

- MASON, EDWIN A., 1944. Parasitism by Protocalliphora and Management of Cavity-Nesting Birds. *J. Wildl. Mgt.*, **8**: 233-247.
- SHELLEY, L. O., 1935. Notes on the 1934 Tree Swallow Breeding-Season. *Bird-Banding*, **6**: 33-35.
- WEBER, JAY A., 1940. Destruction of Tree Swallows. *Auk*, **57**: 405.
- WEYDEMEYER, WINTON, 1935. Efficiency of Nesting of the Tree Swallow. *Condor*, **37**: 216-217.
- WHARTON, WILLIAM P., 1952. Two Tree Swallows Exchanged between Nesting Colonies. *Bird-Banding*, **23**: 30.
- WINN, H. E., 1949. Nestling Mortality Rate of the Tree Swallow. Ninth Annual Report of Bowdoin Scientific Station, Kent Island.

South Great Road, Lincoln, Mass. 01773

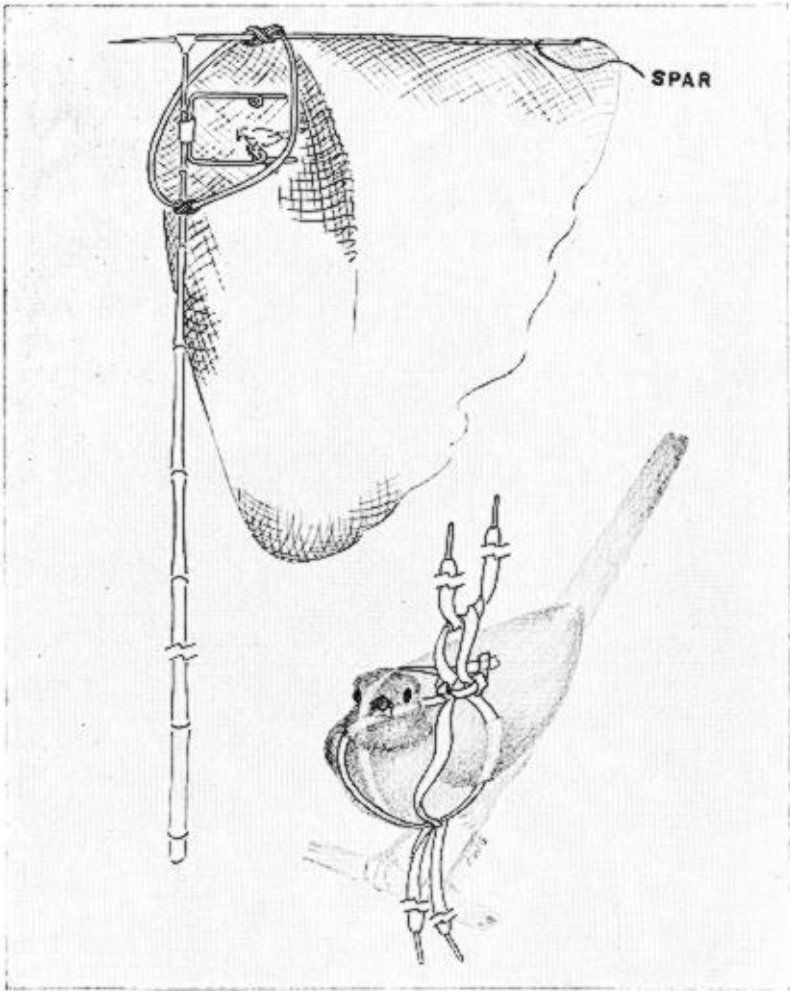
Received February, 1968.

A DECOY AND NET FOR CAPTURING NESTING ROBINS

By JAY N. DYKSTRA

I found that using a modified version of a net developed by Nolen (*Auk*, **78**:643-645), with a live decoy added was very effective in collecting nesting Robins (*Turdus migratorius*) in situations that precluded the use of the Nolen net. Nolen's net for capturing nesting birds was the epitome of simplicity, consisting of a bag made from a Japanese mist net with a supporting hoop at the mouth of the bag. The hoop was tied to the nest limb after pruning away interfering branches. A string was attached to a corner of the bag and tied to a supporting limb away from the nest, so that the bag was horizontal to the nest. After the bird returned to the nest Nolen would frighten the bird into the net. Unfortunately, several drawbacks became apparent when I used the Nolen net to capture nesting Robins. Only the nests near the main axes of trees were at suitable netting sites, while the Robins occupying nests out toward the ends of small branches high in trees could not be captured at all. Also pruning limbs which were in the way of the net was not accepted in parks and on campuses where my study was conducted. Furthermore, only the incubating bird could be collected using the Nolen net. Both birds of a pair could be collected only when young were being fed in the nest.

FIGURE 1. Drawing of the decoy and net. The inset shows the harness on the Blue Jay.



