well advanced at two months of age. The bill increased in length remarkably during this period as did the length of the legs. were slaty colored during this entire period. Their call was a quavering peep having an indication of dragging it out in a faint r-r-r-r accent.

The adult birds at all three nests were very brown on the back of the neck, back, and wings, in fact I would say it was the predominant color. One bird was a little larger than the other. The birds observed in Barry County in September, 1931, were entirely gray, much different from the Calhoun County birds during the nesting season.

Migrations. March 27, 1932, and March 26, 1933. September 27. 1931. A farmer who lives near the marsh said that two of the cranes were seen in his cornfield during the mild winter of 1930-31. I can not verify this myself but do know that the man knows the birds.

BIBLIOGRAPHY

Allen, A. A. The Sandhill Crane. Bird-Lore, XXXIV, 1932, pp. 414-423.

Barrows, W. B. Michigan Bird Life.
Bent, A. C. Bull. 135 U. S. Nat. Museum, pp. 241-253. 1926.
Holt, E. G. Nesting of the Sandhill Crane in Florida. Wilson Bull., XLII, 1930, рр. 163-183.

BATTLE CREEK, MICH.

DIURNAL ACTIVITY OF THE WOODCOCK

BY MARCIA B. CLAY

Over a large section of country in August, 1925, drought was prevalent. In Trumbull County, Ohio, rainfall during that month was only .75 inches, whereas the average rainfall for thirty years amounted to 3.34 inches. My lawn on the slope of the ravine at North Bristol was bone dry, but at the foot of the slope a spring-fed brook still contained water, and though the swampy floor of the ravine showed unmistakable signs of the drought there was still a considerable boggy area.

On August second I flushed a Woodcock (Philohela minor) on the slope from under a clump of evergreens in a patch of brambles. It tumbled into the ravine behind a mass of swamp rose. A few days later from almost the same spot I saw a Woodcock fly from an open boggy track leading across the ravine where I am sure it was feeding. The bird disappeared behind a bend of the hill and when I came up it flushed, and again tumbled into good alder cover in the edge of the swamp.

Thereafter I began to watch for this bird, and on August 15 I saw it sitting across the ravine from my yard, under some overhanging

trees on the bank of the brook at the foot of a steep hill. As I watched the motionless bird sitting plainly in view, unscreened by any vegetation, a chipmunk suddenly ran along a low pendant branch of an overhanging tree and jumped to the ground a few feet from the bird. The latter, startled, jumped swiftly into the air. My eye lost it for a moment, but almost immediately discovered it again a few feet farther along the bank. Instead of dozing again the Woodcock suddenly fluffed out its feathers until it seemed twice its former size, and thus broad, squat and grotesque, it began a teetering, undulating movement as it probed with its long bill, moving slowly along the boggy run and into the swamp. The ground was soft, and the Woodcock ran its long bill deeply into the mire, though not to the base, and that it was abundantly rewarded was evident from the frequency with which it gave its head a quick shake, as though working some morsel back towards the throat. The thrusts of the bill into the bog were not rapid, but were made with a steady rhythm that reminded me of the action of an old-fashioned hand cornplanter in the hands of a skillful farmer.

Occasionally too, the bird fanned out and flirted its short tail. In fact the bog-bird's whole body was decidedly animated, as it worked slowly into the swamp, and toward me. Occasionally the probing ceased for a few minutes while the Woodcock either stood perfectly still, or preened its breast feathers with its long bill after the manner of a duck.

The day was very clear and warm, and the ravine was flooded with sunshine. A large herd of cows had recently eaten or trampled the vegetation made scanty by drought, so there was no difficulty in observing the Woodcock. After watching the bird for a long time, I went down the slope determined to flush it. Advancing into the swamp a few feet until I was within twenty-five feet of the now quiet bird, I threw some sticks at it as it stood regarding me. Not until the third stick went hurtling over did the Woodcock budge, when it ran very swiftly across the brook and up the bank where it stood stockstill with its back to me, and without a vestige of vegetation to screen it, protected only by a few fallen leaves lying around. Again it had shrunk amazingly in size, by flattening the feathers tightly against the body.

It remained thus ten minutes perhaps, until I moved away up the slope, when very, very slowly the bird edged toward a small weed. Having gained this small shelter, it began probing again along the brookside. It was a commonplace looking bird as it froze on the

bank, but when feeding with feathers fluffed out, with wide back and waddling gait, it became grotesque, admirable chiefly for its untiring industry and a certain furtive alertness. During the next two or three hours, the Woodcock worked up the ravine about seventy-five feet to a tiny mud flat just below a spring, and here in the open, with the sun beating down it continued to probe.

At 5:30 P. M. I went down the slope again. The bog-bird stopped probing and stood perfectly still for a few minutes while we eyed each other at a distance of perhaps twenty feet. Suddenly it dawned upon me that the bird was moving. I could scarcely see it move, but its relative position was changing, as, with an almost imperceptible easing away it was nearing a clump of coarse grass and sweet flag. Even as I gazed entranced the bog-bird suddenly darted out of sight.

At 7:30 P. M. when next I looked for the Woodcock, it was feeding again on the little mud flat, and continued there probing until darkness drew a curtain between us. As twilight deepened, however, the thrusts became more rapid. At eight o'clock the next morning, the bird was feeding just where darkness had found it the night before. I could not watch it much that day, but saw it probing at noon under a blazing sun.

