

WVU IACUC POLICY: Field Studies

Field studies are studies that involve free-ranging animals. Such studies may involve essentially any vertebrate species, and under varied environmental conditions. Field studies by their very nature can invoke special hazards such as worker safety from natural hazards, exposure/getting lost, animal-induced injuries and zoonotic diseases and disease vectors. Such studies also place animals at added risks such as exposure, predation, drowning, capture stress and injury. Any research or teaching procedure that decreases the survival potential of a species in the field requires careful thought and planning to minimize the impact of such studies on the animals in question. In this context, the WVU IACUC is obligated to ensure that the best, least invasive practices are used for the animal's wellbeing after release, in addition to the usual welfare concerns at the time of capture as relates to minimizing pain and distress while optimizing survival. In some cases, wild animals are being studied that are consumed and the issue of drug withdrawal times must be considered (e. g. mark-recapture of game fish and MS-222 use during capture). Lethal collection methods must be scientifically justified. Finally, copies of current local, state and/or federal collecting or endangered species permits must be on file in the WV ORIC Office for an IACUC protocol to be approved. Failure to keep these permits current means that the protocol is suspended on the expiration date, and any work as specified within the protocol, as well as outside of it is a compliance violation. In some cases, permits cannot be applied for ahead of the work. In such cases, the IACUC protocol may be approved, but the work itself cannot continue until the necessary permit approvals are secured and new updated copies are filed in the ORIC office with the PI's approved protocol.

In some cases, professional societies have published guidelines for field studies. Many of these recommendations are helpful, however such guidelines must be checked to ensure the standards are current, or the WVU IACUC may require other or additional standards where applicable.

The 2011 (8th ed.) *Guide* extends IACUC oversight to casual observational studies, and requires that even these non-invasive observational studies have IACUC approval. *The Guide* also raises the concern that even passive observers could affect the survival of animals under observation. Examples include driving mothers off incubated young during inclement weather and increased predation when predators are cued to prey by observers.

Acquisition of animals for the purpose of mark-recapture studies or sample collection can cause increased personnel and animal risks. In some cases it is scientifically necessary to double-mark animals for marker validations, although it is counter to the study's intent, such marking procedures have the potential to make the animal more prone to increased predation to diminish survival in other ways. Disease, animal-induced injury and special worker considerations related to such activities are identified by completing the animal health questionnaire and addressed by Occupational Medicine, and where needed by consultation with OLAR or other informed parties.

If such animals are placed in captivity, they may require species-specific requirements for their optimal care. To do so, PI's will need to pre-arrange with OLAR how to meet these requirements. Information from OLAR and/or professionals with this experience are crucial to a successful outcome.

Policy for the Study of Free-Ranging Animals

1. All studies (i. e. for teaching, or data collection) involving the systematic observation or manipulation of free-ranging animals must have an approved IACUC protocol.
2. For all studies, researchers need to explain in their protocol the steps they will take to minimize pain, suffering and optimize survival of animals observed or manipulated in the field.
 - a. If surgery is required, the use of non-sedating (e. g. non-steroidal anti-inflammatory drugs, local anesthetics, etc.) at the surgery site may be preferred over more debilitating systemic drugs.
 - b. All surgery procedures should employ an intradermal pattern and absorbable suture and/or tissue glue (small incisions < 1 cm, or when combined with absorbable suture) remove the need for recapture for suture removal.
 - c. Surgical procedures should only be performed by trained or experienced personnel using appropriate anesthetics, and in consideration of applicable withdrawal times where relevant. Recovery should be complete before anesthetized animals are released.
 - d. Muscle relaxants are not adequate for painful procedures during wildlife immobilization.
3. In cases where animals are captured, great care should be used to ensure the animals are not injured (including damage to their plumage) and are released in optimal condition (i. e. capable of exhibiting normal behaviors) under favorable environmental conditions, and always at their original site of capture.
4. When animals are held in traps they should not be held any longer than necessary, but not to exceed 12 hours. During trap placements and processing, if the traps are not directly observed at all times, adequate provisioning for high radiant exposures (out of the sun; work during the cool periods of the day); flooding (proper location or floatation use) and freezing temperatures (adequate bedding and food if below 0 deg C), should be ensured.
 - a. Leg-hold traps should only be used under special circumstances. Although it is preferred that leg-hold traps be directly observed at all times, have jaws that are suitably designed or padded to avoid unnecessary injury, and the chains are equipped with multiple swivels, there may be circumstances that necessitate the use of leg-hold traps where direct observation is not practical or feasible.
 - b. Mist nets carry the same concerns, and should be attended continuously to avoid excessive trauma, excessive environmental exposure, and predation.
 - c. Fish capture methods should also minimize by-catch. Adequate training and personnel safety should be observed with electrofishing or chemical agent use. Federal and state regulations may apply to the use of chemical agents in certain water bodies. These laws should be carefully observed.
5. Whenever baits, oral agents (e. g. Alpha-chloralose; oral poisons*, etc.) or generic capture methods such as electrofishing, use of nets (e. g. Trammel, hoop or gill nets) or mist nets are used, a description of how to minimize by-catch and unintended losses of animals not under study is expected. Adequate experience or prior training is of considerable importance before used nonspecific methods.

*For example, for terminal fish collections with rotenone, as might be used during population studies, rotenone application should follow standard protocols, and should only be used only in relatively still water or in blocked off coves where rotenone exposure can be controlled, and where potassium permanganate inactivation can be effectively applied.