



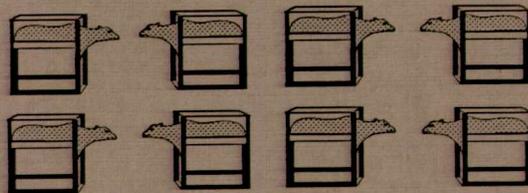
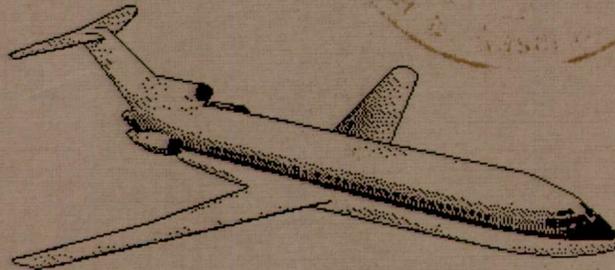
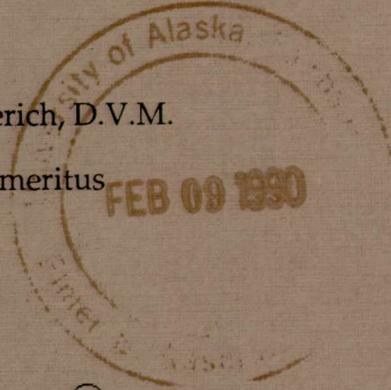
Air Transport of Alaskan Reindeer

Applied Reindeer Research Project

by

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Air Transport of Alaskan Reindeer

Robert A. Dieterich*

Reindeer have been translocated to various areas of the world for many years. There continues to be a demand for shipments of live Alaskan reindeer within the state of Alaska, to other states and to foreign countries. Methods have varied from overland herding to air shipment. Air shipments have been combined with land or ocean transport. In Scandinavia, large numbers of reindeer have been transported to alternative ranges by semi- and tandem-trailer trucks capable of carrying up to 200 animals.

Some methods have been used quite successfully. Unfortunately, other methods have resulted in serious problems—abortions, death, or injuries. In Alaska, the use of aircraft is usually necessary because there are few connecting road systems where reindeer are located. Sea transport is difficult because of the lack of holding facilities near ocean ports. The location of reindeer in relation to airports which have regular air freight service is another important economic consideration.

In most cases, it is not economically feasible to gather reindeer for shipment except during regular roundups for winter treatments and separations or for summer fawn marking and antler harvest.

This report describes one aspect of successful air transport developed over the past 20 years in Alaska.

Transport

Each transport of reindeer is unique, and it should be recognized that there is no single correct method. The use of good husbandry practices, plus consideration of the practical economics of the situation play important roles in a successful outcome.

Over the past several years, personnel at the University of Alaska Fairbanks have transported several hundred reindeer from Alaska's west coast to Fairbanks. Distances varied from 500 miles to 800 miles. In that experience, the use of drugs to immobilize reindeer during

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the entire shipment was not successful because immobilizing agents interfere with proper body temperature regulation and depress the cardiovascular system. Drugs should be used only on reindeer which are unwilling to remain calm even after proper handling. Most transport trips have not required the use of tranquilizing or immobilizing agents.

The use of air cargo space is expensive, and most airline companies charge an additional fee when shipping live animals. However, because less stress is placed on animals during shorter trips, air transport is usually preferable to slower, alternative transportation. Some aircraft are especially configured to transport livestock. Most airline companies require control of urine and feces. Individual reindeer can be shipped in large, well ventilated crates that enclose the entire animal. When aircraft are chartered, concessions have to be made to safely move the largest number of reindeer possible in the cargo space available.

Shipment of reindeer by regular jet airline service is regulated by specific container and handling requirements set forth by the International Air Transport Association. Their current requirements are as follows:

"Materials: metal or wood, and burlap or canvas for padding, if required.

Principles of Design: It should be of sound construction and have a smooth interior. Where padding is necessary, it should be of burlap or canvas which is stuffed with wood shavings or fiber. The sides must be close-boarded at least up to the height of the animal's eye level when standing. The sides may be slatted above this height, but care should be taken to ensure that the horns cannot become trapped between the boards. However, the boards must be close enough to prevent the animal from forcing its head and legs outside the container.

For horned animals, the height and width of the container must be sufficient to allow the animal to stand in a natural upright position with head extended, and the top shall be boarded in a similar manner as the sides. In addition, the ventilation slots in top and sides must be so situated as to prevent the animal's horns from becoming entangled in the openings between the slots. If the wire mesh is on the inside, all sharp edges must be protected.

A sliding (or hinged) door shall be provided at the rear, adequately secured to prevent accidental opening. The floor shall be of pegboard or open slatted to prevent the animals from slipping. A droppings tray must be provided.

