

THE REARING OF A COWBIRD BY ACADIAN FLYCATCHERS¹

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WHILE assisting Dr. George M. Sutton with his study of the nesting birds of the Edwin S. George Reserve (a 1,300-acre tract near Pinckney, Livingston County, southeastern Michigan), I discovered on June 22, 1946, the newly finished nest of a pair of Acadian Flycatchers (*Empidonax vireescens*). I visited the nest repeatedly from June 22 to July 22, and observed the rearing of the brood, a single Cowbird (*Molothrus ater*).

Despite Bendire's (1895:304) statement that the Cowbird "imposes occasionally" on the Acadian Flycatcher; Evermann's (1889:23) statement that the Acadian Flycatcher is "one of the most frequent victims of the Cowbird" in Carroll County, Indiana; and Jacobs' (1924:53) record of 12 parasitized Acadian Flycatcher nests in southwestern Pennsylvania, I find no published account of the history of a parasitized Acadian Flycatcher nest and no definite record of the fledging of a young Cowbird by Acadian Flycatcher parents. Friedmann (1929:209) stated that he knew "but few definite" records of parasitism of the Acadian Flycatcher by the Cowbird.

The Flycatchers' nest-territory was in the Reserve's most extensive woodland—a uniform 130-acre stretch of oak-hickory forest known as the Big Woods. My attention was first attracted to the birds while Dr. Sutton and I were watching Cerulean Warblers at their nest from about 3:30 to 4:30 p.m. on June 22. During that hour, the Flycatchers called almost constantly, their cries coming from a dry kettle hole near us with a low ridge and open leatherleaf bog ("Buck Hollow") beyond it. Stationing myself in a well concealed spot, I watched the birds with my binocular, hoping that they would lead me to their nest.

The territory was much like three other Acadian Flycatcher territories that Dr. Sutton and I had found elsewhere in the Big Woods. Tall oaks and hickories darkly shaded the heavy under-story of witch hazel (*Hamamelis virginiana*) and sassafras (*Sassafras albidum*). The ground was thickly covered with dry leaves, and where the shadows were deepest, luxuriant stands of maiden-hair fern (*Adiantum pedatum*) grew. The area in general was shared by several pairs of nesting birds—Cerulean Warblers (*Dendroica cerulea*), Red-eyed Vireos (*Vireo olivaceus*), and Eastern Wood Pewees (*Myiarchus cinerascens*). In the distance I could hear Scarlet Tanagers, Oven-birds, and Yellow-throated Vireos singing; from the other side of the kettle, a Yellow-billed Cuckoo continually clucked. Occasionally a Ruby-throated Hummingbird buzzed through the small openings in the woods, and I saw a female

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Cowbird accompanied by several males moving through the taller trees. Mosquitoes were abundant and caused me much discomfort as I tried to maintain a motionless position on the ground. The Acadian Flycatchers continued to call as they moved among the shadows from one low tree to another. Their call was usually a *peet*, with an occasional explosive *kit-a-rup*. Suddenly one of them darted onto what appeared to be a bit of hanging debris, but which proved to be a nest.

The body of the nest was composed of dried plant stems, held together by cobwebs. It was swung across an 80-degree fork at the end of one of the longer horizontal branches of a witch hazel. An eight-inch strand of entwined cobwebs with entangled flowers of oak or hickory hung from the rim. So flimsy and so loosely woven was the structure that I could easily see the tree-tops as I looked upward through the bottom. It appeared to be completed and ready for eggs. As I left the spot, one of the Flycatchers returned to the nest.

When Dr. Sutton visited the nest at 5:25 a.m., June 25, there was one egg. One egg was in the nest when he examined it an hour later.

On June 27, Dr. Sutton found two eggs in the nest at 6:10 a.m. When I went to the kettle hole at 11:20 the same morning, a Flycatcher (presumably the female) was on the nest. When I came within 30 feet it flew to a near-by sassafras sapling, whence it called excitedly. Its mate was near by, also calling. There were then three eggs. The third had been laid in the four-hour interval.

