black one flew in and started to light not far away. As he went down the Master of the Bay made a rush at him, splashing the water white in his fury. The nesting season must be approaching, I said to myself, and noted with satisfaction that there were plenty of snowberry bushes near the shore for good nesting sites. Two days later, between storms, when a strong south wind was blowing across the lake, I went down to see what the Scoters were doing, for when inland Ducks take to the sheltered bays, these sea Ducks go out to ride the waves. There they were, quickly recognized by their flat

heads and retreating foreheads. Two or three pairs there seemed to be, but some were so far out that I could not be sure.

Scattered over the water and farther up the lake lined up along the shore as a row of black spots, were a large number of Scaups. As I patrolled the tree line bordering the lake they gradually worked their way down the shore, some flying low over the water, their small heads and slender black necks outstretched, their white wing patches and gray blankets showing. When they had all turned Stony Point with its rocks and trees, and gained the quiet waters of the cane-bordered bay, they lay in close sociable groups, forty in one bunch, seventy-five others in sight. From my distance they all seemed to be males. As they sat quietly on the water in the sun, the gray saddle was suggested, and as they lay on one side, the white belly showed.

When the Scaups were on the bay another day, a Redhead came swinging in and lit outside the cane-bordered water front, his handsome round head and black neck showing well. As the sun struck his head I was surprised, for it burned like that of a Red-headed Woodpecker. The next day I saw him—or a brother—swim from the bay far out across the lake, and later return—if, again, he were the same bird—swimming with puffy head arched, his mate beside him. The last of August, out on the rough water of the lake I was much pleased to discover a family of Redheads swimming along, six about half grown young riding the waves ahead of their parents.

Large flocks of Scaups and a few pairs of Scoters were seen on the lake a number of times, and one day when hunting through the glass for a large flat-headed Scoter among the small round-headed Scaups, I finally discovered one swimming rapidly past the Bluebills in the direction of the shore. Just then, unfortunately, my attention was called in another direction so that, if the Scoter were on her way to her nest, I lost the opportunity to locate it. Late the next afternoon, after a day of heavy east wind I found the lake almost deserted, but three pairs of Scoters were riding at ease well out on the rough water, brown, lurid water, ominous of the violent storm that shortly after swept down over the prairie. Beyond the three pairs of White-wings a few black bobbing corks may have been still other Scoters, but they were too far out to be distinguished.

On one of the quiet days after the storm, a number of Scaups and two pairs of Scoters were gathered in the bay. One of the black Scoters kept throwing up his head as if swallowing, and then he and his brown mate started to swim slowly across the bay. She led the way, swimming on her side and looking over her shoulder as if using a breast stroke. He got behind, stopping to plume his feathers, and had to hurry after her. They disappeared around Stony Point, and, presumably, stopped to feed on some green weed near the surface; for when I came up they burst away noisily, two pairs of big webbed feet sticking out behind and white wing patches showing conspicuously. The water was sparkling and a great many Ducks were scattered over its surface though I could recognize only Scaups, among whom there now seemed to be some females. Another time, up the curve of the shore the sand was black with Scaups—solid yards of them, there appeared to be! Not long after this I left the north Sweetwater for a term of weeks, but late in August had the satisfaction of seeing the second chapter of the Scoter history—a family of perhaps half grown young swimming around with their parents.

When watching ducks on the lake near sunset the first of September, I

saw a flock of gulls massed on the water at a safe distance from shore. Being struck by raucous call notes quite unlike the familiar calls of the Franklin, I walked up the beach to investigate, when I was pleased to discover a few near shore showing the characteristic dark ear spot of the attractive Bonaparte Gull.

When I was down at the lake with some children, one day, a pair of long-bodied Gadwall came feeding along the shore line. Alarmed at our intrusion, the drake, with head up, watched the movements of the children behind the thin border of trees, but the duck as if feeling safely guarded, fed calmly along the edge of the water, moving her bill back and forth over the surface as if for insects; though when the restless children ran down to the beach, both ducks moved on up the shore. The comfortable pair were seen there again, two days later, swimming companionably close together.

The children were greatly interested in seeing a family of young Flickers coming to the big mouth of their nest hole, and one little fellow horrified me by asking earnestly, "Do we *have to take them?*" Another Flicker family was found in the same short strip of timber, and when the large broods were out, the woods seemed full of Woodpeckers. Near here a Cuckoo slipped into the cover of a low tree top one day as I came in sight, and during the nesting season Kingbirds flew silently away from trees, bushes, and fences, looking wonderfully white and fluffy. In the trees bordering the lake in June the Crows cawed so aggressively when I passed that but one interpretation was possible. They bored me so, however, by making an outcry when I wanted to creep up quietly to see Ducks, that I did not take a proper interest in their affairs.

