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## MOURNING DOVE TRAPPING IN THE SOUTHEAST

### A COOPERATIVE DOVE STUDY

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#### INTRODUCTION

Migration of birds is an interesting type of behavior as well as one of the most important factors in management of game birds. Federal and State wildlife administrators must know where game birds rear their young, where they spend their lives during different seasons and the direction and extent of movements during fall and spring migration before good management is possible. It is necessary to have this information so regulations may be formulated that will give the hunter optimum hunting, yet afford adequate protection to the species.

In 1948 the Association of Southeastern Game and Fish Commissioners voted to undertake a cooperative Mourning Dove study. One important phase of this study was to learn as much as possible regarding the movements of this dove. The best method known was to

trap and band as many doves as possible in as many locations as feasible. With this in mind, each of the southeastern states set up a banding program, but because very little was known regarding the methods of trapping large numbers of doves it was necessary to experiment with traps, baits, and techniques for using them.

The purpose of this paper is to outline briefly the experience encountered so far in this study. It is felt that a discussion of the problems encountered by the banders in the Southeast may help to eliminate some of the problems of other banders. It is hoped that description of some of the methods being used may promote interest in the banding of doves throughout the country, since only in this way can we get the complete picture of migration in this wide-ranging species.

#### TRAPS AND BAITS

For a banding program such as that required in the present investigation to be successful it is necessary that large numbers of birds be caught as economically as possible. A number of factors are essential in fulfilling these conditions. First, a trap was needed that would catch large numbers of birds, operate efficiently without too much personal attention and be easily transportable. Heretofore, most traps were designed and used by the "backyard" bander with a few traps in permanent locations. To trap large numbers of doves many traps had to be moved frequently to areas where the birds were concentrated. With this in mind, all project personnel immediately began to think of traps that were easily and cheaply built, readily portable, and effective in catching doves. A number of the traps most nearly fulfilling these conditions are described below, but the perfect trap for catching large numbers of doves is still not available.

As pointed out above, knowing a trap will catch a specific bird is only the start of choosing an efficient trap. The bander must decide whether he needs a permanent or a portable trap, complex or simple, and whether his time permits frequent or occasional handling.

#### *Clover Leaf Traps.*

The 3-leaved Clover Trap is both illustrated and well explained in the *Manual for Bird Banders*\*, pp. 28-30. It has not been used intensively in dove trapping because in the form described it is difficult to transport. In a semi-permanent trapping station, it could be used successfully.

A two-cell modification of the 3-leaved clover trap which is easily collapsible for ready transportation has been found effective for doves at the Patuxent Research Refuge in Maryland. Assembly merely involves bending two sheets of hardware cloth of any desired size into such position that their ends come together, forming the sides of an enclosure with inverted openings on opposite sides but not opposite each other. The top is formed by a third sheet of hardware cloth (or

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\**Manual for Bird Banders*, U. S. Dept. of the Interior, Washington, D. C., 1947 (an administrative manual distributed only to licensed banders).

chicken wire). A stick of wood, running the length of the top and tied to the four ends of the wire which form the funnel entrances as well as to the two ends of the trap itself, supplies all of the support necessary.

#### *Duck Trap.*

The Duck Trap is a large house trap, with a funnel entrance. Although the large size restricts its use to fairly permanent trapping areas, it is becoming increasingly popular for use with doves. The trap will hold more doves, safely, for a longer time than will any of the smaller traps. If perches (poles) are fastened in the trap, the doves seem content to perch quietly, not exhausting or injuring themselves in fluttering attempts to escape. Equally important, it best protects the doves from being reached by hawks from the outside. The occasional predator that can get into the trap will be caught and can be destroyed. Since the birds are fairly safe, the frequency with which traps must be checked is reduced.

#### *Potter Trap.*

This trap is well described in the *Manual for Bird Banders*, p. 24, and has been used successfully in trapping doves. However, it is recommended only for small-scale operations unless used in great numbers. Trigger action must be sensitive enough that a bird entering will spring it but sufficiently insensitive that a trapped bird fluttering cannot jar closed other compartments in a block of traps. A disadvantage of single-cell traps of this sort is that if some other species of bird or mammal gets to the trap first, no dove will be caught. Unless made collapsible, the trap is bulky and awkward to transport.

