

EXPERIENCE WITH A DECOY TRAP FOR MALE GADWALLS

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During a study of the Gadwall (*Anas strepera*) in southern Manitoba, it was necessary to capture a large number of drakes for subsequent marking and observation. The present paper describes the trap constructed for that purpose and explains its use. Dzubin (1952) used a decoy (live bird) technique to trap drakes (species not stated) in southwestern Manitoba. A female duck was placed inside a small wire cage that was positioned within a larger clover leaf bait trap (Lincoln and Baldwin, 1929). Rogers (1964) was also successful in capturing 35 male Lesser Scaup (*Aythya affinis*) by using a rectangular trap with an inner compartment for the female. The trap had a single funnel entrance. That design, however, allowed one male to enter the trap and once inside fend off other drakes, preventing multiple captures. Seymour (1974a) used the clover leaf design and a female compartment to capture 17 male Shovelers (*Anas clypeata*). In the present study, the basic decoy concept was maintained, but trap construction was modified to allow the capture of more than one male.

MATERIALS AND METHODS

The frame was constructed from iron reinforcing rod. Four pieces, 1.3 cm diameter and 2.9 m in length, were machine rolled to a 91.4 cm radius. The halves were welded to form two circular frames. Five supporting rods, 1.0 cm diameter and 91.4 cm in length, were welded between the circular frames (Fig. 1). Two rods were placed 45.7 cm apart to provide an opening for the outer door. Poultry netting, 2.5 cm mesh, was attached over the top and bottom frames with hog rings and thin wire.

The inner decoy compartment was made from 2.5 × 5.1 cm mesh welded wire by forming a cylinder, 61.0 cm in diameter and 91.4 cm high. A hinged door, 20.3 × 20.3 cm, was cut in the cylinder, opposite the main entrance. This compartment was fastened to the top and bottom portions of the trap. Additional poultry netting formed the outer wall of the trap. Another 91.4 cm supporting rod was attached to the loose edge of the mesh covering the door.

Funnels were constructed by wrapping 2.5 cm mesh poultry netting around three hoops of 0.3 cm flexible wire. Each funnel tapered from a 40.6 cm hoop to a 15.2 cm diameter opening. Three funnels were attached equidistant within the decoy department, curving toward the middle. This arrangement allowed the drake to come closer to the hen as he moved further into the funnel.

The trap was set with the bottom frame at water level. Supporting blocks, metal rods, or wooden stakes were used to maintain this position in varying depths of water. In some instances, a set was made on land.

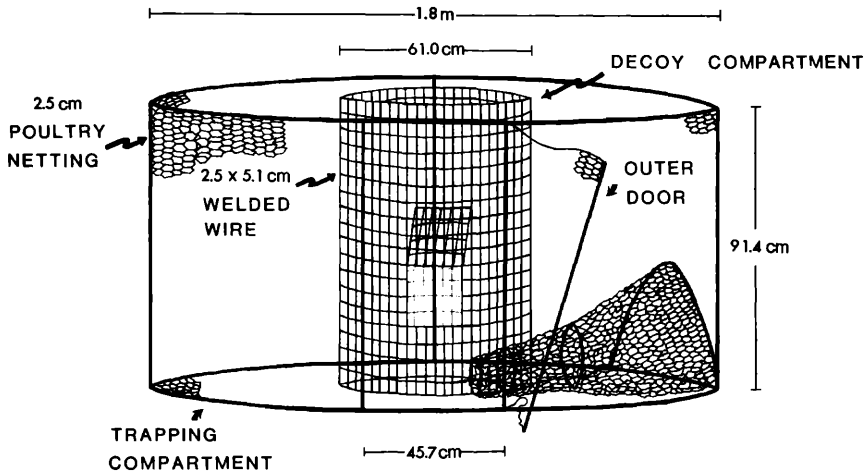


FIGURE 1. Specifications of decoy trap. Only one funnel is included for illustrative purposes.

Female Gadwalls to be used as decoy birds were obtained from eggs taken in the wild and the young raised in captivity at the Delta Waterfowl Research Station. These ducks were wing-clipped but not pinioned. Generally, decoy hens were placed in the traps during the evening and removed the following day. During weather extremes, shorter stints were necessary for the welfare of the decoy birds. Hens spent most of their time seeking an exit. However, some females settled down, fed, displayed, or loafed on a wooden platform in the inner compartment. Decoy hens not in use were kept in a holding pen on the study area. Each hen was used for one day every 3–4 days. Birds were banded with Fish and Wildlife Service (USFWS) bands and individually color-marked with airplane dope. Colored nasal saddles with alpha-numeric characters were also applied for subsequent identification. Trapping was initiated within a week after the arrival of Gadwalls on the breeding grounds in April and continued until the first week in July. Weather conditions and a low density of ducks usually negated any advantages of trapping at an earlier date.