The dimensions of the container must sufficiently restrict movement to prevent the animals from turning around thereby trapping and injuring itself or from kicking and breaking the container. NOTE: Deer species may only be accepted after they have shed their antlers or when they have been cut off if hard."



Figure 1 — Crate for shipping reindeer

Crates meeting the above standards (approximately 55 inches high, 35 inches wide and 70 inches long) are large and present a limiting factor when shipping several reindeer in one load (Figure 1). For shipment within the state on chartered aircraft, smaller collapsible crates have been designed that have several advantages (Figure 2). These crates can be shipped to the loading sites as collapsed compact boxes which saves on freight charges. The crates can be readily reassembled in a few minutes. The reindeer can be quickly crated before the transporting aircraft arrives. This saves on aircraft-ground-time charges. Shipping collapsible crates also saves on freight charges based on size-to-weight relationships, and more crates can be loaded in one aircraft.

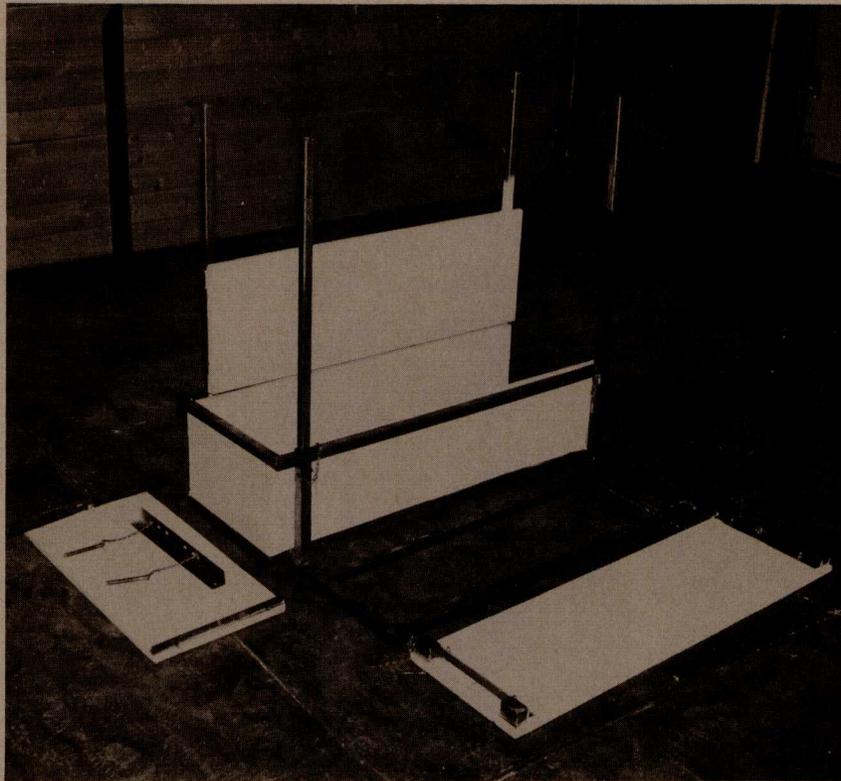


Figure 2 — Collapsible crate for shipping reindeer

These crates are large enough to contain the reindeer's body, but allow the head to extend outside the crate (figure 3). A padded stanchion which surrounds the animal's neck aids restraint. The crate sides and floor are waterproof, and wood shavings are placed on the crate floor to absorb urine and fecal moisture. Inside measurements of the crates are 48 inches high, 17 inches wide, and 49 inches long. This size is correct for mature females, but it is too small for adult males. Crate size is minimal to prevent struggling and to conserve space. Once reindeer are placed in the crates they quickly stop trying to escape. It should be stressed that crates of this design are only suitable for relatively short (8-to-12-hours) trips.

Large airline canine kennels have been used successfully to ship fawns up to four months of age. The kennel size used should be selected based on the size of the fawn. Kennel shipment is relatively inexpensive since they are normally handled as pet shipments.

