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Active Netting to Capture Nesting Mourning Doves

David Edward Blockstein
Bell Museum of Natural History
Department of Ecology and Behavioral Biology
University of Minnesota
10 Church St. SE
Minneapolis, MN 55455

Introduction

Mourning Doves (*Zenaidura macroura*) are the most harvested migratory game species in the U.S. (Keeler 1977). Although hundreds of publications have discussed their biology and management, basic aspects of their life history are not well known. These include pair bond duration, number of nestings per year, and site fidelity, which can only be learned from observation of identifiable individuals.

Few studies of Mourning Doves have utilized color-marked individuals (but see Harris et al. 1963, Jackson and Baskett 1964). One reason may be that generalized capture techniques such as those presented by Reeves et al. (1968) often fail to catch the desired individuals. Swank (1952) designed a trap to catch adult Mourning Doves at the nest, but this trap needs at least 35 cm. overhead clearance for operation.

Harris and Morse (1958) described a mist-netting technique to capture nesting adults. Their method requires three people, two of whom hold an 11-m long net placed in front of the nest tree. The third approaches from the opposite direction and flushes the sitting dove into the net. A disadvantage of this method is that it requires the coordinated movements of three people to avoid prematurely flushing the bird. I attempted to use this method with a novice crew at five nests without success.

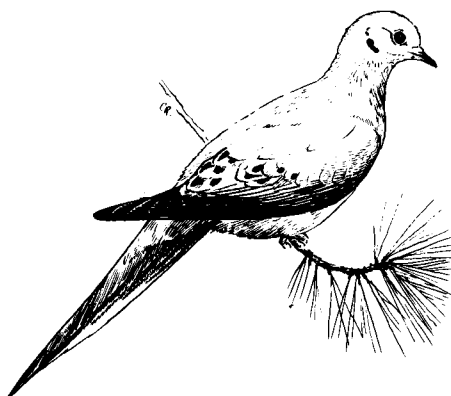
This paper describes "active netting", an adaptation of their technique, which requires only two people and uses a shorter net (6 m). It is especially suited for low nests (≤ 2 m) in isolated trees, such as those often found in suburban and rural areas where Mourning Doves commonly nest.

Although active netting was used only for Mourning Doves in this study, it probably would be effective for other species that are slow to flush from their nests and that nest in suitably accessible sites. In the eastern U.S. this may include species such as Cedar Waxwings (*Bombus cedrorum*), Gray Catbirds (*Dumetella carolinensis*), and Black-billed Cuckoos (*Coccyzus erythrophthalmus*).

Study Area and Methods

Mourning Doves were captured at J. Clark Salyer National Wildlife Refuge in north central North Dakota from 1981-84. Most of the doves nested in planted trees and bushes in shelterbelts and around the refuge buildings. Because Mourning Doves are more likely to abandon eggs than nestlings (Blockstein 1984), we usually did not attempt to catch adults until their eggs had hatched.

We used a standard 2.3 X 6 m mist net with 6-mm mesh mounted on 3-m aluminum poles. Our technique was to open the net about 50 m from the nest tree, then have each person take one pole and walk at a steady pace toward the tree, and loosely surround it with the net. It proved best to approach the sitting dove from the side. The lead net carrier then quickly stepped in front of the bird while extending the net in front of it. The other person wrapped the rest of the net around the tree. If the dove remained on the nest, one person stuck his pole in the ground, or handed it to the other person, thus completely surrounding the tree. Then he checked for gaps between the ground and the bottom of the net before approaching the dove from behind to flush it into the net. This step had to be completed quickly to prevent the dove from locating tears in the net or areas that the net did not cover. If the net was too taut, the doves often bounced out and escaped over the top. If the net was carried too loosely, it became entangled in vegetation.



For nests in tree rows, the net carriers walked parallel to a row. After passing the nest tree, the lead person pulled his end of the net into any available gap between trees, stuck the pole in the ground, and reached behind the dove in an attempt to flush it toward the net. In these situations a third person who attempted to flush the dove by approaching perpendicularly to the net (cf. Harris and Morse 1958) was often helpful. It was best to position the net in front of the sitting doves because they tended to flush in the direction they faced.

A more effective technique to catch doves nesting in rows was to use four people with two nets. The groups approached the nest from opposite directions. After each net was placed alongside the nest tree, one person on each end held the poles together forming a "sandwich" with the nets. The other two people were free to flush the dove from the nest. This technique was 100% effective at a small number of nests; the main drawback was the required number of people.

Results and Discussion

We were able to position the net in front of the dove at most nests. Doves nesting in dense spruce trees were especially reluctant to flush. Sometimes we had to almost touch sitting birds before they flushed. Other doves, usually those in more open situations, flushed long before we reached their nests. Approximately 60% of all capture attempts were successful. We usually had only one opportunity to catch each dove because they flushed more readily on second attempts.

Active netting is more labor-intensive than trapping, but has the advantage that it can be used to catch a particular individual. Each active netting could be accomplished in 10 minutes from opening the net to closing it after removing the bird. Time could be saved by leaving the net on the poles between uses.

Active netting was most successful for nests less than 2 m high. This included most of the nests in the study area. A clear lane of approach to the nest was essential. Unlike the Harris and Morse (1958) technique, this method was successful on windy days.

The main disadvantage of this technique was the inevitable damage to the nets. One can not avoid entangling the net in vegetation when wrapping trees. Doves nesting in isolated spruces were most easily captured by this method, but spruces did the most damage to the nets. A nylon fish-gill net (cf. Harris and Morse 1958) probably would be more resistant, but may not be as effective at entangling birds.

Acknowledgments

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