Guidelines for Field Research

Regulatory and Safety Considerations

Field Studies

"I'm a Field Biologist. Must I submit my protocol for IACUC review?"

Federal regulations and Guidelines dealing with animal welfare focus mainly on biomedical and behavioral research, teaching, and testing that takes place in the LABORATORY.

Yet, Institutional Animal Care and Use Committees (IACUCs) must ensure that ALL PROJECTS involving the use of live vertebrate animals comply with federal regulations and guidelines.

So the question is asked, "Where do "Field Studies" fit in the regulatory puzzle?"

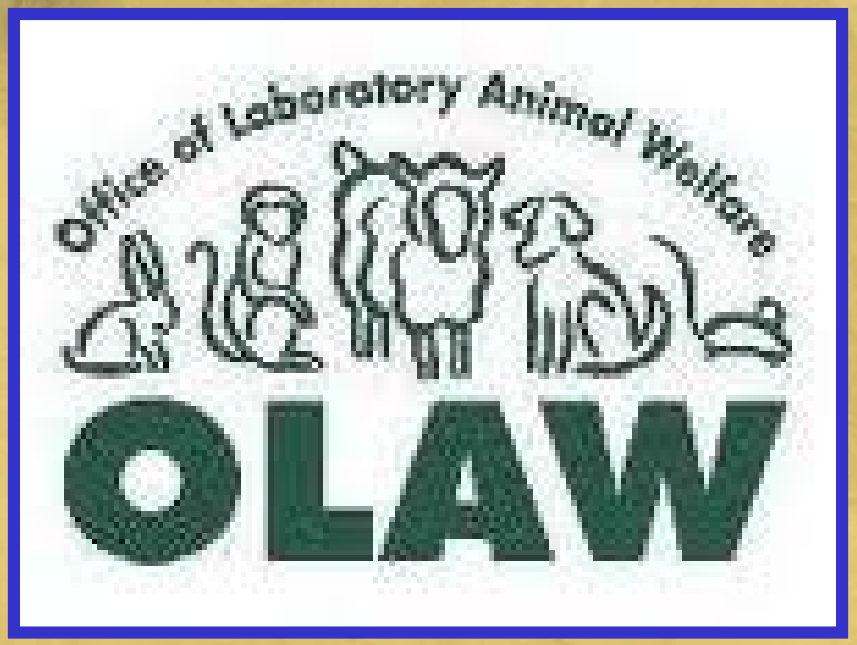
The U.S. Department of Agriculture (USDA) Animal Welfare Act (AWA) regulations define the term “Field Study” and specifically exempt such activity from IACUC review.

"Field study means any study done on free-living wild animals in their natural habitat, which does not involve an invasive procedure, and which does not harm or materially alter the behavior of the animals under study."

A. Examples of Field Studies – USDA definition

- Short term trapping for census
- Measuring weight or length
- Blood sampling—non-invasive or invasive?
- Tissue sampling – non-invasive or invasive?
- Collection of hair
- Identification, such as radio collars, tattoos, or ear tags
- Behavioral observations
- Mortality studies, e.g., road kills, bird and bat kills at tall buildings, towers, etc.

Guidelines for Field Research



E. Field Studies that Satisfy the USDA Definition Are Not Exempt From IACUC Review Since Our Institutional Assurance is to the PHS

The *Guide for the Care and Use of Laboratory Animals* (P. 32), states that

*"*zoonoses, should be reviewed by the institution's health and safety committee or office, with assurances to the IACUC that the field study does not compromise the health and safety of either animals or persons in the field*."*