Near Stony Point, on the fourth of July, as I happened by, a female Golden-eye with puffy brown head and yellow eye was swimming near shore. When she caught sight of me, instead of swimming out farther from shore or flying to another part of the beach as other ducks did when surprised, she stood her ground, swimming slowly back and forth along a short beat, helping to propel herself by her neck, now held erect, now slanted back. Another female joined her for a time, and once I thought I caught sight of the drake with the green head and white bill spot, swinging in by the Point. The duck was so evidently watching me that when I found a tree with a big hollow about ten feet from the ground I grew hopeful. But though I was often in the neighborhood, I never saw her again. Was it one of her sisters of which I was told who dropped down a chimney instead of a hollow tree much to the surprise of the housekeeper who came home to find her room full of soot and the bewildered duck on the windowsill? Near Stony Point, Spotted Sandpipers were often seen on the sand, tipping and teetering as the wash of the waves sounded on the beach; and one day two were seen on the rocks at the very tip of Stony Point, standing their ground when the waves washed over their feet.

Between Stony Point and the small bay in its arm, when I was watching for ducks, our band of farm horses filed by me, gentle mothers with their foals, and spirited adventurous colts; each in turn stopping to enquire about me or to have their noses rubbed, and then wading out into the cane border of the lake, their feet sucking up the deep mud as they moved around nibbling cane. A pretty picture they made, with their red backs above the green, and one with pleasantly cool suggestions on a warm June day.

Undisturbed in the little bay, meanwhile, sat a pair of Shovellers, whom I often found resting on stones in the quiet water. Seeing me they swam out

toward the canes, and when the horses came too close simply swam out of the way a little among the green stalks. Another day when I was there, the Shoveller drake came flying around the Point with his soft *chuck-uk, chuck-uk*, and lit in the bay with his orange feet out behind him. When I was on the beach, a duck would sometimes swing around over the lake and woods, as if making me the center of its circle, and again one would fly down the shore to be joined there by its mate, suggesting that the nest might perhaps be in the bushes not far away.

From Stony Point one July morning between storms, so quiet that the trees at the foot of the lake and the tules along the marshy border were reflected in the water and the grasses outside the shore punctured gently waving lines, a Black-crowned Night Heron was seen on a post in the water, a statue on a pedestal; while nearby on a floating piece of wood stood a Bittern, a wooden image mirrored below. As I watched, the Bittern suddenly lunged forward, and then from outspread wings rose, holding tight to his wriggling prey. While he stood there round-shoulderedly with his minnow, if it were one, in his bill, ducks swam near, reflected in the smooth water and leaving short rippling wakes behind them, each looking up with curiosity at the fisherman's catch. Finally, with the dark limp object dangling from his bill, the Bittern flew over to the canes and went down inside, doubtless to his nest.

Looking out over the surface of the still white water banded here and there with streaks of blue, ducks taking advantage of the quietness of the lake after storms could be seen so far out that they were only pairs of dots on the surface. Near the Point the wooded shore strip was ringing with the voices of birds celebrating the change from heavy wind and rain to quietness and sunshine. The Clay-colored Sparrow sang its best *kray-kray*, while Song Sparrow, Catbird, House Wren, and Maryland Yellow-throat made merry, each with his own tuneful ditty. The horse bell tinkled contentedly, and the cows, having had their morning meal, came to rest in the shade of the trees; up the lake shore our neighbor's horses stood in the water, while beyond sheep and cattle from the pastures gathered, each in its own band down the beach.

That evening the farmer who was starting with his sulky to make a round of the neighboring pastures looking for a strayed calf, offered to take me down to the pass where I could see the second lake. Trotting over pasture hummocks fast enough to make one's teeth rattle, wading through boggy ground till horse and wheels sank deep and the driver had to urge insistently, "*Keep a'goin'—keep a'goin'*," driving straight into brush patches, crowding obstructing willows under the wheels, and turning at sharp angles out of positions where retreat became necessary, we finally reached the pass where large trees filled the narrow strip of ground between lakes making even a sulky and a western horse impossible.

