



FACT SHEET

Capturing and Handling Large Animals

Many different wildlife species are captured and handled by biologists in order to learn more about the biology and behaviour of the animal. Often animals are fitted with radio, GPS or satellite collars as part of a study. For the welfare of the animal and the safety of the handlers, it is best that potentially dangerous animals be relaxed and unaware of what is going on around it while the collar is being put on. Using drugs to put an animal into sleep-like state is the most widely accepted humane way of handling large, powerful animals. One exception is caribou that are most often handled very quickly with a net gun where no sedation is required.

Tracking animals with collars helps managers learn about population sizes and where animals spend time in different seasons of the year. Collars used in studies of wolves, polar bears, muskox and barren-ground caribou have shown long range movements and important habitat needs that would otherwise not be possible to measure. Animals are treated with respect and great care during the process of capture and handling.



The Process of Capturing and Handling

To select the right animal and inject the drugs, it is necessary to get very close. It is best to be within 30 feet of the animal. It is also important to keep track of the animal until the drug works (usually 3 to 8 minutes) and be able to get to the animal very quickly if it is in danger of drowning or falling. Because of this need for speed and agility, a helicopter is used. The Yukon Fish and Wildlife Branch works with only very experienced pilots, usually with a minimum of 5,000 flying hours. Trained and experienced darters, usually with extensive large animal capture experience and special training in wildlife handling and immobilization, fire the darts or directly supervise those being trained.

Until recently, the drugs most commonly used on animals such as muskox, bison and moose were a combination of Carfentanil and the sedative xylazine. But because Carfentanil is a very potent and dangerous drug to humans, the Yukon Government is attempting to switch to safer drugs for use in wildlife captures. A different combination of drugs- Medetomidine and Ketamine- is now being used in the Yukon. These are the drugs recently used to immobilize muskox on the Yukon North Slope. This combination is also being used in bison and moose

collaring projects elsewhere in the Yukon this winter. The drug Telazol is used alone to sedate bears and other predators. It has been used on wild and domestic animals for many years and is very safe for the animal and human handlers when used as directed. When animals are captured using Medetomidine and Ketamine, another drug, Antisedan, is used to wake them up. The captured animals will usually get up and walk or run away in minutes.



Only rarely do animals die from drug or capture complications. These deaths are difficult to prevent as they are usually a result of poor body condition, adverse reaction to the drug or stress. Every effort is made to keep handling time to a minimum. The latest technology is used to monitor the animal's condition (heart rate, breathing rate, circulation, etc) while under the drug's influence. Collars are often removed from animals after the study is finished. Animals handled with immobilization drugs are left with an ear tag or a visible collar so that hunters can avoid shooting them.

If a dart misses the animal or falls out, every effort is made to find it. In most cases the drug is probably discharged into the ground or air and the dart is empty except for some residue. If you find a dart, **DO NOT TOUCH IT**. Mark the location and contact the nearest Fish and Wildlife Branch office.

The Effects of Capture Drugs

The drug combination of Medetomidine and Ketamine appears to be safer than Carfentanil for humans and animals. It is not easily absorbed through the skin and a person would have to be directly injected with the drug to cause serious effects. None of these drugs last or build up in the environment in any way. If a drugged animal were to die soon after handling and be eaten by predators or scavengers, the predator or scavenger at worst might become sedated for a few hours, but would be unlikely to ingest enough to kill or seriously injure it.

Work done in the United States has shown that the level of the drug in the animal's meat decreases rapidly within a few days after the animal is handled. The US's Food Animal Residue Avoidance Database (FARAD) recommends people should avoid eating the meat of a wild animal for 30 days after it has been given these drugs to be conservative. In Canada this research has not yet been done, so we must advise even more conservatively that the animal never be eaten.

Animals that wear or have worn collars are very important. They give us information that helps us to understand animals, the way they use the land, their relationship with other species, what affects their numbers, and how human activity affects them. These animals should be protected and deserve our respect for the information they have provided and continue to provide about themselves and their species.

For more information from the Government of Yukon, Department of Environment, contact Philip Merchant at (867) 667-5285, the Regional Biologist in your area or veterinarian Dr. Michelle Oakley at (867) 634 -2110. (toll free 1-800-661-0408)