EXPERIENCES WITH CARDINALS AT A FEEDING STATION IN OKLAHOMA

By MARGARET MORSE NICE

N OUR RETURN to Norman in September, 1925, after a year's absence, we found on our grounds a family of Cardinalis cardinalis consisting of two dilapidated looking parents and a devoted son with a full length tail but with a mixture of brown and red on his back and a light brown space on his chin. We first saw these birds on the 13th; on the 17th I watched the mother and son from the house; he begged zee-zee zee-zee zee-zee, then flew to a nearby bush and picked a leaf which he dropped. Mother found a green caterpillar, began to flutter her wings, giving almost the same call as the young bird had given; she then flew to him, gave him the food and left. He descended to the ground, pounded the caterpillar somewhat and ate it leisurely. Soon he found an insect for himself. Two days later I saw him experiment on a piece of string, a dead leaf and a green leaf, picking them up and dropping them. He got a small caterpillar and ate a little crust of bread, but still his begging note was continually heard.

A cold rain on September 23 brought Mother Cardinal to the feeding shelf just outside our living-room window; she ate some seeds and cheese and then flew three times with cheese for her offspring perched in the bushes and incessantly calling. Near noon they both came to the shelf; Mother took a piece of cheese, Son begged, and she fed him a little piece. Then she went to the other end of the shelf and soon flew away. The young Cardinal ate a piece of bread and then started in on the bird seeds, cracking and swallowing and cracking and swallowing; finally he flew to a black elder bush and began to eat berries. All at once he must have remembered that he was still a baby for he gave his begging note.

Later in the afternoon Mother came again and started to eat; she picked up a small piece of cheese and called her child, who appeared at once, vibrating his wings and tail, bill wide open, the picture of eagerness; she daintily bestowed a tiny morsel upon him and then turned her back. He stood expectantly, begging for more, but as she remained indifferent, he looked about and helped himself to an *immense* piece of cheese.

The next day he teased in the bushes and was fed cheese by his mother. On September 25, they came separately several times; Son now gave gentle peeps. A Catbird visited the shelf enjoying the cheese, but the young Cardinal unkindly drove him off. The only time that Mother and Son were seen together, she depressed her crest, opened her bill and drove him away! This was the last we saw of her for more than two weeks.

The young Cardinal now attached himself to his father, teasing with apparent success until the 30th, after which date this parent also went into retirement; thus he was partially fed by the adults for at least 17 days after he was full grown. He then became the most faithful of patrons at the feeding shelf. On October 2 I heard the oddest song—such queer and squeaky notes—unlike any bird song with which I was acquainted; it came from the young Cardinal. After the concert he picked a leaf and dropped it to the ground. (On September 28 I had heard a strange Cardinal song while on a walk, but had not obtained a good view of the singer; it was a whisper song and, although beginning in ordinary Cardinal fashion, ended with strange low growling notes; the bird flew into thick cover giving the characteristic peep of the species.)

By October 5, the young Cardinal's feathers were all red, but his bill was still horn colored. Five days later, Father and Mother reappeared at the shelf in resplendant new plumage—a great contrast to the worn and tousled feathers of a short time before; Mother had been absent 16 days and Father 11. (In 1920 the Cardinals disappeared from our grounds from October 4 to 17, and from a 40-acre tract of land of which I was making a special study they were absent from September 30 to October 16; in 1922, three were recorded on this tract on September 26, none was seen October 1 and 7, but two had returned October 11.) The young bird who had come for food many times a day from September 23 to October 9 was not seen until the 15th; on that date he tried the suet and took big nips of it, the only Cardinal I have ever observed doing so. He came several times on October 18, but that was the last time we saw him.

Father and Mother came separately to the shelf nearly every day until early December, when Mother disappeared. Father soon proved to be a tyrant; he tolerated no commoners at his feast, and consequently was kept busy dashing from one end of the shelf to the other to teach those impudent English Sparrows their place. For a week in December a Robin came often for water and raisins; although the epitome of dignity and never molesting any other bird—at one time five English Sparrows were eating beside him—the Cardinal regarded him with awe and hurried away whenever this stately bird alighted on the shelf.