Along the shore we passed two pretty black and white 'wood pussies,' evidently out on a hunt with their mother; and while they disappeared in the marshy border of the lake, she valiantly drew our fire by running slowly ahead of us, the broad white stripe on her back insuring our attention. Her parleys with our dog made me wish for a camera, but the most theatrical pose of all was when she faced the dog at close quarters, her slender head low, her wide, white-striped brush raised straight at her back. A hint of a wood pussies successful hunt was had out on the prairies—fragments of egg shell and some black down on the ground near some shallow, nosed holes—within easy reach of a black and white family that lived apparently under our barn.

As we walked along the pass where the Louis Hill hunting lodge was, we came to the Big Ditch that had been cut through when one of the lakes was too low, and which now holds a stream some twenty feet across. The southern lake presented a beautiful evening picture with its quiet white water reflecting the sunset sky framed by its wide green border of tule and cane. A confusion of startled ducks rose before us from their safe cover, and Black-crowned Night Herons reluctantly relinquished their nightly hunting grounds.

From the north side of the pass a long rocky point projected out into the water, on which ducks and gulls were fond of assembling. It could be seen from the house, and one morning late in August I was called to the kitchen window to see a flock of White Pelicans that had taken possession of the rocks. Hurrying down to Stony Point I looked across the lake at them. Between fifty and sixty were there, standing lined up, too close to count, at my distance. Some stood tall with necks raised, others sat low, making an irregular line of white pickets. About forty rose first, soon followed by the rest, when they flew heavily south, their bills slightly tilted up, the black tips of their wings making a handsome pattern. The leader of one of the flocks kept command through all the shifting movements. As they flew south I followed eagerly, expecting to have a good chance to study them from the pass; but by the time I got there they were already out of sight.

Later in the morning when I was crossing the open wheat fields I discovered a dim line high in the sky, that through the glass proved to be some thirty of the great birds moving slowly toward the south lake of the chain. Once they strung out in orderly single file so that it was easy to count them. Then, as if they could not agree on the next move, the point of advance became confused, and before a decision could be reached they were mulling about within a circle like a swarm of insects. When they went on the slowness of their statefly flight was accentuated by the swift flight of a flock of ducks crossing the sky below them.

The next morning when I got to Stony Point only eight Pelicans were on the rocks across the lake. Two stood on higher rocks than the others and looked as if their wings were wide open at their sides. As I watched, seven of them rose, a flock of white Gulls and a flock of dark Ducks flying at the same time, perhaps disturbed by the movements of these Giant Fowles! As they went they again shifted to the single file that makes such an effective figure across the sky. The one Pelican left behind must have been slightly winged for while he seemed to try his wings, he did not rise, but swam about, back and forth over the water as if expressing his restlessness at being left behind by his comrades. He would swim rapidly over quite a circuit, then apparently stop to fish, then climb up on a rock, and after a few moments drop back into the water and start on his restless round again. Poor creature—too handsome, too striking a mark across the water! But who could be wanton enough to make a target of such a bird?

The next morning my wounded Pelican was still on the point of rocks when I went down, but hardly had I seated myself inconspicuously back to a tree prepared for an interesting hour with him when—there he was on wide, black-tipped wings up in the sky! I gazed at him in astonishment. Two days rest had put him on his wings again! Possibly he did not go far, but hunt as I might, I could never find him again, and could only hope that he was able to rejoin his white brothers in their majestic flights through the sky.

## 2. OUT ACROSS THE WHEAT FIELDS

Many of the ducks at this time were scattered out over the prairie nesting, when hungry rejoining their mates on their feeding grounds in the shallow sloughs. Individuals would be seen going or coming between the nest and the feeding grounds and a pair would often be seen winging their way out over the grain fields. One of the brooding ducks was flushed from her nest beside a dim farm road through the wheat, her nest containing five dingy olive eggs unprotected by feathers or down. And another duck, with white subterminal tail band, rose from my side by a grass grown road where I had previously seen a Shoveller drake, leaving her nest with its four pale greenish eggs uncovered only a few feet from the wagon tracks, though well hidden in a brown band of coarse vegetation that had lodged and dried when the slough water subsided. The next day when I returned the eggs were cold, and much to my disappointment that was the end of the story.

