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AN OCTAGONAL BAL-CHATRI TRAP FOR SMALL RAPTORS

by

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Several modifications of the bal-chatri trap for birds of prey have been used, most of which are described in the 1977 *North American Bird Banding Manual* (Vol. II: *Bird Banding Techniques*). Among these are the cylinder type (Berger and Mueller 1959, Mersereau 1975), the quonset or hemi-cylindrical type (Berger and Hamerstrom 1962, Berger and Mueller 1959, Mersereau 1975, Ward and Martin 1968), the box type (Clark 1967, Lohrer 1974, Mersereau 1975), and the cone and cube types (N. American Bird Banding Man. 1977). We have been using an octagon type of modified bal-chatri trap for several years, of a design quite different from any of the types listed above.

Our trap consists of an octagonal tunnel in which the bait-mice can run. We have found that mice tend to move more in this trap than in the quonset or box types, perhaps because there are no corners to huddle in. The tunnel also seems to produce more movement than the open spaces of the cylindrical trap. This increased movement of the mice makes the trap more effective in catching the birds' attention. We have had good success capturing American Kestrels (*Falco sparverius*) and Broad-winged Hawks (*Buteo platypterus*) with traps of this design.

The materials needed are (1) a 24-by-24 inch piece of hardware cloth ($\frac{1}{8}$ -inch mesh is best, but is hard to find; $\frac{1}{4}$ -inch mesh will work satisfactorily), (2) a 24-by-24-inch sheet of cardboard, (3) a can of spray paint (black or brown), (4) wire, and (5) 6- or 12-pound monofilament line, depending on the species to be trapped.

To construct a trap, draw the design, as shown in figure 1, on the sheet of cardboard. Cut out this cardboard pattern and trace it on the hardware cloth, using spray paint or a felt-tipped pen. Cut out the trap with tinsnips and make three 90° folds in each segment, along lines as shown in Figure 1 (B). Starting at the inside of each segment, the first fold is vertically upward, the next horizontally inward, and the third vertically downward to the flat base. This will form an octagonal tunnel. Wire the segments together and to the base, leaving one segment unwired to be used as a door. This segment can be temporarily secured with a twist-tie after the mice have been placed in the trap. Spray the entire trap with a dull finish paint and allow it to dry. Then place about three monofilament nooses on the top of each segment, and several along the sides. Nooses can also be placed in the central region of the octagon. Leave one segment with no nooses to serve as a place to hold the trap for Frisbee-style throwing. The completed trap is shown in figure 2, along with bait-mice and ensnared kestrel.

The base of the trap could be weighted if larger-than-anticipated hawks are likely to be baited—species such as the Red-tailed Hawk which could carry away a trap of this size. For our own method of cruising county roads and sailing the trap out a car window on sighting a kestrel, we have not found weighting to be necessary.

The octagonal bal-chatri might also be effective for shrikes (*Lanius* spp.) We have tried enlarging the pattern for trapping Red-tailed Hawk (*Buteo jamaicensis*), but have had more success with the quonset type of trap for these larger birds. We have not tried it on any of the other large hawks or any of the owls.

Acknowledgments

We are grateful to Ralph Meier, who originally conceived and designed the prototype of the octagonal bal-chatri.

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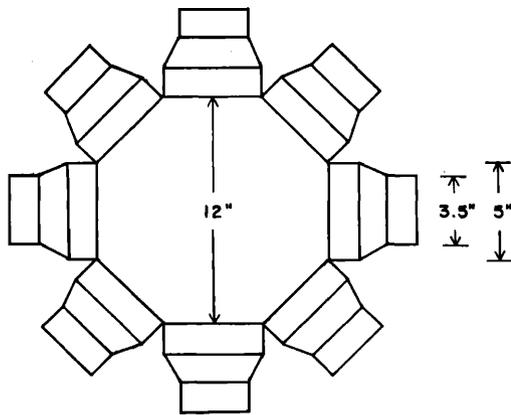


Fig. A

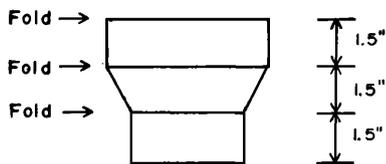


Fig. B

Figure 1.—Design for the octagonal bal-chatri trap: (A) the complete pattern; (B) an enlarged pattern for folding individual segments.

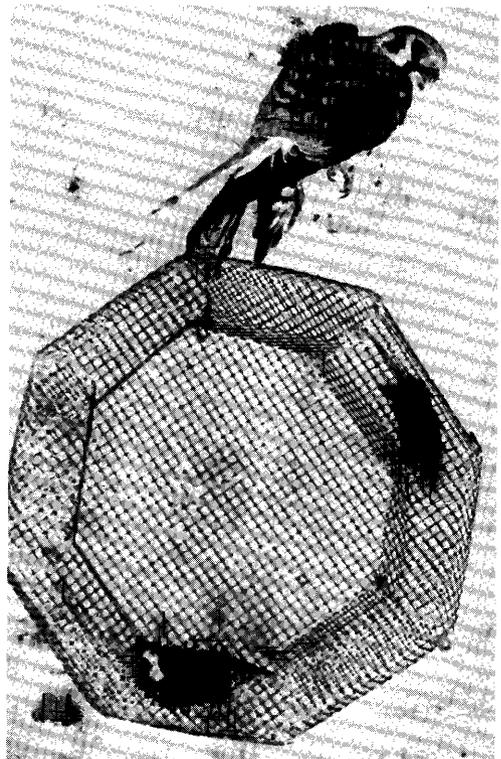


Figure 2.—The octagonal bal-chatri trap with bait-mice and ensnared kestrel.