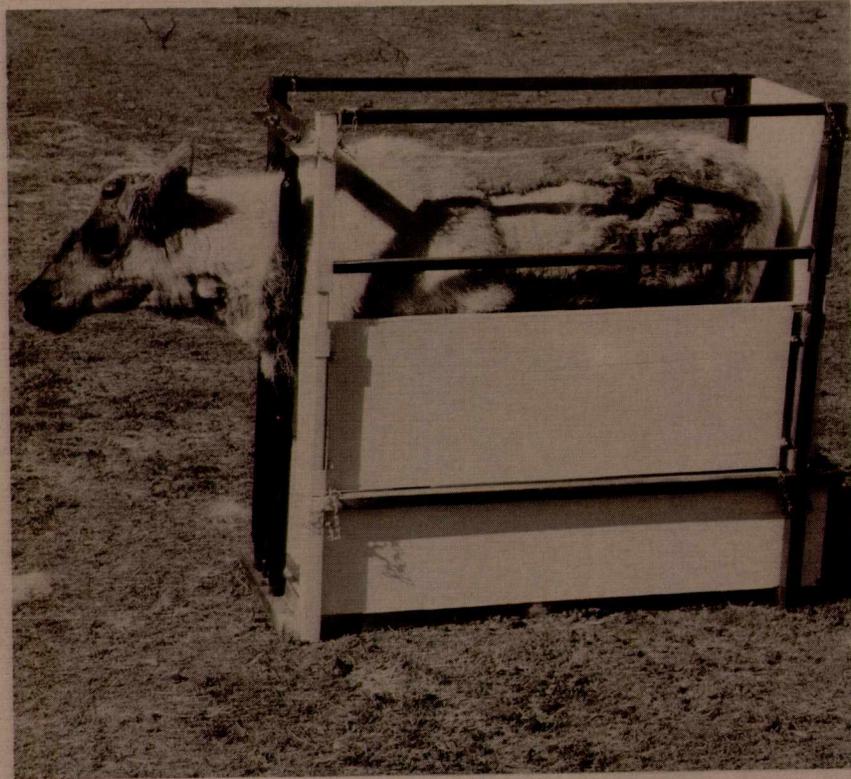


Figure 3 — Crate allows head to extend outside

REINDEER

Reindeer shipments are best accomplished in November or December. Best survival is obtained during these months as the breeding season is over, and the pregnant females are early in their gestation period. Body reserves are adequate in young animals and females. Males are relatively more difficult to transport at this time because of poorer body condition following the recent completion of rut. To avoid heat stress, reindeer should not be transported during summer months. Many airlines will not accept reindeer for transport if enroute and destination temperatures are above 70 degrees.

Every effort should be made to minimize the interval between the time the reindeer are first handled and the time they are loaded into crates. During the pre-crating period, the reindeer should be held in pens constructed with high sides that offer no view of surrounding activities. Immediately after crating, an injection of long acting antibiot-

ics can be used on reindeer that have their heads extended outside the crate. Antlers should be cut near the base to prevent injury to other nearby reindeer or handlers.

Crates should be loaded carefully and quietly. Crates which allow the heads of the animals to extend outside should be placed in rows where reindeer can face another reindeer as shown in figure 4. This arrangement appears to comfort the animals as they have close head contact with the animals in the next row facing them. It is very important that the interior temperature of the aircraft remain as cool as possible and that crates have as much ventilation as possible.

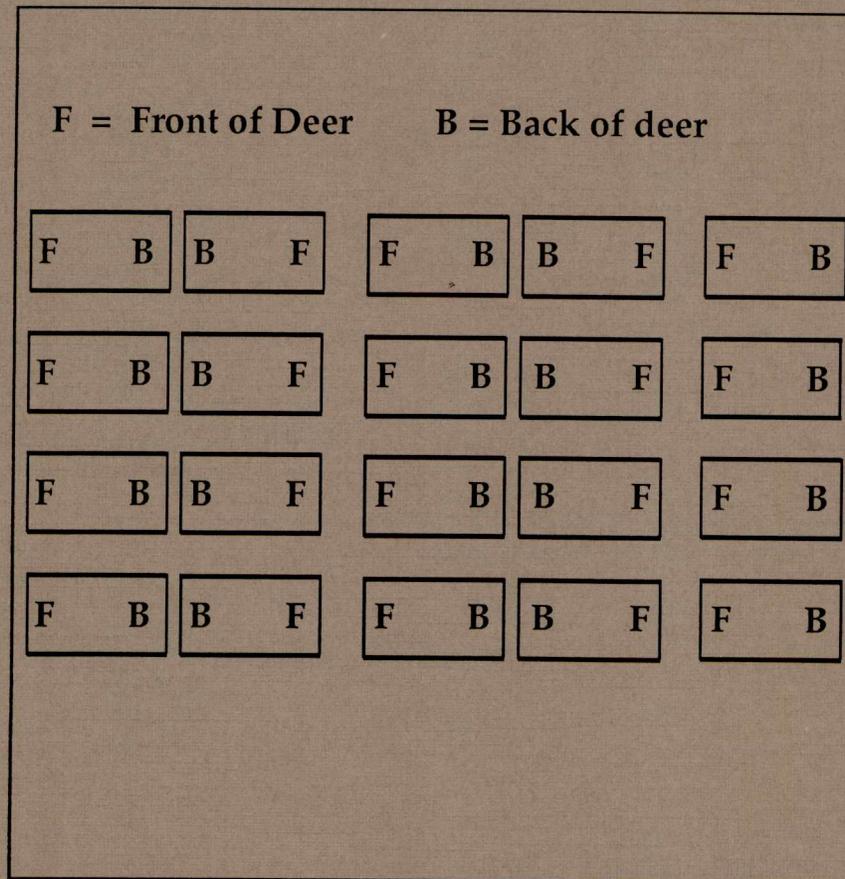


Figure 4 — Loading scheme for crated reindeer