One of the ducks most frequently seen was the Pintail, a bird known to me previously mainly through a Fuertes plate which depicts a pair crossing the sky, cutting the air delicately with long slender head and neck, and gliding by through the blue, the long tail of the drake with its gently up-curving pins preserving an exquisite balance—marvelous aircraft of the blue ether, whose portrait might well be entitled, *The Poetry of Motion*. What a privilege to meet the bird at home on the prairie! To be assured by the long upstretched neck, the angular brown patch on the side of the head, and the long tail feathers that it is indeed a Pintail is exciting; but when the distinguished bird rises and with level flight glides across the ethereal blue sky, you realize the poetry of motion.

The prairie afforded many beautiful pictures and interesting sights. In cutting across lots I discovered beds of snowy anemones, streaks of golden mustard, and unsuspected pools, sometimes dark ultramarine, from which startled ducks swam quickly to a marshy cove or flew off over the grain fields. Marsh Hawks were frequently seen, now a brown female flying off with a ground squirrel in its claws, now a blue male seesawing from the ground up perhaps ten feet, flying up, then down, then up, then down, whether in excitement over some unusual catch or in courtship play I could not determine, for neither nest nor quarry were in evidence. A pure white gull larger than the Franklin was occasionally seen flying over the prairie, once over inappropriate ploughed ground; but looking up at it, its white breast went well with its background of soft blue sky and small white horizon cloudlets. The plaintive cry of the Killdeer was sometime heard over the grain fields. One that I watched going down between the low rows of wheat went in its characteristic manner, running a few steps, crouching down, rising, and running again till it was almost out of sight. On rare occasions I flushed a Prairie Chicken from one of the few small islands of prairie sod in the midst of the wheat; and one day a bird that must have been a Burrowing Owl appeared and disappeared so suddenly that I could hardly believe my eyes in spite of its bob as it lit on the ground and the fact that the eastern line of its range extends from Manitoba to Louisiana.

Chokecherry motts—high clumps of bushes making islands in the grain fields—attracted a number of birds to whom they offered congenial nesting places. A Yellow Warbler was singing loudly on the edge of one of them when I appeared, and a Catbird singing inside stopped with suspicious abruptness when I intruded. A Kingbird was seen there too, and a bulky old nest suggested that a Crow had been a former resident of the island grove.

When the wheat was only a few inches high, sand-colored ground squirrels and big jack rabbits were easily seen. Small heads stretched up from vertical backs seemed to watch you wherever you went, low whistles calling your attention to the animated flickering tails. Sometimes one dropped down from on tiptoe to slide into its hole before you, or a close group with heads at different family levels stood erect around a hole returning your interested gaze. The big silent jack rabbits loomed large above the low ground cover as they loped along head down, seeming all hips, the white tail and ear backs making them so conspicuous and easy to follow over the grain fields that they had the appearance of being surprised with the lid off. One that I must have rudely awakened from a noonday nap jumped out of its pretty form, a cozy little cavern prettily roofed by the headed straws of a sheaf of wheat, a choice home for the solitary wild creature of the earth.

As the wheat grew and I walked down the narrow dead furrows between its rows, it was a pleasure to come upon the low prairie roses with wide spread petals smiling back at the sun. The wheat was late in coming up because phenomenally heavy spring rains had flooded much of the country and the grain could not be put in at the proper time.

### 3. PASTURE SLOUGHS

"There's water in every slough, this year," the farmer said, and as I went about I found myself corroborating his statement in rubber boots.

Just inside the pasture fence of our next neighbor on the north was a streak of open water heading a slough that on our side of the fence fanned out widely under cover of high, wide-bladed slough grass. A pair of Shovellers, very likely the pair whose nest I had discovered near by, attracted me to it and I crept cautiously down the fence line stopping behind posts to see if the outcry of the Redwing population had betrayed my presence. The Shovellers swam around, however, feeding and bathing quite oblivious of spectators, the light brown duck, after giving herself a thorough sousing, twisting her head back to fix her feathers and the tricolored drake putting his dark head under water here and there in search of food. When they had been enjoying themselves, paddling around close together in a pretty confidential, conjugal way for some time, a brown sister, apparently also a Shoveller, flew in. At this the duck quickly swam out toward the visitor, as if with friendly greeting, while the drake stretched up till he looked very long necked and gave several jerky bows of the head; after which he loyally swam off to his mate. The visitor, left alone, went swimming off by herself, perhaps waiting for her mate to join her.

A few days later a pair of Shovellers, presumably the same, were on the slough with a pair of Blue-winged Teal that looked very small by comparison. When I started down the line of the barbed wire fence, our neighbor's horses, big gentle Percherons, crowded in to see me, and while I was making friends with them the Shovellers discovered me, the ducks disappearing and the drakes swimming to the farthest end of the slough. When the horses had strolled off I put my camp stool down beside the fence where the high grass helped conceal me and I could watch the water between the wires. While I was waiting for something to happen, I had a chance to enjoy the laugh of the Sora Rail that kept coming from the slough grass near by.

