SUMMARY OF DOVE STUDIES IN THE NORTHERN STATES

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The Cooperative Mourning Dove Study was extended into 11 northern states during the past summer through the cooperation of many interested individuals. Great numbers of doves are produced in the northern breeding grounds which migrate to the southeastern states for the winter months. Hence, it seemed necessary to gather information there to supplement the data being secured in the southeastern states, especilly on breeding populations and production of young. The dove is not a game species in most of the northern states, and consequently, income from hunters' licenses cannot be devoted to its investigation. Therefore, we appealed to selected bird ganders, college professors and students, wildlife technicians, game wardens, and other interested persons to participate in one or more phases of the extensive dove investigation. Rather than just asking for information on doves in general terms, we requested help on several specific phases of the problem which might be most easily undertaken.

First, we suggested they make observations on a selected study area of five or more acres. Each area was to be covered at periodic intervals, preferably once or twice weekly, to determine: the location and number of all dove nests; number of broods raised; total production of young; movements of juveniles; extent of the nesting seasons; migration of juveniles and adults; and possibly the population remaining over winter. Those who held bird banding permits were asked to make a special effort to band nestlings on the area or from any other nests.

Our second suggestion was to conduct a roadside count, preferably over the same route of ten or more miles at periodic intervals. We advised that best results would be secured during the first three or last three hours of daylight and requested doves be reported as singles, pairs, or flocks.

Many cooperators participated in one or two of these suggested phases and a number of other individuals sent miscellaneous data on nests, flocking, migration, and banding.

The Fish and Wildlife Service assigned Allen J. Duvall and Chandler S. Robbins to dove work in Maryland, New York, and Pennsylvania. They conducted investigations on study areas, roadside counts, and cooing counts from mid-May until the end of June. They soon found that the breeding population was too low in those states to produce results on study areas so most of their time was devoted to comparing several types of roadside counts to cooing counts. They became especially interested in determining the reliability of cooing counts made during different hours of the day and soon concluded that a combination count of doves heard and seen gave the best indication of breeding populations.

I was assigned to conduct dove studies in Ohio from mid-May until mid-August. My work was carried out in Franklin and Ottawa counties, in central and northern Ohio. Several study areas in each county were studied with local cooperation. Various types of roadside counts were tested; and cooing counts were made several times over each of 13 routes. Much of my time was devoted to

developing and testing these methods of estimating breeding populations. As a result of the combined work of we three Fish and Wildlife Service biologists, the combination coo-roadside count was selected as the best indicator of breeding populations. Therefore, I wish to recommend that a standardized route be carried out as follows:

A twenty-mile route should be selected from a county road map, taking care to avoid main traveled highways. Beginning one-half hour before local official sunrise drive exactly one mile; stop for three minutes by the watch; count individual doves which are cooing and the number of times each individual coos. Drive another mile and stop for three minutes — and so on until 20 stops have been made. A speed of 25 miles per hour should be maintained between stops, and all doves observed during the mile intervals should be recorded separately from the doves observed while stopped. The 20-mile route will be covered in approximately two hours, terminating about one and one-half hours after local sunrise and before the cooing activity lessens with the advancing day. Records of temperature, degree of cloudiness, and direction and velocity of the wind should be maintained for each count.

We believe that a number of such coo counts could be taken in many states at the same time each year. Then, by comparison of the numbers of birds heard and seen from year to year, an indication of fluctuations in breeding populations can be secured. The Fish and Wildlife Service intends to recheck the cooing routes in New York, Ohio, and Pennsylvania next summer.

Roadside counts proved much less reliable as indicators of breeding populations, including those run at periodic intervals over a selected route in early morning, as well as random counts. The determination of breeding populations from study areas seems entirely too expensive for results obtained and besides, requires much more time and more personnel. I found the breeding population in Ohio to be noticeably much higher than that around Atlanta, Georgia. On one check, 11 nests were found active on two acres in northern Ohio. An area of 35 acres in central Ohio had 65 nests (47.7% successful) from mid-May until September. Upon two occasions we found three active nests in one tree. Mr. Laurel Van Camp located 375 nests in Ottawa County, Ohio from which he banded about 500 nestlings. He had ten active nests on September 17, several of which might contain young until early October. On the central Ohio area the young left three nests during the first week of September and one nest the second week of September. In Wisconsin doves left a nest as late as September 19.

In addition to the dove work conducted in the northern states there were active projects in Missouri, Oklahoma, and Texas. Mr. Wendell G. Swank is making a very intensive study of doves near College Station, Texas. He studied 537 nests to early August which showed a success of 64.8%. He banded the surprising number of 1,002 nestlings, as well as nearly 300 flying doves. He expects to use this as a Ph.D. thesis. There are other men working out their Master's theses on doves in Iowa, Michigan, Virginia, and Wisconsin at the present time. Table 1 shows the participation of persons in the various states in several phases of the study.

We expect to continue Mourning Dove investigations in the northern states next year and believe an exchange of information from all dove workers will be mutually helpful. Consequently, we expect to summarize the results of Mourning Dove studies in all states in a newsletter which will soon be distributed to every person who has participated in the extensive study.

Table 1. Summary of 1950 dove studies outside Region IV[a].

States	Cooperators	Study Areas	Nests Studied	Road Counts	Coo Counts	Doves Banded	
						Nestlings	Flying
Northern States							
Illinois	4	2	3	1	0	67	6
Indiana	12	6	106	12	0	52	26
Maryland	9	0	0	4	3	0	0
Michigan	11	2	4	13	0	6	0
Minnesota	3	1	38	0	0	34	0
New York	4	3	20	18	10	8	0
North Dakota	1	5	43	5	0	69	0
Ohio	30	12	550	104	45	650	200
Ontario	1	0	0	1	0	0	0
Pennsylvania	2	4	7	8	14	0	0
West Virginia	1	0	0	1	0	0	0
Wisconsin	4	5	260	1	0	257	36
Total	82	40	1,031	168	72	1,143	268
Lower Mississippi Valley States							
Missouri	2	1	14	2	0	38	1
Oklahoma	2	1	210	0	0	300	0
Texas	1	2	550	0	0	1,002	265
Total	5	4	774	2	0	1,340	266
Grand Total	87	44	1,805	170	72	2,483	534

[a] Incomplete since reports from all cooperators have not yet been received or summarized.