Guidelines for Field Research

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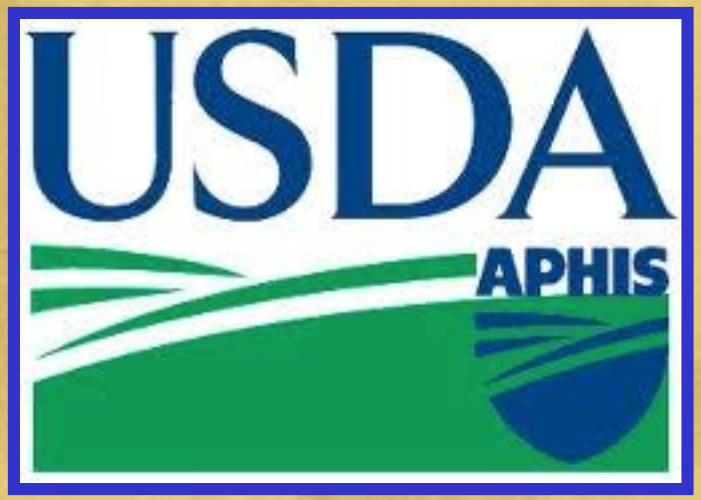


Guidelines for the Use of Animals in Field Studies

From: **Guidelines for the Use of Fishes in Research**

Research scientists have long recognized the importance of animal welfare considerations; however, formal guidelines for the use of fishes in research were not common in the United States before 1985, when requirements that research proposals obtain the approval of an IACUC were imposed. Although the principles and procedures described in these Guidelines have been designed to address requirements imposed by IACUCs, the general concepts should be applicable to researchers in all situations and all countries.

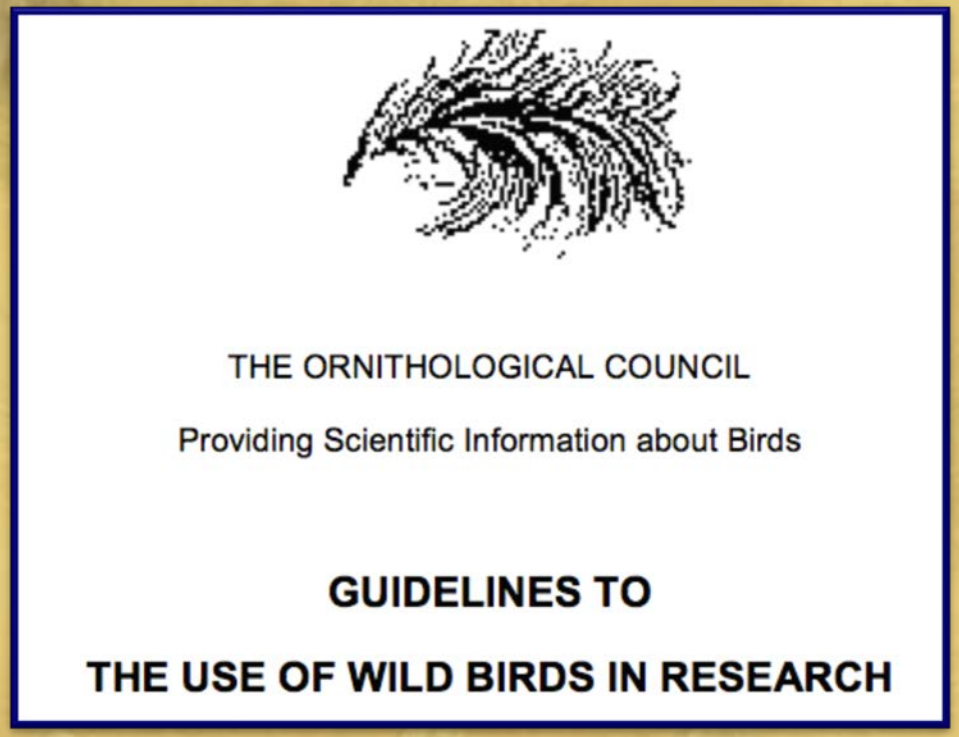
Guidelines for the Use of Animals in Field Studies

American Society of Mammalogists

http://www.mammalogy.org/uploads/Sikes%20et%20al%202011.pdf

Guidelines for the Use of Amphibians and Reptiles in Research http://www.asih.org/files/hacc-final.pdf

Guidelines for the Use of Animals in Field Studies



http://www.nmnh.si.edu/BIRDNET/documents/guidlines/Cover_August2010.pdf

AMERICAN FISHERIES SOCIETY

GUIDELINES FOR USE OF FISHES IN RESEARCH

http://www.fisheries.org/afs/docs/policy_16.pdf

Field Studies that Satisfy the USDA Definition Are Not Exempt From IACUC Review Since Our Institutional Assurance is to the PHS

