ANIMAL TRACKING IN MANITOBA

To try and understand population sizes, migratory routes, or other information about animal populations, researchers will often track the animals using a variety of different animals. With larger animals such as caribou and polar bears, the animal is usually tranquilized then fitted with a radio collar, (Figure 1) which allows for the individual to be tracked from a plane.

http://www.nps.gov/common/uploads/stories/images/nri/20150401/articles/A3055853-A4B7-1212-30C324C87230E8AA/A3055853-A4B7-1212-30C324C87230E8AA.jpg

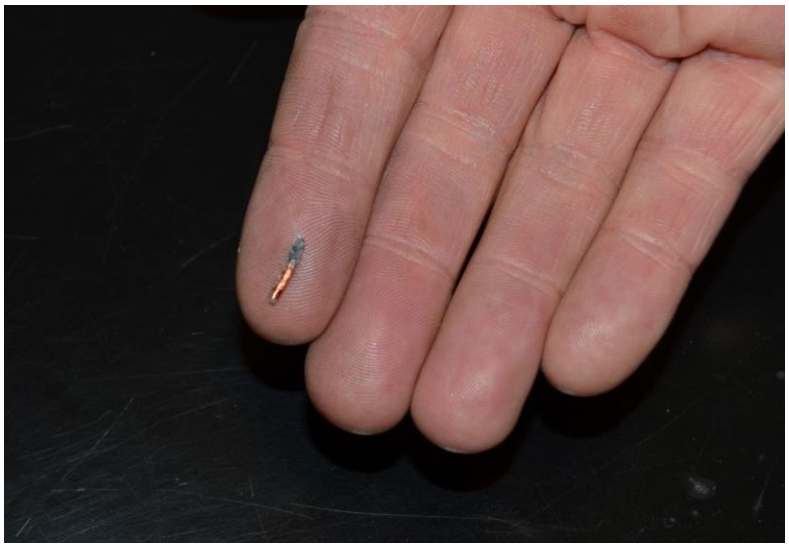
Figure 1: Caribou with a radio collar

Smaller animals, like birds or bats, can't wear conventional radio collars because they are too small. In this case, bands or PIT (Passive Information Transponder) tags are used for monitoring. In Manitoba, birds are banded to track their migration routes and to gather information about population sizes. Birds (and bats) are often caught using a mist net (Figure 2). Once removed from the net, a small band is placed on one leg that is unique to each individual. Migration routes can be mapped when a banded bird is caught in another location.

http://www.sonobat.com/images/mistnet.jpg

Figure 2: Mist net for catching birds and bats

In Manitoba, bats were formerly tracked with bands just like birds, but the bands were placed on the arm at the top of one wing. However, banding bats was found to cause occasional wing damage or injury to the bat. Now, bats are monitored using PIT tags (Figure 3) that are inserted under the skin between the shoulder blades. PIT tags cannot be monitored from a plane, but by panels placed at the entrances to caves or mines that read the "barcode" of each bat as they fly by, or by PIT tag readers (Figure 4) used to scan bats that are captured To insert the PIT tag, bats are captured using mist nets or harp traps (Figure 5). Currently, researchers at the University of Winnipeg are monitoring bat populations because of the disease White-Nose Syndrome (WNS) caused by an invasive fungus, which hasn't arrived in Manitoba but is now as close as North-Western Ontario. Each bat that is PIT tagged also has a genetic sample taken from it. Researchers hope to be able to look in the genes of bats that survive WNS to find a cure for the disease.



http://blogs.idahostatesman.com/wp-content/uploads/2014/03/Pit-tag.jpg

Figure 3: PIT tag

http://www.pet-detect.com/media/catalog/product/cache/1/image/1200x/040ec09b1e35df139433887a97daa66f/u/n/universal_pocket_scanner.jpg

Figure 4: PIT tag reader

http://media.nhbs.com/jackets/jackets_orig/jpics/199548.png

Figure 5: Harp trap used to catch bats. Harp traps have two sets of strings that are mounted on a frame. Bats will fly through the first set of strings, and hit the second set, causing them to fall safely into the collection bag at the bottom.

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