
A modified Bal-Chatri trap for capturing Screech Owls

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We began long-term studies of the Screech Owl (*Otus asio*) in southern Connecticut in 1974. Specific aspects of investigation initially were to develop reliable census methods and determine habitat selection and activity patterns. Beginning in 1979 we used radiotelemetry to facilitate our study of these and other aspects of Screech Owl ecology (Smith and Gilbert, 1980).

We initially attempted to capture individuals by luring them into mist nets, using play-back of tape-recorded songs. Results were extremely sporadic and time consuming. Next, we saturated a specific study area with nest boxes. We obtained good capture results with this method, but use was of course confined to a relatively small locale, plus — again — the amount of time involved in checking boxes each day was too great. We next attempted to capture Screech Owls using standard bal-chatri traps described by Berger and Mueller (1959) and Mersereau (1975) and a scaled-down version of the Swedish Goshawk trap described by Meng (1971). Again, we used playback of taped songs to locate owls and lure them towards us.

We placed traps as near to the owl as possible, then left them for 30-45 min. Several species of small mammals and birds were used for bait. Although both types of traps have been used successfully to capture a variety of raptor species, our success was again too sporadic, and use was discontinued after one season. We, therefore, modified the bal-chatri by replacing the wire top with a plexiglas top. Capture success with this trap is, to date, 65%. Herein we describe our modified trap, methods, and capture success.

The modified bal-chatri trap which we constructed is shown in Fig. 1. The trap is rectangular in shape and measures 320 mm X 230 mm with 50 mm sides. The base and sides are of 12 mm mesh hardware cloth. The top is a piece of 3 mm thick plexiglas cut to hang slightly over the sides. To anchor the top, holes are drilled in each corner of the plexiglas and 20 lb test monofilament line used to fasten the top to the sides. At 60 mm intervals or less, either 5 or 6 strands of 20 lb test monofilament line are stretched across the top and

fastened either to the sides or through small holes drilled in the plexiglas. Six nooses of 4 lb test line are attached to each strand, using methods described by Jenkins (1979). Noose diameters average 70 mm.

We used brown or white laboratory mice (*Mus musculus*) for bait. To trap the Screech Owls, we drove along suburban and rural roads with calling stations located 1.2 km apart. At each station we played a tape of mixed *whinny* and *warble* songs for up to 7 min, or until a response was obtained. When a Screech Owl responded, one of us walked slowly towards it and placed the bal-chatri on dry leaves. Traps were left in place for 15-40 min. We were able to hear distinctly the noise made by a snared owl attempting to escape.

We began using the modified bal-chatri in January 1980. Trapping success, measured as the percentage of owls responding to the taped song compared to the number of owls actually trapped, was, initially, 100%; all of the 6 Screech Owls which responded were trapped, usually on one of the perimeter nooses. We discontinued trapping in March, by which time we had used the trap 10 times and captured 9 owls, for a capture rate of 90%. Our only "missed" owl occurred when we attempted to recapture one which had been trapped in January. An owl in the same territory responded to the taped song but ignored the baited trap.

When we resumed our trapping in late October 1980, our first 3 attempts again resulted in 3 captures. On 3 subsequent attempts, owls were snared but managed to break the monofilament line and escape. We then substituted 6 lb test line and have not since experienced this problem.

To date we have captured 20 Screech Owls in 31 attempts, for a success rate of 65%. A major factor involved in the declining success rate has been our attempt to recapture individuals which we had previously captured using the modified bal-chatri. Although the individuals often continue to respond to the taped song, they ignore the baited trap.