Presently a second Shoveller drake, showing his blackish head, white breast, and dark maroon belly, flew over and lit on the water with bill tilted up airily, and at once started across the slough after Shoveller no. 1, clucking and



raising and lowering his neck, his bill held slightly above the horizontal. No. 1 promptly swam out and met him half way, whereupon both did head exercises. They did not come to blows but swam up to the Blue-winged Teal, when the four stood looking my way in an interesting group for a few moments, after which the Blue-wings went swimming off. Left to themselves the two Shoveller drakes partly forgot their rivalry and fed peaceably side by side till, at a sudden thought, they stopped and again did head exercises, their big blackish heads looking droll enough as they pumped up and down. Once when performing, the two stood facing each other only a yard or so apart, raising and lowering their heads. One of them, presumably the resident, twice rose and circled out far enough to inspect me; then returned to the slough.

A Black Tern hovered over the slough, dropping down for quarry, Redwings called, the wide-bladed slough grass bowed and sang in the wind of the gathering storm, and again came the laugh of the Sora, light and joyous; for under his dense marsh cover, what cared he for wind or weather? Another band of the big, gentle farm horses came over the low hill to my fence line, and a flock of sheep followed as if to get out of the wind. The storm was almost upon us, and I too had to hurry to shelter.

On a shallow slough in our own pasture nearer the lake, Shovellers were frequently seen during the breeding season, and if my supposition were correct, each small body of water had its own habitues. Two days before watching the mild rivalry of the two drakes, I witnessed an incident that I interpreted as the punishment of an interloper from our slough by the lord of our neighbor's slough. However correct the supposition, these were the facts. Two Shoveller drakes, striking figures in flight, came swiftly in—the second close on the heels of the first—from the direction of our neighbor's pasture and lighted down on our slough. As they did so, the Indignant Pursuer raised his breast well out of the water and with a pumping motion flew at the Interloper with a noisy rush of water. After a series of rapid encounters, the Indignant Pursuer chased the Interloper back to the far end of the basin, when, apparently satisfied with his work, he flew back low over the snowberry and sagebrush across our neighbor's pasture in the direction of Shoveller Slough. If the mild rivalry that I witnessed there two days later were the sequel, the antagonists had learned to respect each other's preserves.

The well punished Interloper when watched on his own slough acted much at home. When some of our farm horses waded in near him and stood up to their bodies feeding on the juicy grasses he showed as little concern as the pair in the bay by Stony Point, merely swimming to the edge of the basin where he fixed his feathers, his bright orange legs showing and his speculum in bands of green, white, and bluish gray giving a distinguishing touch.

A pair of Shovellers were often seen on our main pasture slough, a long narrow one with only a few inches of water, paralleling and cut off by a barbed wire fence from the deep grassy slough of our neighbor to the south. In the middle of this deep slough was a black streak of tule enclosing open water from which many voices were heard and over which Gulls and Black Terns were occasionally seen. The open water in former years had extended so far that a boat was kept on it, for before the prairie was broken the surface water was not absorbed as it is now by the grain fields. The black streak with its wide protecting band of high slough grass in time of danger made a good hiding place for the ducks which came to our open slough to feed and rest.

The pair of Shovellers that frequented our shallow water were apparently enjoying themselves in the interval before family cares and duties should become all engrossing. The drake seemed to spend most of his time there and the duck came over at intervals from the nest, when they swam about together feeding by putting their heads under water and where the water was deep enough to admit it, standing on their bills with their tails up. When the drake stood on a stone at the head of the slough, his big body and white breast made him conspicuous, but when he squatted down, his white breast was obliterated and his black head rested on his magenta belly making him suggest an inconspicuous Mallard! On the other hand, when surprised on the grassy edge of the slough when he had apparently retired for the night, he raised his blackish head and stretched his white neck enquiringly, showing his true colors.