#### *Quail Traps.*

Of the small traps, the quail trap type is coming into most frequent use because it collects larger numbers of birds without dependency on trigger action.

#### *Alabama Quail Trap.*

The Alabama Quail Trap is three feet square and one foot high, with one by two-inch mesh welded wire. This wire is heavy enough to need no extra frame. Each side is cut out and later fastened together with hog-nose rings which allows the trap to be folded and easily transported. The top is made from one piece with a door in the center to allow access to the doves trapped. The trap has two entrances four inches wide and four inches high, extending inside the trap six inches. This trap is easily assembled in the field and has caught many doves.

#### *Florida Quail Trap.*

The Florida Quail Trap is three feet square, with hardware cloth sides, and a top of fine netting attached to a frame. This trap folds flat and the funnel is removable. By tying up the corners and the funnel it becomes

sturdy enough to hold many birds; as many as 13 doves have been caught at one time. Because of its size and collapsibility, a great number of traps can be transported and set up in a hurry.

#### *Resetting Trigger Trap.*

This trap is the most complicated to construct, but is quite effective for taking several birds at a time. By means of a string (viz. nylon fish-line), the bird trips the trigger. The back end has a piece of glass that apparently looks like an opening to the bird; as it moves toward the glass, it falls down a trap door that enters to the gathering cage. When the bird's weight releases the swinging trap door, a line rigged to the trap door resets it for more birds to enter. It is the writers' opinion that banders should try at least one such trap for its interest. A few modifications in the size of gathering cage would permit large numbers of birds to be trapped.

#### *Thompson Trap.*

This small trap has been successful in trapping doves because of the large entrance but, like the Potter, it will catch only the first animal or bird that trips the trigger. It has been successful in Mississippi when used in great numbers in an area.

#### *Baits.*

Doves are seed eaters. Therefore, they are attracted easily to cleared areas baited with scratch feed consisting of cracked corn and wheat. Mixtures of sorghum, buckwheat, rye and other farm grains also have been successful. The bird trapper must use his own judgment on baits, weighing local conditions and the availability and price of the various grains which can be used for baits.

### TRAPPING TECHNIQUES

After a trap or traps best suited for given conditions have been selected and the trapper has chosen the bait most attractive to the dove, it is time to consider the placement of the trap at the station and methods of getting them in the trap, banded, and released in good condition. It is necessary to know the habits of the dove as well as conditions that may cause trouble. Vigilance must be carried out at all times to protect the bird after he is in the trap, or your efforts will be wasted.

#### *Selecting Sites.*

Observations of mourning doves tend to reveal no definite behavior pattern as far as feeding habits are concerned. Some doves will fly to a field and begin feeding at once, while others will alight in feeding areas and remain motionless for a period of time extending in some instances to one hour, at the end of which they will begin moving about to feed, or for some unknown reason, there will be no feeding and the birds will fly away. Because of this peculiarity, doves are difficult to trap. The method most commonly used in the Southeastern States for establishing a trapping station is to find large concentrations

of doves, usually numbering fifty or more and establish this as a trapping site. If the field is large, a few minutes of observation will indicate what portion of the field the birds are using. Locating the main feeding areas will eliminate the necessity of setting traps over the entire field, and traps can be concentrated within the feeding area. It is necessary to place traps in each of the feeding areas of large fields if many doves are to be trapped.

Traps placed ten to fifteen feet apart will be just as successful as traps placed farther apart. Efforts have been made to bait areas containing only a few doves in an attempt to draw large concentrations, but as a general rule, this has been unsuccessful.

Fields having an abundance of waste grain do not need to be pre-baited but it has been found desirable to prebait fields having very little waste grain. The more compact the area, the more trapping success will be enjoyed for the trapper can concentrate the doves. Pre-baiting tends to concentrate the doves into small areas, for they will usually take the bait rather than search extensively for natural food.