The Cardinal grew more pugnacious than ever; I would hear his ya of anger time and again as he drove off the tiny Plumbeous Chickadees and English Sparrows; he would even dart at them from the bushes. Once an immature Harris Sparrow appeared, the Cardinal pounced on his head and effectually discouraged him from returning. His animosity toward this species soon became a disaster, for on January 8, during a snow storm, a handsome Black-hood appeared with a band on his left leg. This must have been no. 65948 whom I had banded nearly two years before—March 19, 1924. Of course my chief ambition was to trap this famous traveller; but here the Cardinal was the greatest obstacle, for he drove away my poor Harris Sparrow most unmercifully. Perhaps he was venting his spleen on the innocent bystanders because his favorite sunflower seeds were all in the trap next the shelf; his hiss of anger became a snarl. The nimble Chickadees evaded him, but poor Zonotrichia querula got no chance to eat and but little to rest.

The next day an English Sparrow was in the trap, the Cardinal alighted on top and peered down at the captive; she jumped up and pecked the lordly creature's foot. He leaped up with a ya of astonishment and rage, and took refuge on the shelf, cuddling his insulted foot in his brilliant feathers. On January 11 he was reaching into the trap, getting sunflower seeds without being caught, but finally he became less cautious and down he went. He gave two blue-jay-like screeches when I took him in my hand to band him, but he did not try to peck. I did not see him at the shelf again until January 25, when he was as disagreeable as ever; after this he left our vicinity. On June 1 it was with a thrill of pleasure that I met Father Cardinal once more in his new headquarters by a creek a mile southwest of our grounds; he wore a band and no one but myself bands birds in this region. I rejoice that he has taken up his abode so far away.

On February 20, 1926, a new male Cardinal without a band arrived; he has proved the greatest contrast to his predecessor, for only once have I seen him drive off an English Sparrow; at all other times peace has reigned, even Harris Sparrows not being molested. On March 3, a female Cardinal appeared in the bushes; but not until March 14 did I see the two together at the shelf. Then, instead of driving her

away as I had expected, he courteously presented her with a husked sunflower seed—the earliest date at which I have seen this pretty ceremony. Sometimes he fed her a whole sunflower seed and sometimes only a small morsel of food; once he fluttered his wings just before their bills touched.

During each of the three previous seasons (from 1921 to 1924) our feeding station has been patronized by a pair of Cardinals, although two winters the female did not appear until the middle of February. In each case we believed the male was a different one, partly because of behavior in regard to drinking water (the first male having been a very thirsty bird and the others just the opposite), and also because of the contrasts in their characters, the first having been of a pleasant disposition, the second pugnacious, and the third unusually amiable. The first was not noticed to drive away smaller birds until a day in late February when falling snow covered the provisions; however, he did not tolerate the presence of his future mate until late The second male was a decidedly bellicose bird, showing special animosity against Harris Sparrows and also against the female Cardinal during February. third male, on the contrary, although occasionally threatening Harris Sparrows, never treated the female unkindly; his unusual meekness of character was shown by the outcome of a battle in late April with a male English Sparrow; the gorgeous creature spread out his tail, lowered his crest and opened his bill, but, alas, he was bluffed by the little foreigner and retreated! All three of these males were afraid of Mockingbirds; two with good reason, for both a male and female Mimus polyglottos evinced a particular zeal in driving off Cardinals; but the third bird (whom we considered a female because she never sang) never threatened the other visitors at the shelf.

The female Cardinals seem to have sweeter dispositions than most of the males; only two have been seen to drive away other birds (English and Field sparrows), one on two occasions and the other once. Both of these were heard to sing. Two females were trapped and banded, one in January, 1923, and the other in March, 1924; the first was never seen after May 4, 1923, but the second came with her mate to the shelf every day until May 27, 1924, when someone shot her about a quarter mile to the west of our grounds.

The Cardinals have eaten canary bird seed, millet, kaffir corn, bread, cheese, nut meats, black elder-berries, and sunflower seeds. In eating these last (as well as bird seed) the Cardinal manipulates each seed with his tongue until it stands edgewise between his mandibles; he then cracks the seed and by means of his tongue ejects the two pieces of husk and swallows the kernel. Much this same method is followed by Harris and English sparrows, although they crack the seeds as they lie flat in their bills. A Blue Jay that came one winter swallowed sunflower seeds whole. The Chickadee takes a seed to a bush, holds it with both feet, hammers the shell open with its beak and then eats the kernel piece-meal.

When they come to the shelf, the male Cardinals often give a loud peep; the females do this less often. The Chickadees almost always announce their coming with a cheery little peep, while the other native birds are silent. Cardinals sing occasionally from August through January, but their season of full song begins in early February and extends into late July.

It must be confessed that some of the male Cardinals in their winter behavior have shown unamiable traits. Nevertheless they are among the best loved of our guests; they give a touch of brilliant color and a spice of excitement to our bird shelf; they rejoice us with their flaming beauty and their splendid song.

Norman, Oklahoma, April 2, 1926.