

THE BIOGRAPHY OF A CEDAR WAXWING

BY HELEN GRANGER WHITTLE

A FEW Cedar Waxwings spend the summer in the Peterborough region each year. We hear them calling as they fly over now and then. Sometimes we have found a young bird just out of the nest. As a rule they are very retiring in habit, and we have little opportunity of learning the details of their lives. The case was different with Cedarbird 117451, banded on November 1, 1924. Its life was not a normal one, but there were certain features of special interest. From a considerable mass of data the following items have been culled. They may prove of interest to others who are studying this species.

When the Cedarbirds left Peterborough in the autumn of 1924 to seek a more desirable winter climate, one was left behind. It stayed on unwillingly, no doubt, for the bird lacked flight feathers; it could only hop about, or jump from place to place with the aid of its stubby wings. This lack of plumage may have been due to a congenital disability; or it may have been due merely to an over-late hatching, with resulting neglect and shortage in the matter of food, and injuries to the feather follicles in its frequent tumbles. A workman about the grounds observed the bird for several days late in October. It was spending most of its time on the ground under a clump of *Cornus stolonifera*, where it was able to pick up a few withered berries which had fallen from the bushes above. On November 1st the man threw his hat over the bird, caught it, and brought it to me for banding. At this time, the bird had only two primaries on the left wing and one on the right, all ragged from misuse. One secondary on the right wing was decorated with a "sealing-wax" tip. There were only two feathers on each outer edge of the tail. These were about three fourths of an inch long and tipped with the usual yellow border. The breast was streaked, indicating a bird of the year.

It was a valorous little creature, attacking fiercely any hand which approached it too closely, but it was very free from fear and wildness. When the band was adjusted, and the bird still held in my hand, it was offered a black-alder berry, which was immediately accepted and swallowed.

At this time, I supposed the bird's plight was due to delayed molt, and that nourishing food would soon put it in condition to follow its mates to the South. It was, therefore, released at our feeding station, and berries provided: barberry, wood-

bine, euonymus, black-alder, dogwood, and moonseed. Barberry was taken first, but all were eaten at times. The bird remained in or near a pull-string trap on the ground for two days and a night, but the weather turned very cold, and I feared for its safety in its helpless condition, so caught it and placed it in a large cage indoors. Its ready adjustment to this new mode of life was amusing and interesting. The only signs of restlessness were evinced at dusk, when for some weeks the Waxwing seemed unwilling to go to sleep without climbing higher than the cage allowed. While it could mount upward by means of a series of perches, it was never able to come down by the same stairway. Invariably, it tried to fly, or missed its footing, and fell to the floor of the cage. To eliminate the resulting injuries, I was obliged to remove the higher perches. At one end of the highest perch remaining I placed a thick branch of juniper. Against this the young bird soon learned to snuggle contentedly for the night.

As this bird never succeeded in growing the larger, stiffer feathers of wings and tail and retaining them for more than a brief space, we continued to keep it in its cage for two winters and a summer. It displayed a really remarkable personality and intelligence, and became an important member of the family. We named it Cede (pronounced in two syllables), and we always used the personal pronoun "he" in referring to it.

While we had Cede, we drove frequently between Peterborough, New Hampshire, and Cohasset, Massachusetts, a distance of over ninety miles. Cede made this journey with us repeatedly. He seemed really to enjoy the earlier part of the drive, perched close to the front of the cage—getting something of the sensation of flying, perhaps. Before the ride was over he became tired, and he always seemed glad when his cage was restored to its familiar position.

The matter of food for Cede, during the eighteen months we had him, demanded and received a vast amount of attention. During the first autumn, he would try berries, or berry-like fruits of almost any sort, if they were small enough for him to swallow whole. He enjoyed being fed berry by berry. He very early became devoted to raisins cut into small pieces. These and juniper berries were mainstays of his winter diet. Late in his first autumn we found a considerable quantity of pokeberries. These had hung so long in alternate sun and frost that they had evidently fermented to some extent. Cede was eager for them as long as they remained moist, but they had an intoxicating effect. After eating six or eight,

he became abnormally excited, then sank into deep slumber, without putting his head under his wing. Sometimes, as he slept, his mouth would drop open and his head sag, giving him a very foolish appearance. The second autumn, we gathered pokeberries earlier, while they were still unfermented, and Cede would have none of them.

One day, cranberries were being sorted and washed some seven or eight feet from Cede, when it was noted that he was watching with eager interest. Cherry-color always attracted him.