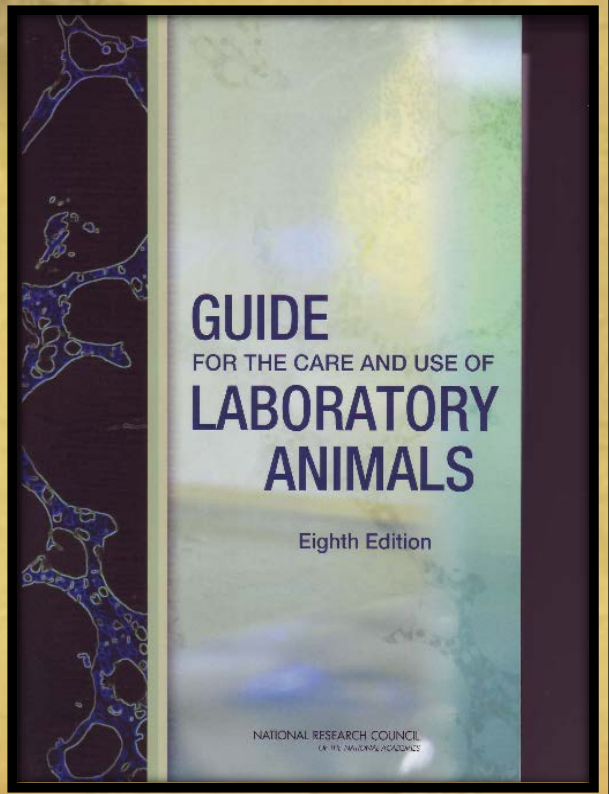
The *Guide for the Care and Use of Laboratory Animals* (P. 32), states that

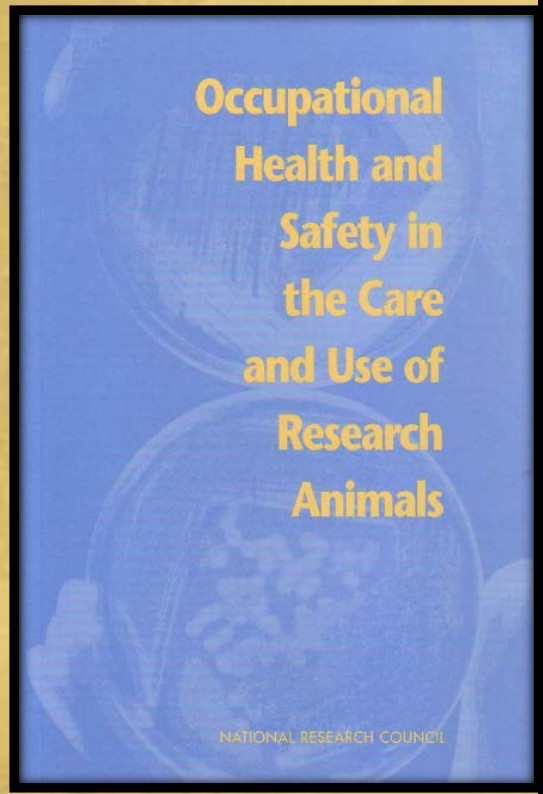
"zoonoses, should be reviewed by the institution's health and safety committee or office, with assurances to the IACUC that the field study does not compromise the health and safety of either animals or persons in the field."