When I approached on June 29, at 6:30 a.m., a Flycatcher was on the nest. When I left, I found one Cowbird egg and one Flycatcher egg. Searching the ground below the nest, I found the two missing Flycatcher eggs—one broken in half, the other intact. There was no indication that either had been punctured by the Cowbird's bill (see Hann, 1941: 219). Both were heavily wreathed at the larger end with reddish brown splotches and dots; that remaining in the nest, curiously enough, was almost immaculate. The two eggs in the nest offered a striking contrast—the large Cowbird egg heavily spotted, the much smaller and differently shaped Flycatcher egg virtually unmarked. Both Flycatchers were nearby. As I withdrew, one of them flew to the nest.

Dr. Sutton visited the kettle hole on July 1, finding one Cowbird egg and one Flycatcher egg in the nest.

On July 12 I found both eggs hatched. Presumably they had hatched two days or so previously, the incubation period, as reported by Harold M. Holland, being 13 days (see Bent, 1942:190). The young Flycatcher was covered above with whitish-gray down. The Cowbird, which appeared to be three times as large as its fellow, was covered with blackish-gray down. The eyes of both birds were closed. The mouth lining of the Flycatcher was straw yellow, that of the Cowbird, dull pinkish-red. The Cowbird occupied far more than half of the nest space. With head resting on the rim, and bill pointed upward, it was able to lift its head for food far higher than its companion could. The

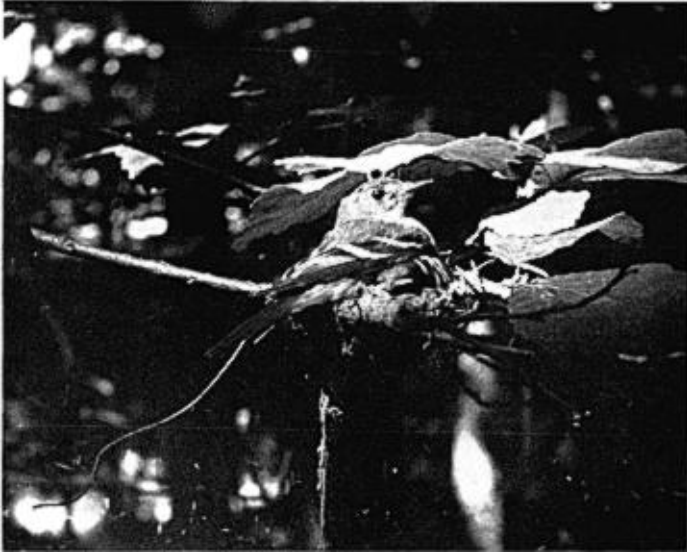


Figure 1. Acadian Flycatcher brooding young Cowbird.



Figure 2. Acadian Flycatcher nest after the young Cowbird had fallen through. (Photographed from directly above.)

Flycatcher, crowded as it was against the nest wall, squirmed constantly, raising its head and opening its mouth from time to time. I was careful not to touch the nest or supporting branch, but the Flycatcher's behavior may have been in response to sounds I had made in approaching, or perhaps to my shadow falling over the nest. In any event, it seemed to indicate that the bird was hungry.

On the morning of July 13, the Cowbird was the sole occupant of the nest. It appeared to have doubled in size and now almost filled the nest. Though I made careful search among the leaves on the ground below the nest, I could find no trace of the young Flycatcher. I concealed myself in a blind four feet from the nest and watched the feeding and brooding of the young Cowbird for about two hours.

I noted that only one of the Flycatchers brought food to the nestling; its mate was near by but never approached the nest. The one Flycatcher, presumably the female, made trips to the nest every three or four minutes, carrying what appeared to be mosquitoes and other tiny insects in its bill. Each time after feeding the Cowbird, it stood on the edge a few seconds, uttering soft peeping noises and spreading its belly feathers, then moved forward to brood. The Cowbird invariably struggled, forcing the Flycatcher up and down in the nest until it freed its head. When its head lay on the rim of the nest, it ceased struggling (Figure 1). After brooding for one or two minutes, the Flycatcher left.

