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A Noose Apparatus And Its Usefulness In Capturing Nestling Bank Swallows

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Introduction

The use of snares and nooses to capture birds is well documented. Noosing poles have been used successfully to capture a variety of birds from open nests (McNicholl, 1983; Hogan, 1985; and Schroeder, 1986). Enclosed nests (i.e. cavities or burrows) are more difficult to reach, however Jackson (1982) devised a noose to remove nestling woodpeckers from their nest cavities. Similarly, Thiel (1985) described a snare used to capture adult Belted Kingfishers, *Ceryle alcyon*, as they enter their nesting burrows.

While investigating the immigration, emigration, and dispersal between neighboring nesting colonies of Bank Swallows, *Riparia riparia*, the need to band the nestlings became apparent. While capturing adults and fledglings with mist nets was simple enough, the numbers of fledglings caught daily were inconsistent and unreliable and their origin uncertain. Banding the nestlings before fledging would be more desirable but the burrows in which Bank Swallows nest presented a challenge in reaching these young. Here I describe an apparatus developed to remove nestlings from their burrows for banding purposes.

Materials & Methods

Figure 1 shows the noose stick used to capture nestling Bank Swallows as well as Northern Rough-winged Swallows, *Stelgidopteryx ruficollis*. It consists of a retractable, monofilament noose supported by a length of 12 gauge wire. To construct the noose stick, begin by bending a handle at one end of the wire leaving approximately two feet which is straightened. At the other end, slide on a tube from a non-retractable, ball point pen and rest it against the handle. Now tape to the wire several small, plastic straws end-to-end. These straws are actually the directional tubes which come with aerosol spray cans of carburetor cleaner or various lubricants. Next, thread a length of 10 lb. test monofilament fishing line through the plastic tubes. One end is taped or glued to the end of the wire while the other is fastened similarly to the pen tube as it rests against the handle. In attaching the monofilament, a tiny loop approximately 1/4 inch in diameter should be formed. This loop will remain when the noose is fully constricted to prevent injury to the birds. Finally, a section of 14 gauge wire approximately four inches long is bent to form a "P" and taped to the pen tube nearest the handle. This will serve as the trigger to constrict the noose.

To operate the noose, a loop of monofilament approximately 1 1/4 inch in diameter is first formed at the end of the wire. The wire is then inserted into a burrow and the noose placed over the head of a nestling. Pulling the trigger constricts the noose allowing the bird to be carefully withdrawn.

A mirror or flashlight shone into the burrow aids this procedure by illuminating the nest chamber and eliciting a begging response from the nestlings. While Bent (1963) observed this same response to light by nestling Bank Swallows, Jackson (1982) used a "lights out" stimulus to noose nestling woodpeckers. Both stimuli will arouse Bank Swallow nestlings, however light is preferable and, in fact, essential to this technique.

Results & Discussion

Using this noose over a two year period, I captured without injury and banded 40 Bank and 9 Rough-winged Swallows from two nesting colonies.

While the obvious benefit of this capture method is the accessibility it affords the bander to the nestling swallows, several factors limit its usefulness. Burrow length is one such limiting factor. Burrow lengths tend to be a function of the nesting substrate, being longer in fine sand and shorter in sand and gravel where digging is more difficult. Stoner (1936) recorded burrow lengths in sand from 15 to 47 inches ($\bar{x} = 28$), while Bent (1963) observed an average length of 34 inches in sand and 19 inches in clay. With a noose stick two feet long only a portion of the nest chambers in a given colony will be reached. While a longer noose stick was not used, its manipulation and effectiveness are questionable.

The age of nestlings to be removed for banding must also be considered. I have successfully captured birds from approximately one week of age to fledging with this method. The young must preferably be of an age where they can crawl back into the nest chamber unaided as replacing them with the noose stick is quite difficult. Bank Swallows at least ten days old seem to be sufficiently mobile to allow banding.

Since Northern Rough-winged Swallows are often found nesting within Bank Swallow colonies, caution must be taken to correctly identify the species of the nestlings to be banded. The simplest way to determine this is to

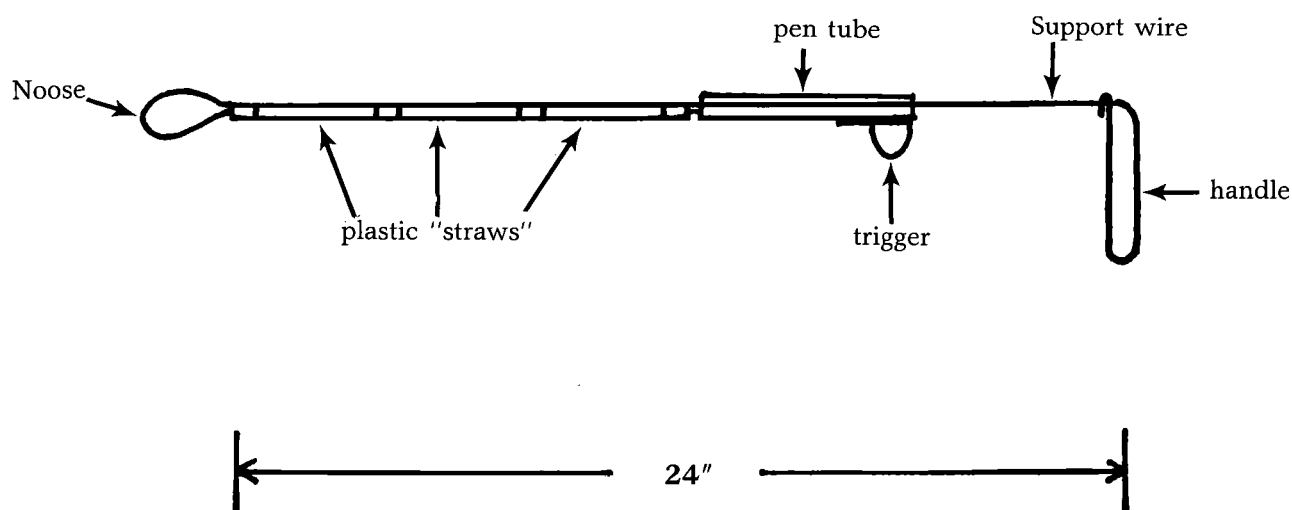
observe the adults as they enter the burrow to feed the young. However, making note of a particular burrow entrance approximately 2½ inches in diameter among hundreds can be difficult at best. Fortunately, the birds themselves make this task somewhat simpler. Rough-winged Swallows tend to nest on the fringes of a Bank Swallow colony or even a few yards away and are usually far outnumbered.

The time required to use this capture method may limit its large scale use as removing a brood of five may take ten minutes. However, I believe it can be of value to researchers in a variety of ways by allowing access to the young of burrow-nesting birds, Bank and Rough-winged Swallows in particular, without damage to their burrows or nest chambers.

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Figure 1
NOOSE OPEN



NOOSE CLOSED

