HARVEY, Diary of a Cardinal's Nest.

Auk Jan.

THE DIARY OF A CARDINAL'S NEST.

BY GERTRUDE FAY HARVEY.

Plate I.

THE Cardinal (*Cardinalis cardinalis*) is a common bird here in southwestern Ohio, and is with us throughout the year. There is one pair which seems never to leave our neighborhood nor to separate, staying together the year round. Every winter we feed these birds to keep them from want, and every summer we continue to feed them because we hate to stop.

For three years they have built in our garden, the successful nests being in a heavy honeysuckle vine at a little distance from the house. Twice they built the nest close to the porch, but both times they deserted it before the eggs were laid. So, when the birds made a tour of inspection in the conservatory this spring, we had little hope of their settling in so conspicuous a place, or, at least, of their staying to raise their young. The Cardinal has the reputation of deserting his nest for slight reasons.

The Cardinals were first seen in the conservatory on the 13th of April, having entered by an open ventilator in the roof, as all the other windows were closed at that season. Birds often come by accident into the greenhouse, but usually when once inside they make wild efforts to get out, dashing against the glass and flying frantically about. The Cardinals seemed to have come in deliberately, and they showed their superior intelligence by the manner in which they grasped the situation. Walls of glass did not delude them in the least. When their inspection was finished they calmly departed by the little opening through which they had come in.

The next day they came again, and a few days later were noticed to have twigs in their beaks, as though planning a nest. On the 20th of April they selected the site — a fork in a Marechal Neil rose vine, and they began to bring in a great amount of material, which did not take definite shape until the 26th. Throughout the process of building the female gathered the material and did all the work, the male keeping close at her side,

THE AUK, VOL. XX.

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CARDINAL, NESTING IN A CONSERVATORY. Photographed from Nature.

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Vol. XX

and accompanying her on each trip. They worked in the morning only. The site was a difficult one for building and a great quantity of stuff was wasted before the foundation was finally It was interesting to observe that when a stem fell established. to the floor instead of lodging in the crotch where it was put, the bird never picked it up, but flew off in feverish haste for another. At one stage of the proceeding there was much more nest on the floor than in the vine. When finished, it was unusually strong and elaborate for a Cardinal's nest, which is apt to be alarmingly frail and slight. They used in it a great amount of paper. The Cardinals' nests which I have examined always contain one or two pieces of paper, but this one had an entire layer of eight or ten pieces. The supports and outer laver were of fine twigs and weed stems, the next layer paper, the next of the thin bark which they peel from grape vines and honeysuckles, and which is characteristic of all Cardinal's nests. The lining was dried grass.

The nest was completed on the first of May and the first egg was laid the next day. Four eggs were laid. The female did all the work of incubation, while the male fed her frequently. Occasionally the female would give a loud whistling call, which the male immediately obeyed, sometimes bringing her food, sometimes taking a stand near by while she went out for herself.

The conservatory in which the nest was built communicates with the dining room by means of two glass doors and with the kitchen by an open window. The nest was on a level with the eves of a person standing in the dining room and was about five feet from one door and about eight feet from the kitchen window. The position was very exposed, as the Marechal Neil is a spindling vine, and provides not such covert of leaves as the bird usually selects. The female bird, who in the winter is much less bold than the male, was now exceedingly courageous, remaining on her nest while we watered the very plant in which it was fixed. Noises in the kitchen did not trouble her in the least. As soon as the birds began to build we scattered their seed on a shelf nearby instead of in the usual place outside. They did not resort to it much until after the young were hatched. After the little ones were flown the old birds seemed to rely upon this supply altogether, coming to it many times a day.

The female began to sit on the nest on the 4th of May. On the 16th three eggs were hatched, the nestlings of equal size and apparently just out, though as I had been absent the day before I cannot say positively. The fourth egg did not hatch and was removed by one of the birds soon after our finding the others hatched. The parents worked together to feed the young, the male at first passing food to the mother bird for them and afterwards feeding them himself. The food was grubs and insects. which the old birds swallowed and gave to the young by regurgitation during the first week. Afterwards it was given directly and it was then interesting to see what large mouthfuls the little fellows could accommodate. When nine days old, one of them swallowed, without choking, a grub two inches long and as large as a lead pencil. The birds were remarkably cleanly, removing all excrement from the nest and carrying it outside of the greenhouse.

On the 24th of May I noticed the young birds growing very restless and trying to get out of the nest, while the mother resolutely pushed them back again. On the morning of the 25th they left the nest, the mother pushing and helping them out. One of the little ones was drowned in a tank of water, another left the greenhouse seemingly urged by the parent birds. The next morning the other left and both were led away to a thicket across the street. For almost a month after that we saw only the old birds who continued to come in for food.

On the 19th of June the father and the young birds, now fullsized, came for seed, which the parent cracked and fed to the young. When the little ones left the nest they were dark brown, with very dark bills. When they returned wings and tail were red, excepting a little brown at the tips, and red blotches were appearing on breast and back, so we suppose both to be males. The bills were still dark. They gave no note but the shrill peep of a young bird. The three came back very often and twice spent the whole morning inside. Often the young birds would come alone and help themselves, though they always demanded to be fed when the father was along. The mother at this time was sitting on a second nest across the street, so we saw her less often than before. Vol. XX 1903 EATON, An Epidemic of Roup in the Crow Roost.

During most of July and August I was away, and on my return there were two sets of young birds, but as they were growing more timid and never appeared altogether, I cannot tell their number. On the whole the year's nests have been more successful than is usual for the Cardinal Grosbeak, and we fondly hope that they will seek the shelter of our roof again next year.

AN EPIDEMIC OF ROUP IN THE CANANDAIGUA CROW ROOST.

BY ELON HOWARD EATON.

Plate II.

ABOUT the middle of December, 1901, a malady broke out among the Crows (*Corvus americanus*) of Ontario County, New York, which, ere spring, had decimated the ranks of the local 'roost.' As soon as winter had fairly begun, reports commenced to come in of Crows which had been "blinded by freezing of their eyes," as the farmers expressed it.

Upon careful examination it was found that the roup had invaded the Ontario flock, and birds were dying daily from its effects. In one field about twenty dead and dying birds were picked up in one day. Nearly every grove or large field within a distance of ten miles from the roosting-grounds displayed one or more dead Crows. Nearly every wandering crow's track in the snow, after circling round and round in an apparently aimless manner, would lead one to a black carcass lying under a tree or against a Usually they sank down with their bills in the snow and fence. their wings very slightly extended, but sometimes they died in a sitting posture with the feathers of the head ruffled up to their fullest extent. Often the birds died in trees, clutching the branches to the last and then falling headlong into the snow or landing on their backs with the wing tips pointing upwards.

All the sick birds were suffering from an acute inflammation of

57