

## A TROUGH-BLIND FOR CAPTURING CRANES

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**Abstract.**—A specialized blind resembling a feeding trough for cattle was developed to capture cranes. Cranes were attracted to bait placed strategically over hand-holes in the sides of the blind. Twenty-one cranes (2 Florida Sandhill Cranes [*Grus canadensis pratensis*] and 19 Whooping Cranes [*G. americana*]) were captured in 21 attempts. The trough blind was inexpensive (US \$100 for materials) and provided a safe and efficient technique for capturing individual cranes.

### UN OBSERVATORIO ESPECIALIZADO PARA CAPTURAR AVES DEL GÉNERO GRUS.

**Sinopsis**—Un observatorio especializado parecido a un comedero de ganado se desarrolló para capturar grullas (*Grus* sp.). Las aves se atrajeron a la carnada colocada estratégicamente sobre aberturas para manos a los lados del observatorio. Se capturaron 21 aves (dos *Grus canadensis pratensis* y 19 *G. americana*) en 21 intentos. El observatorio-comedero fué de bajo costo (\$100 dólares US en materiales) y proveyó una técnica segura y eficiente para capturar aves individualmente.

Because of their size and wariness, cranes are among the most difficult birds to live trap. Sandhill Cranes (*Grus canadensis*) have been captured with the use of rocket nets (Tacha et al. 1981), night-lighting (Drewien and Clegg 1992), walk-in traps (Logan and Chandler 1987), alpha-chloralose tranquilizers (Williams and Phillips 1973), and helicopter pursuits (Ellis et al. 1998). Whooping cranes (*G. americana*) have mainly been captured as flightless young for marking and radio instrumenting (Kuyt 1992).

During a project to establish a second flock of Whooping Cranes in Florida (Nesbitt et al. 1997), it became necessary to capture the free-living birds periodically for health-checks and to replace malfunctioning transmitters. Several capture techniques were used. Some birds could be coaxed into range with corn and captured with a long-handled net, but this technique was only effective on recently released birds. Walk-in traps were

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Figure 1. The trough-blind, illustrating basic construction materials, hinged side, and arm holes for grabbing the bird's leg.

also used, but this was not an efficient technique because it required weeks of exposure to this novel object before the birds were trusting enough to enter the trap. Several night-lighting attempts were made, but we felt that flushing Whooping Cranes from their roost put them at high risk from predation by bobcats (*Lynx rufus*), the primary mortality factor for this flock (Nesbitt et al. 1997). Alpha-chloralose has not been tested on Whooping Cranes, so this method was not tried.

A safe, efficient daylight capture technique was needed. Because Florida Sandhill Cranes (*G. c. pratensis*) and Whooping Cranes were regularly observed feeding from troughs used to feed livestock, we suspected that a person concealed under a trough might be able to capture a crane as it fed.

#### MATERIALS AND METHODS

In early 1994, we began experimenting with a feed trough borrowed from a local rancher. Subsequently, we constructed a trough capture blind 206-cm long by 90-cm wide by 67-cm tall (Fig. 1). The top of the blind was 244-cm long. In 1995, the materials cost US \$100, and it took 2 days to assemble the blind. The legs and rectangular frame were constructed of pressure-treated 2 × 6 pine, the roof and sides were made of 0.75-inch (19-mm) outdoor-grade plywood. Each side of the blind consisted of a hinged door with arm holes that extended to the bottom of the door.



Figure 2. The capture of a Whooping Crane in Florida with the use of the trough-blind.

This facilitated a quick exit from the blind when a bird was in hand. The arm holes were covered on the inside with two overlapping pieces of inner-tube rubber. Three viewing windows (one in each door, one in the end), 7.6-cm square, were covered on the inside with three layers of dark screening, which prevented birds from seeing inside the blind. It was important to build the blind to exclude all cracks or holes where light could enter the blind and illuminate the person inside.

The blind was positioned on level ground where the vegetation was low enough ( $<10$  cm) that the side doors would swing freely. The target bird was lured to a position in front of the hand-holes by centering the bait (corn) in the trough over the arm holes. When the bird was actively eating (as evidenced by a pecking sound and the accompanying movement of its legs) one leg was grabbed at the intertarsal joint with one hand (Fig. 2). The typical response of the birds was to spring upward and rotate  $180\text{--}360^\circ$  before attacking with feet and bill. The bird was held loosely with the hand allowing the leg to turn, preventing leg injuries during the bird's initial rotating movements. Care was taken to hold the captive birds as far out as possible from the blind to prevent injuries that might result from any contact with the blind. A minimum of two people was needed during a capture event, one inside the blind and the other outside to assist with controlling and processing the bird. The biologist on the outside stayed in a pickup truck usually within 100 m of the blind.

## RESULTS

Twenty-one cranes (2 Sandhill, 19 Whooping Cranes) were captured in 21 attempts between 1994 and 1998. An attempt was made only when the target bird was in the appropriate position and no other birds were in a position to see or react to a hand emerging from the blind. The blind was effective on various-aged Whooping Cranes during all times of year. We caught one 1-year-old, six 2-year-olds, seven 3-year-olds, and five 4-year-olds. Of 18 individuals captured in 19 attempts (we had one recapture), 11 were females and seven males. There were no mortalities that occurred with the use of the trough-blind. Handling time was typically 0.5 h, and the bird was released to rejoin the flock. One minor injury occurred when the skin around a toenail of one bird was torn. Toenail injuries are not uncommon during handling of cranes, and it was not evident whether this resulted from the bird kicking at the biologist or the door of the blind.