The use of live decoys has been known to hunters of all cultures and was employed uniquely by Augusto Ruchi in capturing Brazilian Hummingbirds (Marden, *National Geographic*, 123:80-99). In the case of the Robin I chose the Blue Jay (*Cyanocitta cristata*) as a decoy because of its light weight and because Robins are adverse to the presence of Blue Jays in their nesting territory.

The basic net configuration employed was developed independently by both Walkinshaw (*Bird-Banding* 10:107-114, 149-157) and Nolen (*ibid.*) The hoop of my net (Fig. 1) had a diameter of

about 60 cm. (24 in.) made from a 220 cm. (75 in.) length of split bamboo; however a stout wire hoop could be used. A piece of Japanese mist net, 2 3/8 in. mesh (stretched), 76 by 220 cm. (30 by 75 in.) was strung on the hoop. A bamboo spar, 103 cm. (40 in.), strung through the top of the net gave it support. The spar and hoop were attached to a 3-meter (10-ft.) pole in such a manner that the hoop was slanted backward 15 cm. (6 in.) at the top, leaving 15 cm. (6 in.) of the spar extending beyond the front of the hoop. The pole could be lashed to a telescoping pole giving an effective height from 3 to 12 meters (10 to 40 ft.). A metal rod, 60 cm. (24 in.) long, was bent into a U-shaped bracket with arms 20 cm. (8 in.) long. The bracket was taped to the back of the supporting pole at the center of the hoop so that the arms pointed backward. The arms of the bracket had a loop near the end for attaching the harness of the Blue Jay decoy.

The harness (Fig. 1 inset) was made by folding a shoe lace in half with the ends pointing toward you. Then the shoe lace was sewn together in two places creating a figure eight with the smaller loop at the top and the lower loop providing a slot for the head of the Blue Jay. The middle of the second shoe lace was sewn to the base of the head loop of the first lace so that four ends of the two shoe laces were at the bottom. The ends of the second shoe lace were passed backward behind the wings, were tied to the small upper loop and then tied to the wire bracket. The ends of the other shoe lace were tied to the bottom perch of the bracket.

The decoy net was about 70 percent effective in collecting Robins at 60 nest sites during the first nesting period of the spring. However, the effectiveness of the decoy net could be increased by using some of the new procedures adopted later in the nesting season. I often collected one Robin of a pair (usually the female) within ten minutes during the first nesting period of the breeding season. Both the male and female were caught at the nest simultaneously in about 40 percent of the attempts; but if one of the pair was captured while attacking the Blue Jay then the other usually did not attack. If the Robin escaped it could not be induced to attack again the same day, but some did attack a few days later.

During the second nesting period of the breeding season only 55 percent of the Robins were collected on the first try. Of these about 40 percent included simultaneous capture of both members of a pair. The success rate was increased to about 70 percent by supplementing the decoy net with a 2 3/8 in. mesh Japanese mist net. The decoy pole was stabbed into the ground at an angle so that the decoy was lower than the top of the mist net and could be on either side of the mist net. If I left the immediate area of the net the Robins attacked the decoy more readily than during my presence. Another method of improving the capture rate involved hanging the decoy net by the net spar on a branch close to the nest. Again I left the area. The force of the Robin hitting the net was sufficient to dislodge it and entangle the bird. During the second nesting period the Robins were more hesitant in attacking the decoy and usually required 30 minutes to capture the birds.

There was only one case of nest desertion among 93 Robins captured with the decoy net at 95 nests. This includes 28 percent simultaneous captures of a pair, 42 percent single captures, and 30 percent failures involving all netting attempts. Three of the birds that escaped from the net on initial tries did not attack the decoy in subsequent netting attempts, thus showing one trial avoidance learning. However, I do not know if this learning transferred to encounters with wild Blue Jays. It is difficult to explain why 30 percent of the Robins did not even attack the decoy on initial exposure to the net since these birds never had been confronted with this type of trap previously. Probably the birds could see the net because all the birds hesitated to attack the decoy, and in the second nesting period they emitted loud call notes as they made passes at the decoy but avoided the net. Yet wild Blue Jays that were attracted by these call notes immediately were driven away. Thus most Robins apparently were aware of the total situation, not just the Blue Jay threat. However, this was not always the case, since several birds attacked from the rear or side of the net as though the net were not there. The second year five banded Robins returned and two were recaptured on the first attempt, which suggested that there was little or no long-term learning carry-over. The other three banded Robins were not tested with the decoy net.

There are several advantages of the Blue Jay decoy net. One is the facilitation of rapid collection at several sites, except during the second nesting period. Another is the elimination of the need for pruning limbs since the net is effective ten to fifteen feet from the nest. It also eliminates the need for climbing trees. However, the decoy net has two disadvantages: the net may become snagged on bushes or trees in dense growth and, compared to Nolen's net, mine is more cumbersome. This net was developed and perfected while I held an NSF Graduate Fellowship. I wish to thank Mrs. F. Gibson for preparing the illustration.

*Department of Zoology, University of Arkansas
Fayetteville, Arkansas 72701*