

THE EFFECT OF COLD SNAPS UPON THE NESTING OF THE EASTERN BLUEBIRD (*SIALIA SIALIS SIALIS*)

By T. E. MUSSELMAN

SEVEN or eight years ago I conceived the idea of building Bluebird boxes in quantity and erecting them on fence-posts along the hard roads leading into Quincy, Adams County, Illinois. The idea appealed to the popular fancy immediately.

My first route extended north from Quincy to Hamilton, Illinois. It took about fifty boxes to cover this thirty-eight miles of road. The boys in the biology class at Hamilton High School under their superintendent, Mr. Leroy Knoepple, constructed nearly fifty additional boxes and extended the route to Nauvoo, Illinois. The next year I built one hundred and fifty boxes which I erected along the sixty-eight miles of road to Perry, Illinois. The biology class in Bluffs High School under their teacher, Mr. J. W. Summers, constructed additional boxes and lengthened my route about eighteen miles. The boys at Griggsville High School under Superintendent Nichol added a right angled route running from Perry through Griggsville to Pittsfield. The next year I added a route from Quincy to Payson, eighteen miles south of Quincy, east to Richfield and north into Liberty. H. B. Terrell of the Quincy High School Biology Department added about thirty boxes connecting this Payson route with his home town of New Canton. Mr. H. B. Corrie of the Winchester High School has agreed to bring boxes from his town as far west as Pittsfield if I will extend my route from Payson to meet him there.

All of these boxes are standardized, have removable tops, and by the time the entire project is complete will include nearly one thousand Bluebird boxes. Magazines and newspapers have printed copies of my plans and because of such publicity I feel that in many sections of the country, similar projects will be carried on. From the standpoint of conservation this is a commendable movement. However, for the bird-bander such a project presents an abundance of opportunities to band many birds; to learn the courses of migration; to determine the winter homes; to chart the summer drifts of these birds; to learn their ages; and to solve many other interesting experiments valuable to science.

This year I had the return of the first young female bird which had developed from a white egg laid in one of my boxes. When I captured this apparently normal young mother, and found that she had developed from an albinistic egg, I was curious to see whether this characteristic would manifest itself in her also. Imagine my delight in recording six albinistic eggs laid by this second generation bird. Of course, this one case is not sufficient to justify the conclusion that all female Bluebirds which hatch from albinistic eggs

will in turn lay white eggs, but, it is the first step towards solving a very interesting problem. Eventually banding will clear this interesting question of heredity.

In the seven years that I have been banding and studying Bluebirds through the use of bird-boxes, we have had three severe freezes in April after the majority of the Bluebirds had laid their full quota of eggs. Nearly always I found complements of frozen eggs deserted by the mother. Later, a second grass nest was built directly over the old eggs, then the new mother would begin her nesting activities. Seldom did the original mother return to her old nest. The unfortunate feature about such a catastrophe is not alone the destruction of fifteen hundred to two thousand eggs, but it is the fact that the nesting period is advanced about two weeks. This means that these Bluebird boxes which are very much in demand by several types of birds have eggs in them at the time the House Wren (*Troglodytes aedon*) returns. The number of pierced eggs has been correspondingly large on the years of such freezes. During normal years the baby Bluebirds are in the nest at the time of the wrens' return. Generally they are not molested. On normal years the nesting is so timed that when the first batch of young Bluebirds desert the nest, the House Wrens have already established themselves elsewhere. When the Bluebirds return later for the second nesting, there is little danger that piercing of the second complement of eggs will take place.

This year two very interesting experiences were encountered. In a nest on the Hamilton Route, two female birds took refuge in a single box on the night of the heavy freeze and remained during the two or three days of low temperature. Later I found their two bodies lying just as they had died. On many other occasions, I have found solitary females which have died on the nest, but never before was there evidence that two birds used one box, no doubt taking advantage of the heat radiated by two bodies.

In another box, I found a dead mother which had become more or less mummified, after having been frozen on her complement of four eggs. A second female Bluebird had taken possession of the box. She had made no effort at building a nest over this dried body, but had laid four eggs, one of which was located in an elevated position in one corner held there by the stiff wing of the dead bird. The other three eggs lay half buried between the legs and the body of the dead bird. The new mother tried to incubate her eggs but could merely sit on the dried carcass of the other bird. No incubation was evident in the eggs. I removed the eggs carefully, took out the dead body and the addled eggs from below her, remade the nest, and returned the four fresh eggs. Imagine my pleasure at seeing the Bluebird return to the box where she commenced incubation without evidencing any fear because of the removal of the former occupant. Three of the four eggs were successfully incubated.

Such are some of the varying incidents which present themselves each year as I continue this Bluebird experiment.

At the present time I am building a cluster of fifty smaller, chubbier boxes for a similar experiment with Prothonotary Warblers. These I shall add to others which I have erected and I am hoping within a year to have detailed information about the nesting of these beautiful golden swamp warblers which are so numerous in the Illinois lowlands along the Mississippi and Illinois Rivers.

SECOND PROGRESS REPORT ON THE DISEASE STUDY PROJECT

By C. BROOKE WORTH

FOLLOWING the announcement of plans for a study of diseases of wild birds by the Eastern Bird-Banding Association in the July, 1937, issue of *Bird-Banding*, a progress report was published (*idem*, April, 1938) indicating a gratifying response on the part of bird-banding coöperators in submitting dead birds for study.

Since that time the work has progressed at a rapidly increasing pace. Information has accumulated so fast that it seems advisable at this time to present a short abstract of it to readers of *Bird-Banding*.

Strange to say, contributions in the form of dead birds have been received chiefly at three pathology centers, namely, at New York, New Brunswick, and Swarthmore, Pennsylvania, but since a large volume of work has been received at these stations, there is no reason why banders in other States cannot become equally active in shipping their dead birds to their regional pathologist for post mortem examinations. The coöperating pathologists at all laboratories are unanimous in stating their eagerness to further this investigation.

It seems worthwhile to present once more the names and addresses of the men to whom dead birds should be sent. Since our last report we have secured the services of three additional pathologists. The present list of investigators thus becomes:

Boston Region

Dr. E. E. Tyzzer, Harvard Medical School, Department of Comparative Pathology, Boston, Mass.

New Hampshire Region

Dr. C. A. Bottoroff, University of New Hampshire, Durham, N. H.

Connecticut Region

Dr. Irwin Jungherr, Storr's Experiment Station, Storrs, Connecticut.