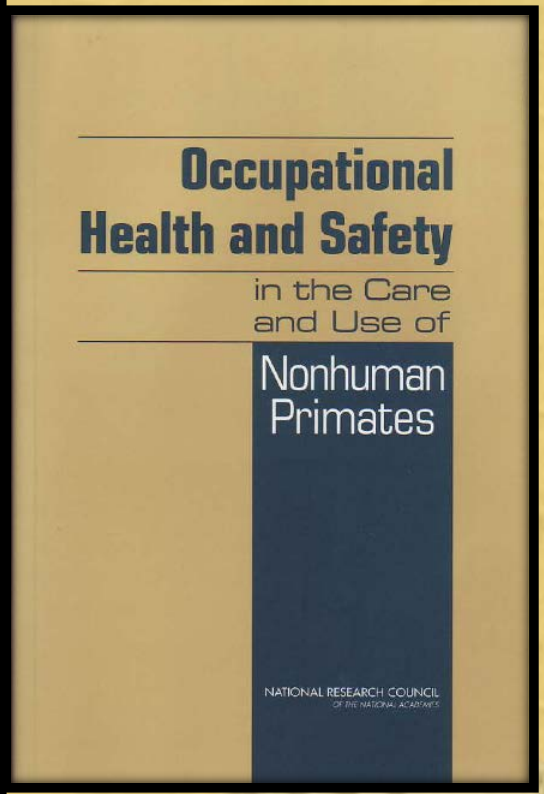
Guidelines for Field Research

- Guidelines provide recommendations that address the ethical concerns that underlie guidelines for other vertebrates while recognizing the unique nature of animals in field habitats.
- The roles, responsibilities, and information needs of Institutional Animal Care and Use Committees (IACUCs) are given specific attention.

OCCUPATIONAL HEALTH PROGRAM







OCCUPATIONAL HEALTH PROGRAM REQUIRED

- Identify Hazards
- Assess Risks
- Establish Prevention Strategies
- Train Personnel
- Provide Personal Protection

Guidelines for the Use of Animals in Field Studies - Field Safety

- Field research and studies are an integral part of the biological sciences.
- Frequently, the nature of data collection or study requires the investigator to encounter physical and biological hazards as part of their fieldwork.
- Recognizing the inherent hazards associated with field work can help prevent injuries and illnesses associated with the tasks and result in a successful collection or field study.

Guidelines for the Use of Animals in Field Studies - Field Safety

- Safety must be considered as an integral component of any course or research project.
- Consider hazards ahead of time.
- Direct supervision, usually by the faculty member or designee.
- Establish buddy system.
- Take first aid kits.
- Assess need for special accommodations, i.e. allergies, fitness levels of students, sensitivity to heat, other visible or hidden disabilities.

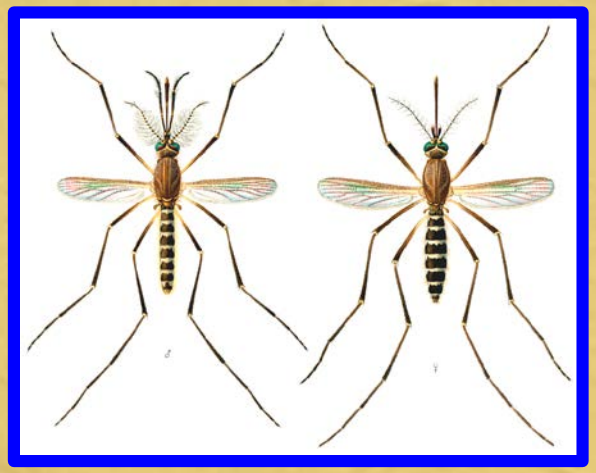
Guidelines for the Use of Animals in Field Studies - Field Safety

- Hazards
  - Heat
  - Terrain
  - Trauma
  - Falls
  - Poison Ivy
  - Insect bites (mosquitoes, ticks, fire ants, mites)
  - Bites from non-venomous and venomous animals - snakes, spiders, etc.
  - Zoonoses (Hanta, Rabies, LCMV, WNV, SLE, Zika, Chikungunya, RMSF, Lyme, Ehrlichia, Rat Bite Fever)

Guidelines for the Use of Animals in Field Studies - Field Safety

- Safety Equipment
  - Proper clothing, boots, long sleeve shirt, long pants, tuck pants into socks, etc.
  - Insect repellent
  - Water or water purification
  - Gloves
  - Animal capture equipment
  - First Aid Kit
  - Emergency phone numbers

Guidelines for the Use of Animals in Field Studies – Arthropod Hazards



- Mosquitoes of Texas
  - *Culex quinquefasciatus*
    - Southern house mosquito
    - Active at dawn, dusk and overnight
    - Eggs laid in large bodies of organic polluted water, like sewers, drainage ditches
    - Can be targeted by spraying programs
    - Likes to bite birds and humans
    - Transmits SLE, WNV, WEE (probably not Chikungunya and Zika)