He became fond of Tokay and Malaga grapes cut in small pieces, and of cooked prunes. He would taste of soft fruits like raspberries and strawberries and small pieces of peach, but did not notably care for them—partly because, in their season, he craved animal food. As summer came on, he cared most for moths. All the soft-winged sorts were taken with avidity, even the large brown moth of the apple-tree borer. He insisted on having his moths presented alive. As they were offered, one by one, he swallowed them head first. Two or three of the larger ones caused him to settle down for a siesta with a very contented expression. Ten to twenty small white grass moths were not too many for a meal. He would take mosquitoes, black flies, and tiny flies of other sorts, small crickets, and small soft grasshoppers, but he did not care for house flies or spiders.

When insects were not available, we often inserted tiny pieces of raw beef in small raisins, and this food was much liked. Occasionally lamb or chicken was used. His fruit food was served to him in heavy, square salt-dishes which he could not overturn. If raisins without meat were put in one dish, and others containing meat were placed alongside, he quickly recognized the difference, and chose those with meat.

Food of almost any sort would be accepted from one's fingers, with an air of eager politeness and the wish to meet friendly overtures half way. If the food was strange, however, it was not swallowed at once, but retained in the bill and often quietly dropped to the floor of the cage. If the food offered was a kind he knew but was tired of, he could sometimes be induced to eat it by feeding. Sometimes it would be flung from him contemptuously. When he was hungry for raisins stuffed with meat, I have offered him an unstuffed one. He would accept the offering, but in some way unknown to me, would immediately sense its shortcomings, and fling it from him in positive anger. If I picked up the identical raisin and put a scrap of meat inside it, wholly covered, the stuffed raisin

would be accepted and swallowed without hesitation.

When banana was first offered, Cede observed the small piece carefully, with each eye in turn, then took a tiny bit from the edge into his mouth, apparently tasting and savoring it. He approved this food, and continued to eat it in considerable quantity, with intervals of refusal, as long as he lived. He tried and liked baked apple and date-pulp in the same way. He preferred baked apple to raw apple, but would take a little of the latter. He remained always especially fond of date, but took only a small quantity each day. He liked green stuff like lettuce and cabbage, and would mull over and seem to extract something from the needles of hemlock and other conifers. At first we supplied gravel, supposing it would be a necessity, but none was ever used. We tried adding milk to Cede's drinking-water, but this was not received with favor.

Warmer weather commonly brought about a lessening of appetite, while a cool turn made hunger keener, which is generally true of the birds at our feeding station. On November 14, 1925, my notes say that Cede took twenty-eight juniper berries in ten minutes.

It was observed, at all times, that the bird's food was incompletely digested. In the case of berries, they seemed to pass through the alimentary tract with little change. We sometimes wondered if this incomplete indigestion could be a possible cause of malnutrition.

Berries taken, aside from those already mentioned, were buckthorn, holly, partridge-berry, wintergreen, honeysuckle, privet, red elder, mountain-ash, and small cherries, also various kinds of viburnum and cornus. Most of these did not become important foods in his diet, but Tartarian honeysuckle was taken freely for a certain period after it ripened.

This great variety of food should have provided the necessary elements for complete feather-development in a normal bird, but in this case feather-development never became normal; in fact, as the months went by, we could see a slightly increasing abnormality.

When first captured, on November 1, 1924, Cede, as has been said, had four short tail-feathers, about three fourths of an inch in length, with the usual yellow tips. On November 5th I could see middle tail-feathers appearing, but these had orange tips instead of yellow ones. At this same time two more tiny wax tips appeared on the secondaries of the left wing, which, with the single one already on the right wing made three. On November 8th, my notes say that the four

yellow-tipped tail-feathers were fully an inch long, the newer, orange-tipped ones were one fourth of an inch long, but the secondary with the large wax tip had been found on the cage floor. This was the first observed instance of a constant series of premature feather-losses, which continued for the rest of the bird's life.

The true color of the tips of the newer rectrices was, by Ridgway's color nomenclature, apricot orange. On November 9th, a fifth orange-tipped tail-feather appeared; on November 12th, one of these was lost. By December 5th, all of the orange-tipped rectrices had disappeared, and five newer yellow-tipped ones were in their place. The bird still retained the four original outer tail-feathers on December 5th, but lost one on the 8th. It measured one and three fourths inches—somewhat shorter than the normal maximum.

A partial molt of body-feathers took place in the early winter of 1924-1925, and the juvenal plumage was replaced by adult plumage. The streaks disappeared from the breast, the velvety black line through the eye increased to adult length and width, and the forehead and chin assumed the mature black. The crest-feathers lengthened, and the bird, dressed in the soft vinaceous-brown of the mature plumage, by the middle of January had all the beauty of its race, barring the imperfect wings and tail. The eyes were a rich auburn brown. Such primaries as were grown during the remainder of its life were narrow and twisted. Sometimes they reached a length of an inch, but remained tightly shut in their sheaths.