The brown duck when swimming through the short grass and weeds was almost invisible. When feeding, if she turned her head on one side to pick something from the grass blade, the orange under mandible of her spoon bill showed strikingly, and when she stretched her wing with her orange foot it showed across the water making a good recognition mark to supplement the wide mouthed bill. In bathing she dipped under water and then rose and flapped her wings till the white axillars showed. After bathing, at one time, she started and swam straight across the slough, the drake following close at her heels, and when she stepped up on dry land, he followed up beside her; after which they both stood and preened and shook their feathers till they looked dry and clean, there being plenty of time for standing around and visiting. Unfortunately I moved and disturbed their rest, but they only flew over toward the open water of the black streak.

There was frequent shifting back and forth from the slough to the black streak and from the streak to the slough. When it was not a Shoveller that came down with orange feet stuck out conspicuously, it was sometimes a Gadwall that dropped down with brown wing coverts showing, or perhaps a heavy brown duck that rose and flew over the marsh with the loud quack of the Mallard.

A pair of Mallards that I found on the edge of the small slough where the interloping Shoveller was punished, were for the moment reversing their usual role, the brown duck standing with neck stretched up watching me while her mate lay at ease pluming his feathers, showing his handsome green head, white collar, and reddish brown breast. This pair when disturbed by the horses coming in to the slough, instead of shifting over to the black streak flew with wide wing beats over the trees, soaring down onto the lake. And later in the day I found a Mallard drake feeding along the line of white foam that had blown in from the lake, making quick jabs down in front of him, and once swinging around quickly as if to secure a morsel he was in danger of losing. A brood of Mallards was found later—the last week in August—on the Big Ditch, and when I pressed too close the conspicuously large mother wisely flew off, leaving the tiny mottled young to disappear in the protecting cover of the bank.

But while female Mallards now and then rose from our long pasture slough, that particular feeding ground was resorted to mainly by Shovellers—two pairs I thought called it home—together with Blue-winged Teal, Coot from the marsh the other side of the fence, and an occasional Pintail. A Pintail drake would swim around watchfully, his head with its handsome brown cheek patch topping his long white neck, his body riding high, held together trimly

and finished off by the long pin tail. A most elegant figure he made compared with the squat Shoveller lying low on the water. While the responsible drakes of both kinds watched me, the Pintail looking over the grass tops at me, the Shoveller eyeing me from between the blades, their brown mates sat around inconspicuously among the weeds feeding or resting, as if confident that they were well guarded. From the slough one day late in June, several rods away I discovered the long white neck of a Pintail rising from the grass. When he turned away for a moment the white line went out. After watching me for some time he lowered his long white streak to a short white patch. Then I discovered another white streak a few feet away, and finally made out the dim brown forms of the two ducks. When I rose, all four of the illusory forms took wing.

As I sat watching the slough one day six Blue-winged Teal flew over from the black streak, the males in their handsome breeding plumage of warm brown marked with white and blue patches. Disregarding me in their preoccupation, they lit in a close group and began a curious performance, all six raising and lowering their heads in a droll way that suggested the more elaborate courtship of the Albatrosses of Laysan Island. After a time all but one duck and drake subsided, but as they separated a little from the group and kept on bowing to each other—if this stiff jumping-jack motion could be called a bow—two drakes walked up to put in an oar. It was too late, however, the die had been cast, and the happy pair, turning their backs on their rejected suitors, waddled off onto the dry pasture where good nesting sites might easily be found.

Just then a dun-colored Willet lit nearby and on discovering me crouched over the ground one moment, jerked up its long bill the next, and shortly after, with a slight note, flew off, revealing its striking black and white markings.

The only other time that I saw the quiet Blue-winged Teal make any demonstration was about a week later, when one climbed up on a stone near a Scaup drake and did head exercises. As the Scaup paid no attention to him he quickly subsided, however. At this time of year, before the striking breeding plumage had been replaced by the dull brown eclipse plumage, the Teal were very handsome, especially when seen broadside in flight or in standing conspicuously on a stone, the white face crescent, reddish brown body, and flat blue wing patch distinguishing them. When flying or swimming from you, two round white spots each side of the rump marked them. One of the birds in flying was heard to give a soft rather thin *seep-seep-seep*, suggesting the soft whistle of the Wood Duck.

While the ducks occupied the sloughs, from the weeds of the surrounding pasture and the wires of the adjoining fences came the small songs of Savannah Sparrows—the commonest songsters of the prairie, like a monotonous accompaniment for the loud varied outpouring of the Western Meadowlark and the insistent *wreechy-wreechy-wreechy* of the Maryland Yellow-throat, singing in the snowberry thicket. A Barn Swallow, doubtless from the colony nesting in the barn, occasionally flew down to the edge of the water for a drink, as he flew off showing the white spots on his spread fork. Crows cawed, Kingbirds—both the eastern and the Arkansas—flew about the fences, their yellow and white breasts contrasting markedly. Sometimes a Yellow-headed Blackbird and a Bobolink added their notes to the pasture medley.