Guidelines for the Use of Animals in Field Studies – Arthropod Hazards

- Mosquitoes of Texas
  - *Aedes albopictus*
    - Asian tiger mosquito
    - Aggressive mosquito
    - Active during daylight hours
    - Eggs laid in small amounts of standing water, like tires, cemetery vases, flower pots, etc.
    - Spraying programs not effective, breeding site control is (no standing water or treat water)
    - Adaptable species, difficult to eliminate
    - Likes to bite birds, humans, other mammals
    - Transmits Dengue, Yellow fever, Chikungunya and Zika
    - Also transmits heartworms in dogs

Guidelines for the Use of Animals in Field Studies – Arthropod Hazards

- Mosquitoes of Texas
  - *Aedes aegypti*
    - Yellow fever mosquito
    - Aggressive mosquito
    - Active during dusk, dawn, daylight
    - Eggs laid in small amounts of standing water, like tires, cemetery vases, flower pots, etc.
    - Spraying programs not effective, breeding site control is (no standing water or treat water)
    - Not as hardy as the tiger mosquito, range is smaller
    - Likes to bite mammals
    - Transmits Dengue, Yellow fever, Chikungunya and Zika

Guidelines for the Use of Animals in Field Studies – Arthropod Hazards

- Kissing bugs
  - Widespread distribution throughout Texas
  - Active at dusk and dawn
  - Attracted to white lights at night
  - Body and feces can harbor *Trypanosoma cruzi* organisms
  - *T. cruzi* causes Chagas disease
  - Do not handle bugs with bare hands
  - Collect in vial or plastic bag
  - Contact kissingbug.tamu.edu to submit

Guidelines for the Use of Animals in Field Studies – Arthropod Hazards

Kissing bugs continued

- Bugs don't inject organism when biting, but defecate in wound after feeding
- When removing bugs from your body:

  "If you squash instead of flick

  It can make you very sick."
- Like to feed on human faces,

  hence the term "kissing" bug
- Acute phase Chagas can go unnoticed
- Chronic phase can be silent for decades, then can manifest serious cardiac or intestinal complications later in life.

Guidelines for the Use of Animals in Field Studies – Arthropod Hazards

Black Widow Spider

Brown Recluse Spider

Guidelines for the Use of Animals in Field Studies – Snake Hazards

Guidelines for the Use of Animals in Field Studies – Snake Hazards

CORAL SNAKE

KING SNAKE

Red touch black – friend of Jack
Red touch yellow - kill a fella

Guidelines for the Use of Animals in Field Studies – Snake Hazards

Rattlesnake

Copperhead

Guidelines for the Use of Animals in Field Studies – Plant Hazards

Guidelines for the Use of Animals in Field Studies - Field Safety

- At most institutions, the physical injuries incurred during the course of a field study are:
  - Scratches
  - Lacerations
  - Puncture injuries
    - Hooks, fins, other sharp objects. Need to be current on tetanus vaccination (within the last 10 years)
  - Broken bones

Guidelines for the Use of Animals in Field Studies - Field Safety

Last but most important – the legal release of indemnity form available from UH Legal must be in place for all UH sponsored field studies:

Form No. OGC-S-2013-11

RELEASE AND INDEMNIFICATION AGREEMENT

PARTICIPANT: (Name and Address)

INSTITUTION:

University of Houston - _____

Dept. - _____

DESCRIPTION OF ACTIVITY OR TRIP: _____

LOCATION(S): _____

DATE(S): _____

I, the above-named Participant, have voluntarily applied and/or agreed to participate in the above-described Activity or Trip (hereinafter referred to as "the Activity or Trip"), which is associated with the above-named institution (hereinafter referred to as the "Institution"). I acknowledge that the nature of the Activity or Trip may expose me to hazards or risks that may result in my illness, personal injury, or even death, and I fully understand and appreciate the nature of such hazards and risks. Such risks may include, but are not limited to, illness, personal injury, or death that is caused from traveling via any means of transportation to and from the Activity or Trip and/or during the duration of the Activity or Trip, as well as engaging in activities or events that are