During June and July, 1925, Cede had no tail-feathers. In August, 1915, he molted completely. About the middle of August he had eight short orange-tipped rectrices, but he had lost three of them by the 21st. When all of this second set of orange-tipped feathers had been lost, he again grew a set of yellow-tipped ones. No sealing-wax tips appeared on his secondaries after the first autumn, but during his first winter he had a small sealing-wax tip on one yellow-ended tail-feather.

Cedar Waxwings are well known as "songless," almost voiceless birds, and our captive bird had the soft, thin, sibilant voice of his race. In the variety and sweetness and profuseness of his vocal renderings, however, he exceeded those of any other Cedarbird whose record has been published, so far as we know. Mr. William Brewster, in his "Birds of the Cambridge Region," speaks of hearing Waxwings "give a succession of loud, full notes, rather mellow in quality and not unlike some of those which Tree Swallows use in spring." In Baird, Brewer,

and Ridgway's "History of North American Birds," Dr. Brewer tells of a captive young Cedarbird which became very tame and "had a regular faint attempt at a song of several low notes, uttered in so low a tone as to be almost inaudible at even a short distance." Experiences of this sort with Cedarbirds have evidently been few, as only a few references are found.

Our Cedarbird was put into a cage on November 2d. On November 4th, my notes say, "Cede is making his single lispng note frequently, and already answers me when I speak his name, even though I may be across the room." On November 6th, as his cage stood in a sunny window and I was busy at a little distance, I was delighted and amazed to hear from him a little song. At that time, I had never heard of a Waxwing's singing. This first song was not long, and not at all loud, but it was distinctly musical and pleasing. It was made up of little trills, interspersed with his usual soft single notes. On November 9th, he "sang frequently all day little trilly, sibilant songs of considerable variety."

This singing increased in quantity until, as my notes often state during the first winter, he "sang practically all day." The singing seemed to be an expression of content, a whiling-away of time when no more pressing matters engaged his attention. It was a nearly continuous warbling, a varied arrangement of short trills, some higher, some lower, with a few connecting or finishing single notes, and occasionally a glide. One needed to be rather near to get all the modulations, as the voice was soft. While Cede was, in general, fearless, he was very sensitive to voices and to the presence of strangers, usually relapsing at once into silence when they entered the room. On January 25, 1925, however, Mr. Charles C. Gorst was able to hear fragmentary renderings of the song, and thought the notes ranged from D flat to D flat, four and five octaves above middle C.

During the summer of 1925 the singing was much reduced in quantity, but it was taken up again the following autumn and winter. Sometimes, if Cede seemed pensive and inclined to silence, we could coax him into song by singing to him, lingeringly, a few bars of "I cannot sing the old songs." Oddly enough, we found no other melody which affected him in this way.

Aside from his singing, Cede had a wealth of other notes. Only one was loud, a piercing danger note, and even that was sibilant in quality. A modification of this note, softer and reiterated, was a complaining note, his only tiresome vocali-

zation. His "dinner" note called for food; he had a bedtime note, and what I called a "nesting" note—an odd development of July, 1925. For several weeks at this time, there was an evident inclination toward nest-building. When I heard the nesting note, I could always be certain that Cede was fussing with twigs, or other material, collecting them on the floor of the cage and squatting upon them. I provided a nest of the right size; the bird played with it a few days, then ignored it.

From the first, Cede developed a considerable fund of conversational notes. His gregarious instincts seemed to express themselves in making the most of human companionship, since nothing better was available. He quite evidently liked to have some one he knew sit near him. His miscellaneous gossipy little twitterings are impossible of exact description, but they were the essence of friendly sociability, and a certain *politeness*, which other observers have seemed to see in Cedar-bird manners.