A solitary Black-crowned Night Heron, perhaps the one seen with the Bittern, was occasionally found, now circling over a small grassy slough where frogs lived, now standing near enough a round rock to suggest the resemblance its humped-over figure gave, its black back and white face producing an unbird-like effect. When the stone turned facing me, the delicate coloring of the long yellow legs and creamy body excited my admiration.

A brown Marsh Hawk was often seen flying about, sometimes flopping down suddenly after her prey; Flickers were flushed frequently from the pasture floor, and Killdeer were met with now and then in the pasture. A pair seen one morning were walking about in the midst of the white-headed yarrow, making a pretty picture. Four were seen together the last of June, crying vociferously in a variety of ways that made me realize afresh that their *kill-dee* is but a phrase in a varied repertoire. One of the family, possibly a parent, discovering good feeding ground on the edge of the slough, stood and called and called till another joined it at the feast.

#### 4. THE BIG SLOUGH

All these visitors to the pasture were as actors in the play, disappearing as the scenes shifted. One of the most tantalizing of our visitors was the loquacious Coot, for small talk such as *ep-ep-ep-ep*, *creck-creck*, *creck-eck-eck*, and *peter-up*, *peter-up*, *peter-up* kept coming from the high marsh grass of the Big Slough the other side of our fence; and a Coot often came out and stood under the barbed wire, a gray figure across the slough, preening its feathers elaborately. Other gray figures sometimes stood on stones at the head of our slough preening, giving a flash of white bill now one side and now the other, or fed with head down and tail up showing the white tail coverts. When startled or in mood for a chase they would go rushing noisily after each other with a high splash of white waters toward the fence line to disappear in the dense cover of the Big Slough beyond. How enticing! And inside the Big Slough was the Black Streak! Who could resist that?

Picking out as dry a place as possible, I crawled under the barbed wire fence and waded out gingerly through shallow water among the low tussocks of wide-bladed grass. Seeing a tract of brown-topped grass that looked dry enough for better footing, I headed for that, but on making my way through it found it shoulder high and soon was surprised by a preliminary cold trickle over the top of a rubber boot. A barbed wire fence ran at right angles to our pasture fence and the tops of its posts showed above the grass down the length of the Big Slough, in its course paralleling and almost reaching the Black Streak; and by following it I hoped at once to have secure footing and perhaps be able to reach the Streak. But though I waded laboriously with boots full of water and often uncertain footing down long lengths of it, at the nearest point to the Streak a wide band of soft untrustworthy mud that I recognized as part of the boggy ground an old settler had told me of fanned out from the Streak and blocked my advance; so, weary from heavy wading, I decided to content myself for that day with wandering about the slough.

In one place a half grown gray Coot flew before me, and adult Coots were much in evidence. As I progressed, ducks rose and circled around, among them a pair of Mallards, perhaps the pair that had visited the pasture. Female Pintails were apparently the commonest, with heavily marked tail and back, and white wing edgings, and one evidently flushed from her young tried to decoy me away. Again and again she flew up near me with a hoarse *quack* and some-

times fairly flopped down on the water in her eagerness to draw my fire. Besides the ducks flushed from the slough, many others rose from the wet pasture beyond.

While following the fence, in the narrow water lane between it and the high grass I had come upon two nests, presumably those of Coots—compact, neat looking rafts of slough grass and large stalks, one brown and the other green, as fresh and green with its grassy lining, as if just plucked. Each nest contained nine small pointed and decidedly dingy eggs, lightly specked. When I had turned from the fence and was heading out through the shoulder-high grass toward the dry pasture long rods away, suddenly the green wall before me gave way and in a bowl-like circle of open water I looked down with delight upon a third nest—a brown island, high on the water, high enough it seemed to keep dry in all peradventures. Only eight eggs were here, but bits of shell pointed to the ninth, and on the water close by I discovered the recent occupant of the shell. Doubtless frightened by my approach, it had plunged over the edge of the nest; but the sudden change from its warm egg-shell to the cold water was too much for it, and it let me pick it up, examine it and return it to its brother eggs—droll little baby Coot, with its red sealing wax bill, dark bluish frontal shield, red skull cap, and yellow and black hairs. Near by I came to another nest, just begun, a few green stalks lying on the water; so altogether there was quite a Coot colony.

