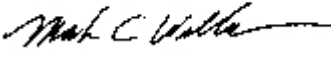




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Author: Committee: Biol, RWFM, TIEHH			Responsible faculty: (Signature/Date)  June 13, 2007

1) Risk of Field Work

Field research of all types has risks. These risks are not necessarily greater than risks associated with laboratory or other types of activities. Indeed, risk in a field situation could be much lower than risk in many other normal work-related activities. The important risks of fieldwork are those that are unique or peculiar to this activity, and thus, likely to be unexpected by inexperienced people. These risks range from the risk of injury through accident (the highest risk category in fieldwork), to risk of illness associated with being in the field (possibly at considerable distance from medical assistance). Commonly fieldwork involves direct or indirect contact with toxic plants or animals, or contact with pathological agents associated with the field environment. Fieldwork that involves the capture, containment, handling and processing of wild rodents poses its own set of potential risks. Fortunately, the most common problems are associated with handling rodents, and these are bites and scratches. Indeed, at Texas Tech University, more than 300 individuals (faculty, students, and technical personnel) have worked with (trapped, handled, and processed) wild rodents over the past 30 years. The number of animals handled exceeds 10,000; and thus far, there have been no cases of Hantavirus Pulmonary Syndrome (HPS) or other indication of Sin Nombre Virus (SNV), and no other illnesses associated with this work. For further confirmation see the Center for Disease Control and Prevention, US Department of Health and Human Services.

2) Basic Precautions

- a) The institutional SOP for collecting and handling wild rodents should include the following basic guidelines:
 - (1) The Principle Investigator (PI) or Instructor of Record is responsible for:
 - (a) Assuring that all personnel (student and faculty) are made aware of the particular risks associated with the planned field collecting trip;
 - (b) Advising all personnel to seek medical consultation and baseline physical examinations (including serotyping) if they have any personal concerns about health related issues;
 - (c) Assuring that all personnel are familiar with symptoms of lyme disease (skin or other), tick fever, and SNV (HPS) infections.
 - (2) All personnel doing fieldwork with wild rodents should be advised that inoculation against tetanus is recommended (if due) and that special care should be taken to avoid ticks and chiggers (through clothing choices, campsite selection, chemical barriers [DEET], and personal body checks). Under some circumstances (i.e., working with



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species known to harbor plague), field workers should be advised to use special caution and consider inoculation against plague.

3) Preparation, Equipment, Trapping, and Handling

a) Field Preparation

- (1) It is critical to identify species of rodents known to harbor SNV, plague, or parasites, or serve as reservoirs for other human diseases prior to conducting fieldwork in a particular locality or region.
- (2) Herein these species are termed “species of special concern”.

b) Training of Personnel

- (1) It is the PI’s responsibility to insure that faculty, students, and technical personnel involved in projects that include species of special concern are given seminars on any human health risks associated with the project. These seminars should cover pathogens, species identification, the PI’s field protocols, and symptoms of HPS and other possible diseases directly related to the fieldwork. Such training shall be documented and filed with Texas Tech University Veterinarian and Environmental Health and Safety.
- (2) Participants in field projects should sign “informed consent” documentation of their training seminars and its filing should be with the Texas Tech University Veterinarian.

c) Rodent Traps and Trap Handling

- (1) If there is risk or likelihood of capturing wild rodents associated with SNV or other pathogens (species of special concern), persons involved in the trapping should wear rubber gloves when picking up traps or handling or cleaning rodent traps. In such cases, regular disinfectant hand washing is recommended.
- (2) It is also recommended that traps be disinfected in the field (washing in 1% chlorine bleach, 5% Lysol, or other hospital grade disinfectants). It is recognized that this is often impractical in trap-mark-recapture grids, so the PI should consider suitable alternatives. Dirty traps should not be stored in tents or other human living quarters. All traps should be disinfected properly before being returned to storage. While in the field, traps should be kept in a central storage area prior to being disinfected. This area should be positioned downwind of camp or specimen processing.

d) Equipment

- (1) Tables, work areas, and instruments should be cleaned daily.
- (2) Cloth bags used for trap transport and other gear should be cleaned with suitable disinfectant before returned to campus storage.

e) Animals and animal handling

- (1) Persons who collect or check rodent traps should be familiar with species likely to be captured. If they are not (i.e., in the case of beginning students), their rodent traps should be checked in the company of a trained person, who in turn can train the student.
- (2) Open-air environment (i.e., no confinement) is probably the best place to check traps. Traps containing specimens of species documented to be potential carriers of SNV or other pathogens should be segregated from other traps if specimens are to be taken for



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processing. In capture-mark-release projects, traps containing species of special concern should be handled on the trapping grid.

- (3) Species of special concern should be processed by designated individuals with appropriate training, experience, and/or expertise (as selected by the PI or Instructor of Record). To process such specimens, the individual(s) should wear surgical gloves and long sleeves, and the processing should be conducted (if possible) either in open air and sunlight (airflow away from processor). If possible, a portable field hood with controlled airflow and HEPA filter should be considered for fieldwork.
- (4) Species of special concern that will be kept in captivity in the field, or transported should be isolated from human contact. Suitable barrier caging is recommended.

f) Clothing and personal hygiene

- (1) Boots and socks, long pants, and long-sleeve shirts are the preferred items for fieldwork. Under some circumstances disposable coverings might be advisable and PIs should consider this. The PI or Instructor on Record is responsible for deciding the circumstances (such as extremely hot weather) under which the protective advantage of the recommended clothing is outweighed by other health risk factors (e.g., dehydration, heat stress). These clothes should be laundered at the end of the day.
- (2) Gloves are essential in processing specimens. Double gloving is recommended when handling species of special concern. Frequent glove changes should be combined with hand washing in suitable disinfectants. Although not always possible under field conditions, showers (each day) are strongly recommended for persons in contact with rodent species of special concern. Hand washing with disinfectants is required before preparing food for human consumption, and smoking should not be allowed under these circumstances during the handling of species. Food and drinking water should not be stored near rodents or rodent tissues or consumed at working areas or while working with rodents.
- (3) Respirators should be available for use in situations determined by EH&S to be high risk (i.e., deliberate, as opposed to incidental collecting and extensive handling of animals known to harbor SNV or other human pathogens). PIs planning to collect such species in geographic regions or at localities or in habitats documented to "hot" zones, should consider options that will maximize human health. Fieldwork of this type is not routine for typical class field projects or training exercises.
- (4) In all cases, PIs conducting fieldwork involving species of special concern are responsible for knowing and identifying circumstances under which specialized equipment and clothing must be used. Any personnel using respirators must be fitted and certified through Occupational Safety at Texas Tech University, as required by OP 60 05.
- (5) Disposal of contaminated waste, including sharps, should be coordinated with Environmental Health and Safety (EH&S) at telephone number (806) 742-3876.
 - (a) All biologically contaminated gloves, clothes, gowns, etc., should be autoclaved and bagged for disposal through normal trash.
 - (b) Biohazardous waste which cannot be rendered harmless through autoclaving or other means must be placed in properly labeled containers and picked up by EH&S.

SOP Number: **SOP027**

Title: Collecting, Handling, and Processing of Wild Rodents



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- (c) All used sharps should be placed in approved sharps containers as required by OP 60.10, and picked up by EH&S.