On July 19, I found a gaping ragged hole in the nest bottom (Figure 2). The Cowbird was on the ground directly below. Presumably the big heavy-footed nestling, then about nine days old, had caused the bottom of the nest to give way and had fallen to the ground. As far as I could determine, it was not injured by the fall, and when I touched it, it fluttered rather helplessly, moving about eight inches. Both Flycatchers were calling excitedly, but neither of them approached the Cowbird closer than 15 feet during the time I was at the nest.

On July 20 I could not at first find the Cowbird. After a careful search I found it almost completely hidden among the dry leaves and other litter. So well did the depression conform to the size of the bird and so closely did the leaves form around it, that it appeared to be sitting in a nest. So well concealed was it that I could not see it from a greater distance than five feet.

On the following day, July 21, the Cowbird occupied the same spot. When I touched its back with a twig, it fluttered over the ground a distance of 10 feet, finally dropping among the leaves. I caught it and placed it back in the depression, where it nestled down and remained motionless. It seemed in good health, and its more vigorous attempt to escape indicated that it was much stronger than it had been the day before. Obviously it had been fed by one or both of the Flycatchers, which had adapted themselves to feeding it on the ground. I watched the Cowbird from a short distance in the hope that I might see it fed. Though I did see one of the Flycatchers approach it within four feet,

and I could hear the Cowbird calling, I did not see any actual feeding taking place. Possibly I was too close, for at the slightest movement of the canvas which I had wrapped around me, the Flycatcher would withdraw immediately, fly to the witch hazel and call excitedly.

When I returned in mid-afternoon on July 22, the Cowbird was gone from the depression. The Flycatchers were calling from the eastern lower edge of the kettle hole about 75 yards away. I searched the area about the nest but could not find the Cowbird. Since neither of the Flycatchers returned to the nest, I walked toward them, believing that the young Cowbird might be there. The Flycatchers did not move about much, but they continued to call; I did not during the hour I was there see food in the mouth of either bird, nor did I see one of them go to the ground. I did not see the Cowbird again. The Flycatchers continued to inhabit the kettle hole. Dr. Sutton saw them there as late as August 16.

SUMMARY

On or about June 22, 1946, a pair of Acadian Flycatchers (*Empidonax vireescens*) completed their nest at the Edwin S. George Reserve, southeastern Michigan.

On June 27 the nest contained three Flycatcher eggs; on June 29, one Flycatcher egg and one Cowbird (*Molothrus ater*) egg; on July 12, a young Flycatcher and a young Cowbird; on July 13, only the young Cowbird.

The young Cowbird was fed and brooded by one of the Flycatchers on July 13.

On July 19 the Cowbird was on the ground below the nest, having apparently fallen through the bottom of the nest.

The Cowbird remained on the ground, nestled in a depression in the leaves for two and a half days. It was apparently fed by the Flycatchers, since it remained in excellent condition.

On July 22 the Cowbird had disappeared, and the Flycatchers were calling about 75 yards away from the nest.

LITERATURE CITED

- BENDIRE, CHARLES
1895 Life histories of North American birds, from the parrots to the grackles. *U.S. Natl. Mus. Spec. Bull.* 3.
- BENT, ARTHUR CLEVELAND
1942 Life histories of North American flycatchers, larks, swallows, and their allies. *U.S. Natl. Mus. Bull.* 179.
- EVERMANN, BARTON WARREN
1889 Birds of Carroll County, Indiana. *Auk*, 6:22-30.
- FRIEDMANN, HERBERT
1929 The cowbirds. Charles C. Thomas, Springfield, Ill.
- HANN, HARRY W.
1941 The Cowbird at the nest. *Wils. Bull.*, 53:211-221.
- JACOBS, JOSEPH WARREN
1924 The other egg in the nest. *Ool.*, 41:52-54.
- FOREST HOME, ITHACA, NEW YORK