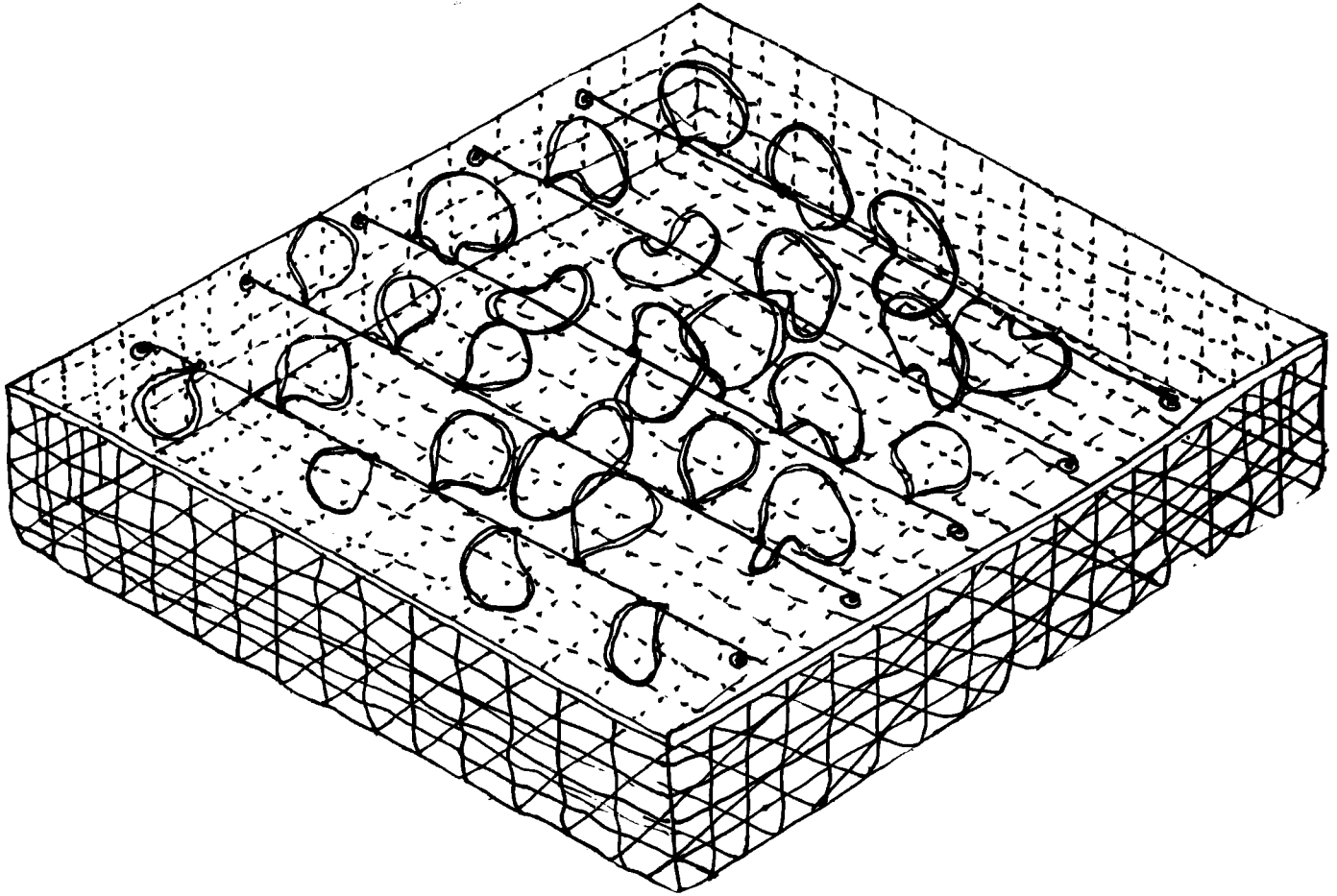


Figure 1. The modified bal-chatri trap for Screech Owls.

In attempting to trap Screech Owls, several other factors are of interest. Our trapping success was higher on dark, overcast nights and always lowest on the clear, bright nights during the full moon. Although Screech Owls are very responsive on nights of the full moon, they are more wary and difficult to approach. Consequently, we were usually not able to place the trap very near them. In addition, there is a pronounced reflection of moonlight from the plexiglas top. From our census studies we observed that individuals often flew to a specific perch from which they responded to the taped song. If the favorite answering perch of an owl had been previously determined, we set the trap prior to calling the owl; this diminished the disturbance of the owl and increased trapping success.

Acknowledgment

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