On August 17, the Woodcock was probing in the same locality from 11:00 A. M. till noon. At 1:30 P. M. seeing the bird sitting in an open place near a tuft of grass, I went down the slope determined to flush it. Stopping near the spring and only fifteen feet from the Woodcock, I watched it for a time. It sat perfectly still returning my gaze until I lowered my glasses and took another step forward, when it rose instantly and flew swiftly on whistling wings directly away on a line a little higher than my head, and dropped in the shelter of an overhanging bank.

August 22 my record says: Saw Woodcock feeding at noon and again at 2:30 P. M.

August 23 at 8:00 A. M. the bog-bird was still probing just below my house in the swamp. A very heavy dew of the previous night covered the vegetation like rain. The bird, too, was wet, and frequently shook its wings and tail to dislodge the water. Finally stopping on a sunny hummock, it preened its feathers with its long bill, parting the feathers of its breast and sides, and stroking and shaking the wings. Completing the toilet, it began again to probe, working along for several rods to its favorite location near the spring. Here the bird spent the entire morning ceaselessly probing. At one time a horse pasturing in the lot came directly across the bird's feeding

ground, but the Woodcock simply ran nimbly a few feet to one side until the disturber had passed, and then returned to its old grounds. It reacted similarly when two or three chickens came along.

On August 26, at noon, the bog-bird made its last appearance below the spring. I did not follow its movements except to note that its fondness for food was undiminished.

The summer of 1926 found vegetation and swampy areas in the ravine normal. July 20, 1926, was a hot day, 90° with a blazing sun. While watching a pair of Killdeers running along the brook, my eye was drawn to a bird directly opposite me sitting on the bank of the brook preening itself. Noting its cinnamon breast, I at first took it for a Robin, but a second look disclosed the long bill of a Woodcock. It soon began to move along the brook picking from the top of the ground and occasionally probing slightly. The bird upon observing me began to sidle along toward some weeds, and having gained this desired shelter it enconced itself in the cool shade partially concealed from sight. Returning in an hour I saw the bird moving slowly along probing in a desultory and not very ambitious manner.

July 21. Blazing sun again. Second hottest day known to the Weather Bureau. At 9 A. M. the Woodcock was sitting at the brookside under some trees. It soon began to probe, but upon discovering me it moved up along the bank toward better cover at the mouth of the ravine. The slope to be traversed was steep, sandy, bare, and in a blazing sun. With head erect, and body rocking back and forth, the bird advanced one foot as far ahead as possible, as though feeling its way in the dark, then after two or three more teeterings it shifted its weight to the foot in advance. Then very, very slowly and carefully the other foot reached forward, and the movement was repeated, while all the time the bird's eye was centered on me. Patiently and stealthily this snail-like pace persisted until the Woodcock had traveled two or three rods, and to within a few feet of the desired cover, when suddenly it darted nimbly out of sight. However, at 1 P. M. this bird was back in the ravine again, sitting under the bank in the shade of its favorite trees.

July 31, at 9 A. M. Woodcock in same place and went through the same performance traversing the washbank, except at the end it flew noiselessly to cover.

August 7, at 7:30 A. M. Bog-bird under the bank in ravine, poking along, probing now lightly, now deeply. Tapped the earth once with its foot. At 8:30, I left it on the bank preening.

August 9, I saw the bog-bird flapping its wings in the open bog at 8 A. M. It fed around until 9:30 A. M. but I did not see it go.

August 12, at 6 P. M. Woodcock feeding in open swamp. At 7 P. M. I went down to within a few feet of it, when it whistled away to the old spring where I found the bird sitting in the open upon some leaves, but it whistled away again along the slope to my yard where I flushed it half an hour later, and again it whistled across the ravine to the old haunts under the bank.

August 19. Bog-bird preening on the bank at 5 p. m. facing me. It soon worked off into the weeds along the brook, teetering and probing.

August 20, at noon the Woodcock was undulating slowly along the brook across the bog to the other bank, probing but evidently not finding much. Finally it came to rest near the hill. At 3 P. M., I stood looking down at the bog, but could not see the bird until it suddenly rose and flew silently straight away to the slope across from me. It lit on a washbank where it sat a while and then meandered down hill under the trees, and was lost in the weeds along the brook. At 4 P. M. the bird appeared again in the open bog, having come back. It probed energetically during all the remainder of daylight, with short spells of resting.

September 1. Under a bright sun, a Woodcock probed diligently at noon. As I watched, the bird raised its wings straight up and flapped, then slowly closed them and shook its tail. It worked for about two hours. This being the last appearance for the season.

This bird was smaller than the one of the previous year, and not nearly so energetic. Owing to more rainfall the swamp had much better cover, but the smaller Woodcock was much more timid than the other. I am strongly of the opinion that I saw only one bird each year.

In July, 1927, following a torrid week which left the uplands dry, I secured four records of a Woodcock feeding in this same ravine in mid-day under a blazing sun. The dates were July 10, 12, 17, and 21. This bird resembled in size and manner the bird of 1925. It was large and energetic and gave ample proof of an abounding industry during the day.

NORTH BRISTOL, OHIO, VIA BRISTOLVILLE.