

## Summary

These mortality studies of the Little Blue Heron were made from banding returns from nestlings banded in Alabama, by the writer, and from a number of other states where they have been banded by different workers.

The combined group showed a first year mortality of 74.1 per cent while the Alabama data show a 58.8 per cent mortality. The expected life after leaving the nest was 0.85 years for the combined group and 1.2 years for the Alabama birds.

After the first year, the average annual mortality rate was 33.3 per cent for both groups and the expectation for further life at the beginning of the second year was 2.5 years for both groups.

Compared with the Great Blue Heron, Common Heron, Common Egret, and Black-crowned Night Heron, the Little Blue Herons had a higher rate of mortality and a shorter life expectancy.

## Literature Cited

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## INSECTICIDES AS A FACTOR IN BLUEBIRD NESTING SUCCESS

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The recent decline in the Eastern Bluebird, Sialia sialis, population and the alleged reasons for the decline are well known. Facts about the extent and rate of decline are largely unpublished or unknown.

Four major reasons have been offered for the decline:

- (1) Lack of nesting cavities caused by man's improved farming practices.
- (2) Mortality incurred by agricultural chemicals, especially insecticides: mortality due either to direct contact with the chemicals or indirectly by ingestion of insects affected by the chemicals.
- (3) Sterility caused by the chemicals.
- (4) Mortality caused by unusually severe or prolonged periods of cold weather on wintering grounds.

Lack of facts, and curiosity, prompted the authors to begin a study of the comparative use of man-made nesting boxes in areas free of insecticides and areas having moderate to heavy use of the materials.

Twenty nesting boxes of 5/4" rough redwood were constructed during the winter of 1962-63. Dimensions of the boxes include 5" x 5" floor space, 8" deep front exposure and 10" rear. A 1 1/2" entrance hole was centered in the front exposure 5" above the floor. A hinged roof allowed inspection of the interior. Adequate roof overhang, drainage and ventilation were provided. Small strips were attached to the interior below the entrance holes to allow the exit of swallows in the event of their use of the boxes.

The twenty boxes were divided into two groups of ten each. One group of ten boxes was erected on Wheeler National Wildlife Refuge near Decatur in Morgan County, Alabama. No insecticides or agricultural chemicals other than chemical fertilizers have been used in this area during recent years. The remaining ten boxes were placed on a private farm in Limestone County, Alabama, about seven miles north of the refuge boxes. This farm has a moderate to heavy annual use of agricultural insecticides and fertilizers. Here heptachlor granules were applied to alfalfa in October of 1962. Methyl parathion, endrin, cystox, toxophene, DDT, and sevin were applied to cotton in late spring and during the summer of 1963 by both ground equipment and aircraft. All of these chemicals are widely used in the Tennessee Valley.

There was no unusual departures from what is considered normal weather in this vicinity during the time the nest boxes were under observation. In the late fall and winter of 1962-63 there were several severe cold periods with temperatures falling to near 0° F. and slightly below.

All twenty boxes were erected on March 20-21, 1963. Each was faced in a southeasterly direction and placed about 4 1/2 feet above the

ground either on fence posts or trees. Locations chosen were in open pastures or fields where the boxes were not obstructed by limbs, brush or weeds. An attempt was made to check the houses on Friday of each week. As much as two weeks elapsed between some checks during late summer, however. Random observations were also made on the refuge by refuge employees and the authors, and on the farm by the authors and farm owners.

The refuge and farm areas selected vary from about 560 to 600 feet above sea level and are typical of moderately clean farming practices with about 70% of the land in row crops and pasture, the balance being in wooded tracts and grounds about the buildings.

Results of the 1963 nesting season are interesting though inconclusive. The first completed nest was observed on April 5; first eggs on April 12; first completed clutch on April 14; and the first young on April 26. The last eggs were seen in mid-July and the young produced from these eggs left the nest in mid-August.

Four boxes were used by blue-birds; three on the refuge and one on the farm. One box on the refuge was used for three separate nestings. The five nests on the refuge produced 23 eggs, all of which hatched, matured and left the nest. The one nest on the farm produced five eggs, all of which also matured and left the nest.

In addition to bluebirds, House Sparrows, Passer domesticus, and Carolina Chickadees, Parus carolinensis, successfully nested in some boxes. Nest boxes located near dwellings or other buildings were utilized freely by house sparrows but not by bluebirds or chickadees.

Although the study will be continued and expanded during 1964, several important observations were made during the current year. Bluebirds readily accepted and successfully used man-made boxes. Nest boxes were most successful when placed at locations remote from buildings. Bluebirds nested, produced eggs, and raised young in both the area affected with insecticides and the area free of the chemicals but nest box use was much heavier in the areas where insecticides were not used.

More conclusive results will depend on a larger number of houses and more efficient observation of each. The authors seek aid from anyone interested in the project.

Decatur, Alabama

### The AOS, 1963, Fall Meeting

The fall, 1963, meeting of the Alabama Ornithological Society was held at the Wheeler National Wildlife Refuge, Decatur, Alabama. Members began to arrive late in the afternoon of November 15 and some early birding was done, including a trip to Garth Slough, a part of the refuge. A slide-showing session was held Friday evening.

Forty-eight people registered for the meeting and most were out early on Saturday, the 16th, for bird trips over the refuge. Three separate parties, each under local leadership, went to different parts of the refuge. While the enormous flocks of geese were the main attraction, a wide variety of birds was seen, as is attested by the list on the next page. In the afternoon birders were again free to go where they chose, and most went on one of the same trips made in the morning. The refuge offered a wide variety of habitats - open water, shallow backwater, mudflats, fields, pastures and woodlands.

On Saturday evening, 49 members and guests attended the banquet which was followed by the paper session. Six papers were given as follows:

The Pyrrhuloxia in Alabama, by Blanche E. Deane,

Insecticides as a Factor in Bluebird Nesting Success, by David C. Hulse and Ben D. Jaco,

A Study of Warbler Migration at a North Alabama Banding Station, by James C. and Margaret L. Robinson,

Early Returns of Blackbirds Banded at Auburn, by Maurice F. Baker,

The Cattle Egret in Alabama, by C. William Summerour,

Nests and Nestlings of some Herons, by Julian L. Dusi.

Two of these papers appeared in this issue of Alabama Birdlife. Others will appear in future issues.

Sunday morning was given to more birding on the refuge until about 10, after which the composite list was made up. A total of 102 kinds of birds were recorded as having been seen on or near the refuge for the three days. The composite list appears on the next page.