RESULTS AND DISCUSSION

This trap captured 530 drakes (including 166 recaptures) from 1972 through 1975.

Records show capture data of 1.6 (1972), 2.8 (1973), 2.0 (1974), and 1.8 (1975) trap-days per drake for the study. Trap success varied, depending upon the number and distribution of Gadwalls on the area, the condition of the trapping site, and the working order of the traps. Females also differed in their ability to attract males to the trapping area

and ultimately into the trap itself. Also, the same decoy females were not available each year due to trap mortality or overwintering loss. Finally, trap success depended on the number of males, including both paired and unpaired drakes, that were present on the marsh at various times throughout the breeding season.

Courtship behavior, described by Lorenz (1953) and Johnsgard (1965), was observed at the trap site. Most females appeared to respond accordingly to the behavioral movements and vocalizations of the males and did not seem affected by the confines of the trap. Certain situations were observed in which a male inside the trap was able to preen, loaf, and feed without eliciting any aggressive response from the decoy hen. However, at the approach of other drakes to the area, the female responded with inciting postures, while the captured male attempted to prevent other birds from entering the trap. Mutual chin-lifting by both birds was often observed during these encounters. Titman (1973) and Seymour (1974b) also stated that unmated drakes defended the trap site and appeared to form a pair bond with a decoy female.

In spite of the aggressive interactions between males, multiple captures were frequent. A total of 94 double, 14 triple, and 2 quadruple catches was recorded over the four-year period. A male inside the trap was hard-pressed to defend all three funnel openings and prevent entrance by one or more drakes.

This trap also proved useful in capturing particular birds on the study area. In 1974, we took advantage of pair bond behavior in capturing the mate of a marked female. This wild hen had been caught moments before in a bait trap and was placed in the inner compartment of a decoy trap. Another male was placed in the outer compartment. Within 10 minutes, the mate of the captured female had entered the trap and attacked the other male. Several times, however, drakes were used as decoys in the inner area of the trap without success.

Some males entered and left the trap at will. They remained in and around the trap vicinity for days, spending much of the time loafing with the female. In 1974, one male was captured or observed in the trap area for 20 consecutive days, despite the use of different decoys. In spite of the obvious difficulty in capturing these few males, they often attracted other drakes to the area. Most males, however, did not escape through the funnels of the trap.

During the four-year study, the trap was successful in capturing other waterfowl besides drake Gadwalls. Included were six Blue-winged Teal (*Anas discors*) drakes, one Canvasback (*Aythya valisineria*) male, two Lesser Scaup hens, one Green-winged Teal (*Anas crecca*) drake, as well as seven Gadwall females. Four of the seven captures involving Gadwall hens also included males in the traps. Later observations confirmed that three of these females were each paired to one of the accompanying drakes.

This decoy trap provides a useful means of capturing substantial numbers of drakes of a given species during the breeding season. The circular construction of metal rod and wire mesh provides a stable, light-

weight, yet highly mobile design which can take advantage of waterfowl concentrations throughout the breeding area. Observations on many aspects of courtship behavior and aggression might be obtained at the trap site. Information on local movements, activity patterns, and seasonal migration routes of both mated and paired drakes can be determined in conjunction with a banding and marking program.

SUMMARY

A modification of previous decoy trap designs was used to capture 530 male Gadwalls, including 166 recaptures, during the breeding season in southern Manitoba. Courtship activities of drakes were easily observed around the trap area. The design provided a lightweight and highly mobile capture method and could be used for other species in which it is necessary to obtain large numbers of males during the breeding season.

ACKNOWLEDGMENTS

We wish to acknowledge the financial support received from the Delta Waterfowl Research Station and the University of Wisconsin. We thank R. A. McCabe and O. J. Rongstad for their advice and critical review of the manuscript. We are especially indebted to the owners of East Meadows Ranch, the Peter Curry and Arthur Vincent families, and to Lawrence King, manager, for their generosity during the senior author's stay at Marshy Point, Manitoba. Finally, special thanks must go to all those who assisted in the trapping operations throughout the four years and endured the long hours on the marsh.

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