

East Tennessee State University University Committee on Animal Care

Policy for Field Studies Involving Vertebrate Animals

To comply with federal regulations and guidelines, ETSU requires that the University Committee on Animal Care (UCAC) review all research, teaching and testing protocols that involve the use of live vertebrate animals (fish, birds, amphibians, reptiles, and mammals) irrespective of source of funding (departmental, public, or private) or purpose (biomedical, biological, agricultural, wildlife, testing, education, diagnostics, etc.). If a wild vertebrate animal is confined in any way, an invasive procedure is involved, or the behavior of the animal is harmed or materially altered, then the use of that animal is regulated and must comply with federal and state regulations and standards. In other words, **if a wild vertebrate animal is used for research, teaching or testing purposes and is handled or otherwise manipulated or harassed, the Principal Investigator (PI) must obtain approval by the UCAC before the study begins. All policies developed by the UCAC apply to the use of wild vertebrate animals as appropriate.** Field exercises in which animals are observed but not harassed or manipulated do not require UCAC approval.

The U.S. Department of Agriculture and the U.S. Department of the Interior together with the National Institutes of Health and the National Science Foundation are signatories of the Principles for the Utilization of Vertebrate Animals Used in Testing, Research and Training. Therefore, ETSU, as recipient of federal funds, must conform to criteria for research and teaching animals described in the USDA regulations and in the Guide for the Care and Use of Laboratory Animals (NRC 1996). These publications are essential references for all researchers dealing with live vertebrate animals whether used in the laboratory or in the field. They stress professional judgement and performance-based standards for all species. In the case of wild animals such judgement requires familiarity with the needs of the species in question. Deviations from standard laboratory animal procedures may be acceptable if the scientific value of the variant is properly justified. It is the responsibility of the investigator to provide such justification, together with applicable documentation and data.

This Policy is formulated with consideration of animal welfare and research/teaching needs. Guidelines for the care of laboratory animals often are not appropriate for wild vertebrate animals. The uses of wild animals have aspects that are not encountered in laboratory situations. However, humane treatment of wild vertebrates in the field is essential for ethical, scientific and legal reasons. Field studies may adversely affect natural populations. Investigations often involve, or necessitate, risk of injury or death to the experimental subject. Risks to individual animals should be minimized, but cannot be entirely eliminated. Risks that threaten the health or existence of entire populations are far more serious and should be minimized.

Rather than covering species-specific details in this Policy the PI and UCAC members should consult the guidelines published by the appropriate professional societies and listed in the References section at the end of this Policy. Following are some of the major points the PI must consider when submitting an animal study protocol for review:

Field Studies means any research, teaching, or testing activity involving a vertebrate animal not performed in a laboratory.

Protocol Review: The PI must complete the ETSU Animal Study Protocol form, including the Special Form F (Field Study), and obtain UCAC approval before the study involving wild vertebrate animals begins. Protocols must be reviewed at least annually and renewed every 3 years. The UCAC must inspect, at least once every six months, all of ETSU's animal study areas. Animal study areas containing free-living wild vertebrate animals in their natural habitat need not be included in such inspection.

Training: Only trained, experienced personnel may capture, handle, mark, track, transport, take tissue or fluid samples from, perform surgery, or kill wild vertebrate animals.

Live Capture: Methods of live capture must be designed to keep captive animals alive, uninjured, well provisioned and in comfortable condition. Live traps or nets must be checked frequently to prevent mortality and to maintain captive animals in prime condition. The time interval between trap checks will depend on the type of live trap, type and activity of the animals to be trapped, configuration of the trap, climate and season.

Responsibility for Dependent Offspring: The PI should recognize the dependent relationship between mother and young, and whenever possible should design sampling procedures and schedule to minimize the possibility of disturbing, removing or killing lactating females or tending individuals. When removal or killing cannot be avoided or when orphaned young are found, the PI must assume responsibility for such young.