When, in the summer of 1925, Cede first heard other Waxwings, as they flew overhead, he answered their calls with interest and in some excitement, but they never came near enough to see him or to be seen by him, and he soon ceased to take notice of them. Other species of birds feeding just outside his window, or with only a porch-screen between in summer, seemed to interest him considerably. He shared their little excitements and panics. Frequently, at feeding stations, some bird will see, or fancy it sees, an enemy or menace of some kind, and will give an alarm-note, which is understood by other species as well as its own. All the birds at the station instantly cease whatever they are doing and remain motionless until some bird, more venturesome or more hungry than the others, forgets its fear and begins feeding again. For convenience we call this rigid holding of pose "freezing." Chickadees are most frequently the birds which announce the danger, and, again, give the "all-over" signal. We are seldom able to see any sufficient cause for this freezing, and it is extremely doubtful whether Cede could possibly have known the cause of alarm, yet when the outdoor birds froze, he froze too. On one occasion, when the menacing danger was more appalling than usual, the freezing continued for twenty minutes. During the first four minutes, Cede held in his bill a juniper berry which he had been about to swallow when the trouble arose. At the end of the four minutes, he cautiously released the pressure of his mandibles just sufficiently to allow the berry to drop from them. Otherwise, he remained on his perch, unmoving, till motion was resumed

outside. When a Sharp-shinned Hawk flew into a shrub just outside the bird's window, during his first winter, and there happened to be no outside bird to give an alarm, Cede was unperturbed. He had, apparently, no acquaintance with hawks. The following summer, when the Waxwing's cage hung in a screened porch, there was evidence that a hawk had attempted an attack through the screen, though we did not see the occurrence. The following autumn, a hawk alighting outside his window terrified him, and he did not fully recover calmness for an hour or more.

At night Cede tucked his head "under his wing." He was evidently more securely placed on his perch with his head under his wing. During the day, especially in summer, he frequently took little naps, merely lowering his breast to the perch, the body in a nearly horizontal position and the head drawn back close to the shoulders. At these times his sleep was usually light, so that any slight noise or movement near him would cause his eyes to open. Occasionally he would sink into deeper slumber, his head would drop forward, and, his insecure balance thus upset, he saved himself from falling only by a quick jerk. When he was napping, it was easy to count the number of respirations a minute. This was, quite consistently, eighty.

At first, Cede finished his day's activities early—an hour or two, perhaps, before other species ceased feeding at the station. If lights were put on in the room after darkness fell, he often opened his eyes but did not leave his position on the perch. Later his habits became modified by his human associations, and he fed and moved about more or less by artificial light.

In the matter of general intelligence and companionableness, in keenness of eye and ear, in quick responsiveness to all that went on about him, this Cedarbird seemed to us greatly to excel any other small bird we had ever known. His reaction to glass was interesting. When drinking-water was first offered to him in a glass cup, he tried once to drink the edge of the cup, but never afterward had any difficulty in distinguishing at a glance the two transparent substances. He would not accept his bath in anything but a glass container. During his first winter, he bathed often and with evident enjoyment, but his desire for bathing dwindled later in his life, owing perhaps to a lowered vitality. Even though he might not feel inclined to bathe, the sight of his bathing-dish in the cage always set him to preening, shaking, and dressing his plumage. He seemed to express affection for those he knew best. Recognizing me as his special friend and patron, he

had a particularly demonstrative greeting for me when I appeared each morning, or after other absence. He knew me by sight alone, but liked to "check up" by hearing my voice.

While this Cedarbird's wings, with their distorted feathers, had a somewhat scaly, unhealthy appearance, we could never discover parasites of any kind. After its death, it was examined by Mr. John D. Smith, of the Boston Natural History Museum, who was unable to discover any sufficient cause for the bird's abnormal plumage. Mr. Smith sexed the bird, and added a final surprise when he stated that it was a female, and not a male as we had supposed. The sex makes the singing ability of this Waxwing still more noteworthy.

HISTORY OF A CEDAR WAXWING FAMILY¹

BY MARY J. LITTLEFIELD AND FLORENCE LEMKAU

Tuesday, August 6th

I WAS awakened very early by the peculiar "lispings" of a Cedar Waxwing. Investigation showed that not twenty feet away from me, in a little pine tree, sat a Cedar Waxwing, presumed to be a female, on her nest. She was not making a sound; the notes were made by her mate, which was nearing the nest, carrying a breakfast of blueberries to her. As soon as she was fed, they *both* flew off, lispings as they went. Later in the morning I noticed the same thing, but I did not chance to see either when they returned to the nest. I shared my secret of the nest with Mrs. Littlefield, our Camp Director, who came to see it this afternoon, and climbed the tree to look into it, reporting that the nest contained three young without a feather on them. I climbed the tree, too, after that. The baby birds were quite a bit larger than the eggs must have been, but we estimated that they were probably hatched early this morning. They were entirely bare, with no vestige of down.

¹These unusual observations written in diary form during August and September, 1927, are a condensation by the editor of a study of a pair of nesting birds and their young, the nest being placed less than twenty feet from the writers' tent in a little pine tree. Mr. Charles J. Maynard, knowing of the writers' experiences, kindly asked them to prepare the account for the *Bulletin*.