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(Eastern)

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# A Self-tripping Trap for use with Colonial Nesting Birds

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Many colonial nesting species are sensitive to human disturbance, and the capture of adults on their nests presents special problems. Cannon-netting may risk mass abandonment of the colony, destroy eggs, or injure birds. Many other kinds of traps may allow capture without abandonment, but require immediate removal of captured birds. Thus the capture of each bird requires a separate trip into the colony; and if more than a handful of birds are to be captured, such repeated disturbance may lead to large-scale abandonment or reduction of nesting success. Another problem with doing any work inside colonies, particularly of Ciconiiformes, is that young will often leave the nest at the approach of a human, usually before the age at which they are able to get back in; this frequently leads to their death by starvation or predation.

The trap shown in Fig. 1 was designed for capturing White Ibis (*Eudocimus albus*) as part of study of mating behavior (Frederick, P.C. 1985, PhD diss. Univ. of North Carolina,

Chapel Hill, N.C.). This trap is a large cage, similar to one described by Burger (1971, *Bird Banding* 42:123 but has a self-tripping door instead of an open top for entrance. Both traps allow adults to incubate eggs or brood and feed nestlings until removal at the observer's convenience. In a coastal South Carolina colony, more than 70 adults were trapped on their ground-level nests in 1984 when young were from 1 to 12 days of age. These young became ambulatory after 5 to 7 days of age and would leave the nest at my approach. To prevent this, hoops of 1" mesh chicken wire (12.25" high  $\times$  17.5" diameter) were wired to each nest in the study area during incubation. The traps fitted with these nest corrals when in use and were anchored by stakes into the mud below the low nests. Adults stepped over the nest corrals when entering the trap.

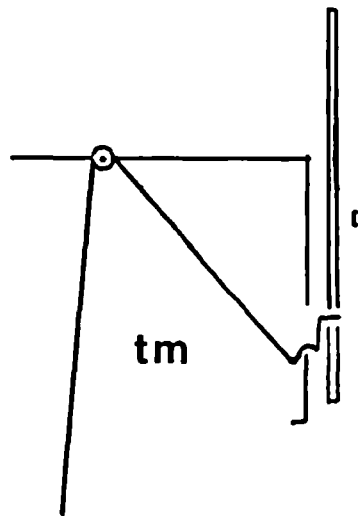
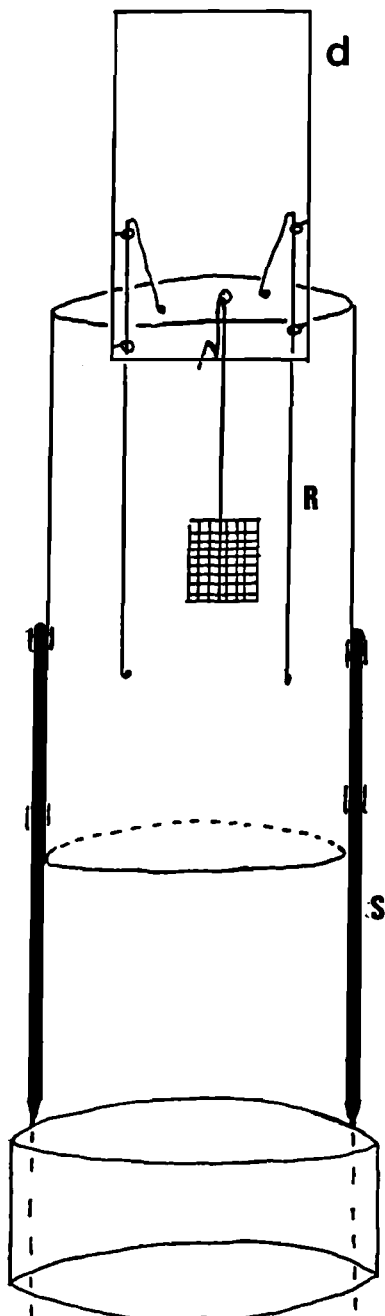
After setting up to 10 traps, I would watch them from a blind 30 to 40 m away. Adults usually entered the trap without reluctance, but it was important to place the door facing along normal entrance routes. Adults sometimes failed to press against the trip plate; weaving prominent pieces of the nesting material into the trip plate usually caused adults to peck at it and thus release the trip mechanism. On windy days, premature tripping was avoided by bending the trip trigger to increase friction. Adults never appeared to be alarmed at the closure of the door and nearly always brooded and fed young normally once entrapped. Because immediate removal was not necessary, I was able to operate 10 traps simultaneously,

with first and last capture times often 50 min apart. This allowed me to time my forays into the colony with weather conditions and feeding trips of adults. Trapped adults always returned to their nests within 24 h after trapping, but later trap shyness was highly variable among individuals.

The advantage of this trap design is that it is suited to capturing large numbers of birds in a dense nesting situation with minimum disturbance and also suited to any situations where the trap must be left unattended, as with particularly wary species or species with large distances between nests. The dimensions of this trap could be modified to accommodate a variety of species.

To construct the trap (see Figure 1), start with a cylinder of welded wire mesh 28" high and 15.5" in diameter. Cover the top with mesh, leaving the other end open, and cut a door 16"  $\times$  10" beginning 12.25" from the open end of the cylinder. The door (*d*) is an 18.5"  $\times$  12.25" rectangle of welded wire mesh which slides on two runners of 8 gauge steel wire. The runners (*R*) are attached at the top and bottom of the cylinder as shown by bending the wire ends tightly around the mesh with pliers. The door is attached to these runners at its bottom two corners, and on both sides 8" from the bottom by cutting and bending out a piece of mesh at each corner into a circle around the runner. The trip mechanism (*tm*) is a single piece of 8 gauge steel wire, pivoted and hung by a circle of wire from the approximate center of the inside top of the trap. The trigger end is bent into the approximate shape shown in the diagram, so that it will hold up the door by resting on a mesh of the cylinder until pushed backwards. The other end of the trip bar is attached to a trip plate (4"  $\times$  4" hardware cloth). Two stakes (*s*, 1"  $\times$  1"  $\times$  27" oak) are attached firmly with wire at two points on opposite sides of the trap. The nest corral (*nc*) is a single piece of chicken wire wired into a hoop and attached to the nest with 16 gauge utility wire.

(Eastern)



- List of materials needed for one trap and nest corral:
- 11.5' of 36" high welded wire fencing (2"  $\times$  4")
  - 65" of 8 gauge steel wire
  - 1 piece 4"  $\times$  4" hardware cloth
  - 2 oak strips, 1"  $\times$  1"  $\times$  27 cm
  - 21.6"  $\times$  12" high of 1" mesh chicken wire
  - 16 gauge utility wire
  - Wire cutters and pliers

Figure 1. Self-tripping nest trap.