Marking: The method of marking employed should be as painless as possible and should not restrict the normal activity or affect the well-being of the animal. To ensure the comfort of the marked animals and easy reidentification, marking methods should be appropriate for the size, future growth, body form, and habits of the species.

Transporting and Holding Captive Animals: Captured animals to be retained for brief periods or transported to a laboratory must be placed in appropriate holding cages/containers. While being transported animals must be provided with adequate space, adequate food, sources of moisture and an appropriate environment for thermoregulation. While in captivity, the animals must be maintained under conditions that meet their needs and tolerances for food, moisture, nesting, space and microclimate. Cages must be designed to accommodate salient features of the animals' ecology, morphology, physiology and behavior and must be maintained in sanitary condition. Captives must be checked at least once a day, more frequently if needed. Records must be maintained of daily observation, manipulation and care.

Release of Previously Captured Live Animals: If animals are released, the PI must ensure that animals are released as soon as possible and in the best possible condition and without impairment. Field-caught vertebrate animals must be released only at the site of original capture.

Surgery and Obtaining Tissue Samples From a Live Animal: Any procedure that causes more than momentary or slight pain or distress to the animal requires the use of an appropriate sedative, analgesic or anesthetic. Although aseptic techniques are difficult in the field, cleanliness in all surgical and puncture techniques is essential to minimize the potential for infection and to provide reliable biological samples. Operative procedures conducted at field sites need not be performed in dedicated facilities, but must be performed using aseptic procedures including preparation of the surgical site and the use of surgical gloves, masks, sterile instruments, and aseptic techniques. If needed, antibiotic drugs appropriate for the species should be given.

Euthanasia: When live-caught vertebrate animals are retained as voucher specimens or when specimens are injured or distressed and cannot be released, they must be euthanized humanely, that is, the method of euthanasia must be swift and as painless as possible, and must be compatible with the design of the investigation as well as the size and behavior of the species under investigation. Death must be confirmed. The recommendation by the Panel on Euthanasia of the American Veterinary Medical Association must be followed whenever appropriate unless the deviation is justified by the PI for scientific reasons.

Habitat and Population Consideration: The PI must design sampling procedures that minimize the likelihood that populations will suffer significant damage. The collection procedures must be conducted so as to leave the habitat as undisturbed as possible.

Health Precautions and Safety: The PI must ensure their own safety and that of their employees and students by understanding the risk of working with the animals they study and by taking appropriate safety precautions. These risks may be bites, scratches and other injuries, infectious diseases transmitted from the animal to the researcher or envenomation by venomous snakes or poisonous animals. Participation in the ETSU Occupational Health Program is mandatory for all personnel with recurrent contact with vertebrate animals.

Permits: The PI must comply with all state and federal laws and regulations and must obtain all necessary federal, state and local permits before starting the field research. UCAC protocol review does not free the PI from other regulatory requirements nor does acquisition of permits or approval from any management agency supersede UCAC protocol review.

References Applicable to Use of Wild Vertebrate Animals:

GUIDELINES FOR THE CAPTURE, HANDLING, AND CARE OF MAMMALS

American Society of Mammalogists

<http://www.mammalsociety.org/committees/comanimalcareuse/98acucguidelines.PDF>

GUIDELINES TO THE USE OF WILD BIRDS IN RESEARCH

Ornithological Societies of North America http://www.nmnh.si.edu/BIRDNET/GuideToUse/guidelines_use.html

GUIDELINES FOR USE OF LIVE AMPHIBIANS AND REPTILES IN FIELD RESEARCH

Compiled by American Society of Ichthyologists and Herpetologists (ASIH), The Herpetologists' League (HL), Society for the Study of Amphibians and Reptiles (SSAR): <http://www.asih.org/pubs/herpcoll.html>

GUIDELINES FOR USE OF FISHES IN FIELD RESEARCH. American Society of Ichthyologists and Herpetologists, American Fisheries Society, and the American Institute of Fisheries Research Biologists. 1987. Copeia Supplement: 1-12. <http://www.asih.org/pubs/fishguide.html>