Certain areas may have a tendency to hold concentrations of doves throughout the year. Such areas may be trapped continuously. In areas where concentrations are only temporary, trapping stations are closed when the doves move away and reopened on their return.

#### *Operating Traps.*

Once the trapping operations have begun, the operator should visit the traps at least twice daily. The majority of the doves finish feeding by mid-morning, therefore it is desirable to visit the traps at this time and again at dark when all of the doves have finished feeding for the day. The traps should be visited at least once each two hours in midsummer to eliminate death caused by heat. In no instances should doves be left in the traps overnight because of danger from predators such as dogs, cats and raccoons.

It is very important for the trapper to keep bait in the traps and also scatter a small amount around the traps at all times. New bait should be added after each rain. Doves show a definite preference for dry grain and very good trapping can be enjoyed immediately after a heavy rain if dry grain is placed in the traps.

The trapper should not be discouraged if only a few doves are trapped during the first two weeks of operation. Usually the best trapping is enjoyed after the second week. The trapper may be encouraged by seeing doves feeding around the traps shortly after they are set, but very few of these doves will enter the trap during the first week. Occasionally a new trapping station will immediately become productive. However, this is the exception rather than the rule, since it usually takes the doves at least one week to overcome their shyness of the traps.

#### *Mortality and Interference.*

Death of doves due to trap injury, predation, and other reasons has run from three to ten percent in some of the recent banding operations. Dogs, house cats, and hawks are the three major predators encountered in the Southeast which molest trapped birds. House cats may be

trapped with a steel trap using catnip as bait. Once dogs start visiting a banding station it has been the practice to notify their owners, and if they will not agree to keep the animals confined, to close the station.

Hawks will continue to molest trapped birds until the birds either kill themselves or get close enough to the side of the trap so the hawk can strike them with its talons. Marsh Hawks, Cooper's Hawks, and Sparrow Hawks are the three more common winged predators encountered in the Southeast.

A variety of other birds are caught in the traps while trapping for doves. Most seed-eating birds, such as cardinals, cowbirds, red-winged blackbirds and sparrows are frequent visitors to traps and when present in numbers, and particularly when individuals become "trap happy," they become a real nuisance. This is especially true in trigger type traps.

#### *Special Information Needed.*

All banders are encouraged to be on the lookout for suspected diseased doves. The most important dove disease is *Trichomoniasis*. Advanced stages of the disease may be diagnosed by "canker" or sores around the mouth and head. If dead or sick birds are taken, they should be sent direct to Dr. C. M. Herman, U. S. Fish and Wildlife Service, Patuxent Refuge, Laurel, Maryland, who is making a special study of this disease.

A complete record of all repeats should be kept. Repeat data tend to inform the trapper when dove concentrations move away and new birds move in. In some instances certain doves may be trapped throughout the year. Such repeats prove that those doves are local residents. One dove was trapped in Alabama as a repeat twenty-three times in a period of thirty-one days. It is common for a few doves to overcome the fear of traps; therefore, the trapper usually looks forward to seeing certain birds in his traps at each visit to the station.

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### GENERAL NOTES

**Age Record for the Arctic Tern.**—An Arctic Tern, *Sterna paradisaea* Brünich, banded A-365164 as an adult at Pamet Point, Truro, Cape Cod, Massachusetts, on June 25, 1929, by O. L. Austin, Jr., was retaken there June 25, 1936, and again at Tern Island, Chatham, Cape Cod, Massachusetts, June 22, 1946, when band 42-343100 was affixed to the other tarsus (cf. *Bird-Banding*, 1946, 168). This bird was found freshly dead at Tern Island July 13, 1951, the original band in perfect condition, the second one missing. It was at least 23 years old, probably more, for the species rarely breeds the year after hatching, and only uncommonly the second. It is the oldest tern of any species known to date.

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**Wear of Towhee Bands.**—Having rebanded three Red-eyed Towhees, *Pipilo erythrophthalmus* (Linnaeus), in the past year because the bands appeared quite worn, it seemed worthwhile to consider how long such a bird could be expected to carry a band.