

Alberta Wildlife Animal Care Committee Class Protocol #007

Wildlife Research Permit or Collection Licences

Adopted 11 February 2005

Class Activity: Small Mammal Handling and Trapping

Specific Activities

Animal handling, live trapping, kill trapping

Objectives

To capture small mammals, primarily for research and management purposes

Primary Contact/Authority

Director of Wildlife

Applicable Personnel

- Project leads must have appropriate experience in small mammal species identification, biology, as well as capture and handling methods
- All team members must be educated about possible zoonotic diseases that small mammal species can carry and how to protect themselves against transmission.

Species

- Mice and voles (Family: Cricetidae)
- Shrews (Family: Soricidae)
- Ground squirrels (Family Sciuridae)
- Pocket gophers (Thomomys talpoides).

Applicable Geographic Range

Provincial

Methods

Animal Handling

- Animals will be handled quickly and without sudden movements
- Talking will be minimized

- Animals will be restrained with appropriate force to reduce excessive struggling or stress, but minimize bodily injury
- A small vial of sugar water should be available to revitalize stressed, hypothermic, or hyperthermic animals

Live Capture Methods

Temporarily discontinue trapping during unseasonably hot, cold or wet weather unless adequate precautions can be taken to prevent thermal stress and drowning mortalities (e.g. checking traps more frequently, closing traps during certain times of day, winterizing traps).

1) Live Traps (Sherman, Longworth, or Bolton)

- Traps must be checked a minimum of twice daily, once early in the morning and once late afternoon. When trapping shrews, traps should be checked more frequently (every 1.5 to 2 hours) to minimize shrew mortality
- Assorted nuts, rolled oats with peanut butter, walnuts, mealworms, dog food, or other foodstuffs may be used as bait and must be provided in the traps to ensure captured animals have an adequate food supply
- Polyester or cotton bedding must be placed in the traps to provide insulation
- Traps may be placed inside a protective cover such as a white cardboard sleeve or plastic milk carton. These covers help to keep the animal dry during periods of precipitation, reflect the daytime sun to help prevent heat stress, and provide additional insulation in cooler temperatures

2) Pit-Fall Traps

- Traps must be checked a minimum of twice daily, once early in the morning and once late afternoon. When trapping shrews, traps should be checked more frequently (every 1.5 to 2 hours) to minimize shrew mortality
- Assorted nuts, rolled oats with peanut butter, walnuts, mealworms, dog food, or other foodstuffs may be used as bait and must be provided in the traps to ensure captured animals have an adequate food supply
- Polyester or cotton bedding must be placed in the traps to provide insulation
- Wood debris or a shingle is to be placed over the opening of the pitfall traps to provide shade from the sun and help to minimize predation
- Drainage holes and floatable debris (e.g. 2-3cm flat styrofoam disc slightly smaller than the diameter of the trap) must be provided in the traps to prevent drowning

Lethal Methods

1) Snap Traps (Museum Special Mouse Trap, Victor Mouse Trap, common household mouse traps)

- Trap size should be chosen based on the size of the target species
- Traps should be checked at least once daily. Any animals found alive must be euthanized as outlined below

2) Guardian-type box traps for pocket gophers

- Traps are set within the gopher tunnel
- Traps should be maintained in good working order, particularly ensuring that the spring has good killing force and the kill bar is unimpeded

3) Poison

- Strychnine-treated bait for ground squirrels can be used at the appropriate formulation, as determined by Alberta Agriculture
- Care must be taken to minimize the opportunities for non-target species to find or consume the bait. Open dispersal of treated seed on the ground is NOT acceptable.

Evaluation

If at any time higher than anticipated death rates occur during live trapping, or if an elevated failure rate of killing in kill-traps is observed, halt the operation and review all activities. If corrective factors cannot be identified, discontinue the operation.

Euthanasia

Euthanasia must be done quickly and with minimal pain or stress. All team members performing euthanasia must be competent in the proper techniques. Acceptable methods of euthanasia in small mammals include:

- Inhalants: Carbon dioxide, carbon monoxide, halothane, isoflurane, sevoflurane are recommended. Animals should be placed in a closed container with a cotton swab soaked in the inhalant agent
- Intraperitoneal injection of barbiturates
- Cervical dislocation is acceptable in mammals <200g bodyweight

Carcasses euthanized by chemical methods SHALL NOT be left in the field.

Animal Disposition

Live animals should be released at or close to the capture site. Researchers are encouraged to make enquiries beforehand about the possible museum submission of trapped animals that die. Such animals should be kept frozen and, if the provincial museum is interested, specimens will be donated upon completion of the program.

Safety

In order to minimize exposure to potentially zoonotic pathogens such as hanta viruses or bubonic plague, all team members handling traps or animals should wear protective field gear (gloves, respirator, and proper clothing) and work on the upwind side when handling live small mammals. Traps and re-usable gloves should be disinfected regularly. Information specific to hanta viruses is available on the Fish and Wildlife web pages:

<http://srd.alberta.ca/FishWildlife/WildlifeDiseases/documents/WDhantavirus.pdf>

References

- 1) B.C. Ministry of Environment, Lands, and Parks, Resources Inventory Branch for the Terrestrial Ecosystems Task Force, Resources Inventory Committee. "Inventory Methods for Small Mammals: Shrews, Voles, Mice, and Rats. Standards for components of British Columbia's Biodiversity No. 31". 1998
- 2) Guidelines for the capture, handling and care of mammals as approved by the American Association of Mammalogists, prepared by the animal use and care committee. 1998.
- 3) 2000 Report of the AVMA (American Veterinary Medical Association) on Euthanasia. JAVMA Vol. 218, no. 5, March 1, 2001.
- 4) Fish and Wildlife files

Last Modified Jan 28, 2005