After this day in the Big Slough, the Black Streak was on my mind for two weeks longer, when I determined to reach its edge at least. By this time, from wading in other sloughs and in the tule marsh along shore, I had tired of my futile rubber boots. Hot and clumsy to walk in when dry, all too heavy when full of water, impossible to withdraw from if stuck in a bog, and difficult to dry out even with the help of a prairie wind and a stove, they were certainly ill-suited to the submerged tenth of North Dakota with which I was struggling. So old shoes, or rubbers tied on over stockings had come to be my substitutes. Leaving the farmhouse by a pathway through the wheat tracked up by the pretty Flicker-tails, I waded out first over the hummocky ground with its short tussocks, then straight out through the dense stand of brown-topped slough grass to the very edge of the Black Streak, although in the rainy interval the grass had grown from shoulder high to over the top of my hat, and the water had deepened from knee to waist high.

When I reached the open water of that magic Black Streak, I saw my mistake. It was deserted, except for taunting voices and vague forms half hidden among the tules scattered over its surface. I had marched up boldly, demanding the keys of the castle, when Nature denies her fortresses to all importunates. Mystery and magic doubtless invested that secret domain, but—prosaic facts—I was looking west when the sun blinded my eyes, my approach had frightened away the birds, and the water was too cold for those threatened with the infirmities of age to stand in pending their tardy return!

But let us be thankful for Life's gracious compensations! Wading around slowly and aimlessly just enjoying myself, with the slough grass over the top of my hat, I came to a better understanding of one of the most interesting types of prairie cover. Fortunate indeed, to have come this year, for the Big Slough now standing waist high in water, in ordinary seasons is mowed to the fence bordering the Black Streak. When out in the midst of the hat-high grass where you could not see over its brown surface, it carried the eye to the

broken tree lines of the lake shores on the horizons, above which the prairie circle of white encompassing clouds closed in, making the Slough a little world apart.

The west wind bent down the seeded tops of the brown grass so that it was easy to wade east with their bowed heads giving way before me, but in wading west against the wind I had to force my way through the dense stand, sometimes entangling my feet. Wading up and down north and south, however, was comparatively easy. Except in the natural openings, the only way I could see the water was by pressing the grass down with my probing stick. One platform and a few suggestions of nests were found in this way, one showing prettily how the first stalks are bent down, still attached.

With the sun in the west, under water the stalks of the slough grass were golden; and even my brown, bark-covered stick turned to gold. The clear sparkling surface was patterned with intricate reflections of grass stems, and when a surface chink admitted, white cloud masses were hinted in the mirror. What a rare place to live! What a cover! A waving grassy cover, waving and softly seething in the wind.

In forcing my way through, no birds were seen, but a sudden splash often told of some one gone before, and in a Coot colony the birds were all around me, some answering my *te-tub, te-tub*, while others barked and laughed and coughed as if choking—one choked almost under my hand and another startled one spat out its *tub* almost in my face, while the voices of young added to the confusion. But only one flash of feathers did I get in this dense protecting jungle. At one of the openings of a tule bordered pool where there was a warning smell of sulphur, I heard the challenging *tip, tip, tip-r'r-r-up* of an invisible Ruddy Duck. Other ducks, singly or in pairs occasionally crossed over the Slough, a female Mallard gave her loud *quack*, or a Barn Swallow circled over the brown sea of grass; while overhead the white clouds encircled this microcosm, a place of abounding life and rare beauty.

(To be continued)

## THE BREEDING BIRDS OF BEXAR COUNTY, TEXAS

By ROY W. QUILLIN and RIDLEY HOLLEMAN

FOR the student of Ornithology, Bexar County is perhaps the most ideally situated of any area of its size in Texas. Being on the dividing line between hills and prairie lands, it contains practically all the birds of these two diverse regions. The northwestern and western portions are rocky hills covered with cedar, small oaks of several species and other trees and shrubs of that category. The various small creeks have cut numerous valleys and ravines in these soft limestone hills, producing many cliffs and ledges. The majority of these are worn until they slope rather brokenly, only the harder strata offering sufficient resistance to the elements to remain abruptly steep. This is especially true of Cibolo Creek, which forms the boundary line of the county in this section. The southern portion is more or less sandy, and is covered with mesquite, cactus and the many varieties of thorny bushes which form the so-called chaparral. The bottom lands of the Medina River, which passes through this