On two occasions we caught both members of a pair of Whooping Cranes at the same site. For one pair it was 12 d before we could capture the mate and for the other it took only 4 d. Another pair was captured 5 d apart, but we had moved the trough 0.5 km to a new site. We generally have not had the need to attempt capturing the same individuals because the life of our transmitters has been longer than the time since we began using the trough in earnest. We captured one female twice with the trough. It was two years between captures. During the second capture she seemed especially wary; she was the last of her flock (four total birds) to eat from the trough. When she did, she looked down at her feet often, as if remembering that a problem came from below.

This technique has been applied (Scott G. Hereford, pers. comm.) in the capture of endangered Mississippi Sandhill Cranes (*Grus canadensis pulla*). Four birds were captured in four attempts since 1996 from a blind modified to include a cylindrical feeder which the birds were accustomed to. Cranes captured at the Mississippi Sandhill Crane National Wildlife Refuge (MSCNWR) did not fair as well as the birds captured in Florida. One crane was found dead within a week of capture, but cause of death could not be determined. After capture, cranes did not always join the flock immediately after release; one stayed away from its usual haunts and flock mates for 2 wk.

## DISCUSSION

The trough-blind provided a safe, efficient capture method for cranes in Florida. However, this technique may not work as well in study areas where there is no history of crane use of cattle troughs. At the MSCNWR, it has been more challenging to get cranes not used to troughs to eat from them.

Several factors affected how quickly an attempt could be made. Preparation time varied from one to many days, and usually took between 1–2 wk. Preparations involved getting the target bird to eat from the trough,

while standing in front of the hand holes. Livestock presented the most significant complication by consuming the bait and/or scattering it. In large pastures, the influence of cattle could be reduced by putting bait in the trough only when cattle were not in the vicinity, and by removing the bait before they discovered it. Once the cattle knew that feed had been provided in a trough, it was difficult to keep them away. A problem arose during attempts to capture Mississippi Sandhill Cranes when some birds flew up into the blind and stood on top making them inaccessible for capture.

Other cranes, and even other species of birds, sometimes delayed capture attempts. Increased flock size make it easier for cranes to spot any movement from the blind. Dominance within a group also became a problem when the target bird was a subordinate member and therefore allowed to spend comparatively little or no time eating.

Quantity and quality of available food seemed to have an influence on whether and how much bait the target bird consumed. In a feedlot, cranes preferred to eat spilled feed from the ground before going to a trough. We found it helpful to pick up as much feed from the ground as possible before a capture attempt. In a feedlot setting where there were many troughs from which a crane could potentially eat, several blinds were used and moved around until the target bird was eating from the appropriate trough. The birds would only eat from the troughs that cattle were eating from, so the rancher allowed us to replace his feeder with our blind.

One nuisance associated with this capture method was that the cool, dark interior of the blind attracted black widow spiders (*Latrodectus mactans*). We were careful to remove or avoid the spiders when entering and laying in the blind. Fire ants (*Solenopsis spp.*) were also an annoyance, and it was necessary to be aware of their presence when situating and using the blind.

The safety of rare birds such as whooping cranes is of utmost importance during capturing and handling. We preferred this capture technique over techniques that involve the use of netting material. With the trough blind, the bird is immediately in hand quickly under control. Capture by hand net, rocket net, or walk-in traps require an extra step before the bird is in hand. During the bird's contact with netting material there is the potential that the bird will injure itself from contact and entanglement with netting.

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#### LITERATURE CITED

DREWEN, R. C., AND K. R. CLEGG. 1992. Capturing Whooping Cranes and Sandhill Cranes by night-lighting. Proc. North Am. Crane Workshop 6:43-49.

- ELLIS, D. H., D. HJERTAAS, B. W. JOHNS, AND R. P. URBANEK. 1998. Use of a helicopter to capture flighted cranes. *Wildl. Soc. Bull.* 26:103–107.
- KUYT, W. 1992. Aerial radio-tracking of Whooping Cranes migrating between Wood Buffalo National Park and Aransas National Wildlife Refuge, 1981–84. *Can. Wildl. Serv., Occ. Papers* 72:1–53.
- LOGAN, T. J., AND G. CHANDLER. 1987. A walk-in trap for Sandhill Cranes. Pp. 221–223, *in* J. C. Lewis, ed. *Proc. 1985 Crane Workshop*.
- NESBITT, S. A., M. J. FOLK, M. G. SPALDING, J. A. SCHMIDT, S. T. SCHWIKERT, J. M. NICOLICH, M. WELLINGTON, J. C. LEWIS, AND T. H. LOGAN. 1997. An experimental release of Whooping Cranes in Florida—the first three years. *Proc. North Am. Crane Workshop* 7:79–85.
- TACHA, T. C., P. A. VOHS, AND D. C. MARTIN. 1981. Factors affecting trap-related mortality of Sandhill Cranes. Pp. 122–126, *in* J. C. Lewis, ed. *Proc. 1981 Crane Workshop*.
- WILLIAMS, L. E., AND R. W. PHILLIPS. 1973. Capturing Sandhill Cranes with alpha-chloralose. *J. Wildl. Manage.* 37:94–97.

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