

BULLETIN
OF THE
NORTHEASTERN BIRD-BANDING ASSOCIATION

THE INFESTATION OF BLUEBIRDS' NESTS BY
PROTOCOLLIPHORA

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Two nests of the Bluebird (*Sialia s. sialis*) infested by the blood-sucking larva fly *Protocalliphora splendida*, form *sialia* Shannon and Dobroscky, have come under my observation during the past summer. The first nest was received from Mr. A. W. Higgins, of Rock, Mass. The day the nest was shipped (July 21st) and the following day were exceedingly warm, and the nest, having been packed in a tight tin box, heated in transit and the larvæ were killed. I was afraid the pupæ were also injured, but twenty-four flies emerged, July 30th-August 3d. Seventy-six pupæ were dead and seventeen were parasitized by a small chalcid. Including the thirty-seven dead larvæ, this made a total of 154 *Protocalliphora* that had been living in the nest. There were also (all dead) thirty-two smaller muscid larvæ, probably the stable fly, (*Muscina stabulans*), that undoubtedly lived in the nest as scavengers.

This large number of blood-sucking larvæ in one nest seemed so unusual that I wrote to Mr. Higgins for more particulars, and, in a letter dated August 6th, he says: "Yes, the Bluebird's nest which I sent you was the content of one box only. There was a brood of five youngsters, three of which matured rapidly; the other two were weaker, and when I went to band them, those two were all that were left in the nest. I have seen all five since with the old bird."

From the seventeen pupæ that were parasitized by the small chalcid, there emerged on August 2d and 3d, one hundred and eleven, on the 4th, sixty-eight, and on the 5th, twenty-three, a total of 202 parasites, about twelve to each pupa. Specimens were sent to the United States National Museum and determined by Mr. A. B. Gahan as *Mormoniella brevicornis* Ashm.

The second nest was taken by Mr. J. D. Smith at Needham, Mass. This nest contained thirty-three pupæ, from which emerged twenty-one flies (August 3d-5th); eight were dead and four parasitized by the above chalcid. Later there also

issued from the nest one stable fly (*Muscina stabulans*) and twenty-two small flies, *Desmometopia latipes* Meig., both of which probably act only as scavengers.

Our observations are not sufficient to really show just how seriously nestling birds are affected by these blood-sucking larvæ. Their habit of usually hiding in the nest during the day and attacking the bird at night probably accounts for their not being more generally observed by ornithologists.

H. W. Henshaw¹ was the first to record this fly in this State. Two successive broods of Bluebirds were infested at Wellesley Hills, in which seven of the eight nestling birds were destroyed. Albert F. Contant² made a study of this fly from the nest of the common Crow at Ithaca, New York. O. E. Plath³ has written some interesting papers on the prevalence and habits of these flies on the Pacific coast. He states that from five to ten per cent of the young birds die from these parasites, while others are so weakened by the loss of blood that they fall an easy prey to rapacious animals.

In the above-mentioned papers the species were referred to the European species *P. chrysorrhea* and *azurea*, but later studies by R. C. Shannon and I. D. Dobrosecky⁴ show that American species are distinct and their classification is here adopted. *Protocalliphora splendida* Macq. shows considerable variation, and the species is based on an atypical female. All the specimens thus far obtained from Bluebirds' nests are the form *sialia*, having the males and females the same dark-blue color, although typical female *splendida* are taken in the field. The latter associated with the form *sialia* has been reared from pupæ found in the nest of the Brown Thrasher. The form *sialia* has been reared from larvæ found in the nest of the Robin, and *splendida* from the Barn Wallow (see Harry E. Woods in this *Bulletin*, vol. 2, p. 12, 1926). Mr. J. D. Smith has also found the Tree Swallow's nest infested apparently by the larvæ of this fly. In this nest the nestlings were dead.

I am greatly indebted to Messrs. Higgins and Smith for their kindness in obtaining the Bluebird's nests for me, and I trust that hereafter those interested in birds and bird-banding

¹ *The Auk*, vol. 25, pp. 87-88, 1908.

² *Journ. Parasitology*, vol. 1, pp. 135-150, 1915.

³ *The Condor*, vol. 31, pp. 30-38, 1919. *Univ. Calif. Publications in Zool.*, vol. 19, pp. 191-200, 1919. *Ann. Ent. Soc. Amer.*, vol. 12, pp. 373-378, 1919.

⁴ *Journ. Wash. Acad. Sci.*, vol. 14, pp. 247-253, 1924.

will observe more closely the condition of nestling birds. If any infestation is noticed, I should be very glad to obtain the old nests and the larvæ and pupæ associated therewith, as a better knowledge of the injury done to birds by these blood-sucking larvæ is most important.

BANDING OF YELLOW WARBLERS IN NOVA SCOTIA

BY R. W. TUFTS

ONE of my most interesting experiences in five years of bird-banding has developed in connection with a family of Yellow Warblers (*Dendroica a. æstiva*), a pair of which nested on my premises at Wolfville, Nova Scotia, in 1925.

In May of that year a female Yellow Warbler built a nest in a climbing crimson rambler rose bush on the west side of my house. On June 28th, the day the young left the nest, I was in close attendance and immediately collected the little chaps from their various hiding places about the shrubbery and banded them (Nos. 30877-30880). An effort was then made to get a close-up snap-shot of the parent bird or birds, and the young were retained in my hand while I sat on the lawn about ten feet from the recently vacated nest, and within proper range of the camera. The female was in evidence practically every moment with food in her bill, but despite the plaintive food calls which the young were constantly emitting, she would not come nearer than eight or ten feet and kept frantically attempting to induce her family to leave my hand and follow her. These attempts failing, she would finally, in desperation, swallow the food herself and fly off for more, returning almost immediately to repeat the drama.

In the midst of this performance the male alighted on an electric light wire immediately over my head, and sang. I noticed that he was carrying a small green canker-worm in his bill, and when he had finished his brief song he dropped to the edge of the nest and peered inside, evidently surprised to find it empty.

At the first chirp from one of the young he flew directly from the nest toward me and to my astonishment settled on my hand and deliberately proceeded to feed two of the babies with the worm, which he had still kept in his beak. This accomplished, he paused before taking flight and calmly wiped