



Protocol: Golden Eagle mortality investigation and carcass submission

Purpose of the work: The U.S. Fish and Wildlife Service Division of Migratory Bird Management has initiated a study of satellite-tagged golden eagles that includes, as a major objective, determining the cause of death of any eagles that die and can be recovered. The following protocol describes the steps that should be taken for collection, storage, and shipment of eagle carcasses to the Southeastern Cooperative Wildlife Disease Study (SCWDS). Upon arrival at the SCWDS laboratory, a full post-mortem examination (necropsy) will be performed on each eagle to determine cause of death; this will include collection of tissue samples for evaluation of contaminant levels.

Carcass Shipment Protocol:

1. Upon receiving a mortality signal from the satellite transmitter, notify Brian Millsap (505-559-3963), and then recover the carcass as quickly as possible.
 - a. Inspect the area where the bird is found for indications of predation, struggle, power lines or towers, bait, etc. Take digital photographs of the scene.
 - b. Before coming in contact with the dead bird, put on a pair of disposable latex or nitrile gloves.
 - c. Inspect the carcass for bullet wounds.
 - d. Remove and retain the transmitter for refurbishing.
 - e. Double-bag the carcass in heavy duty plastic bags.
 - f. Tag the outer bag with date, location, and eagle band number.
 - g. Place the double-bagged carcass in a cooler with plenty of frozen blue ice packs or wet ice for transport to the duty station, and then transfer into a refrigerator when possible to thoroughly chill it down.
2. Assess the condition of the carcass.
 - a. If the carcass has been heavily scavenged or is badly decomposed, limited diagnostics may be available. Discuss the case with Brian Millsap to determine if post-mortem examination at SCWDS is appropriate.
 - b. Birds should be submitted for necropsy even if cause of death seems obvious (trauma, predation, etc.) as disease may have altered the mentation of the bird and predisposed it to injury.

- c. **EXCEPTION:** Birds that appear to have been shot, maliciously poisoned, or apparently died due to illegal activity should be directed to:
U.S. Fish & Wildlife Service National Forensics Laboratory
1490 East Main Street, Ashland, OR 97520-1310
Phone: (541) 482-4191, <http://www.lab.fws.gov/index.php>
3. Once the carcass has been collected and assessed, call SCWDS at 706-542-1741. Ask for the veterinarian on duty and tell them you have a golden eagle carcass to submit as part of the U.S. Fish and Wildlife Service project.
 - a. If the carcass is recovered on a Monday, Tuesday, Wednesday, or Thursday, the veterinarian on duty will ask you to cool the carcass in the refrigerator, and then ship the carcass FedEx overnight with frozen blue ice packs (for arrival first thing the next morning) to SCWDS.
 - b. **The SCWDS lab is not open on weekends to accept packages**, so if the carcass is recovered on a Friday, Saturday, or Sunday, it must be refrigerated until Monday for shipment.
4. Fill out the SCWDS Necropsy Submission Form (click hyperlink below) <http://www.vet.uga.edu/scwds/pdfs/submissionform.doc>
5. After it has been thoroughly chilled in the refrigerator, pack the double-bagged carcass in a cooler with plenty of frozen blue ice packs
 - a. Don't forget to place a copy of the filled-out SCWDS Necropsy Submission Form in a Ziploc bag and put it in the cooler with the carcass!
 - b. Make sure to use a durable plastic cooler, or a thick-walled styrofoam cooler protected by an outer cardboard box.
6. Ship by FedEx overnight to SCWDS:

Southeastern Cooperative Wildlife Disease Study (SCWDS)
Department of Population Health
589 D.W. Brooks Drive
Wildlife Health Building
College of Veterinary Medicine
University of Georgia
Athens, Georgia 30602
PHONE: 706.542.1741
FAX: 706.542.5865
7. Email the FedEx package tracking number and an electronic copy of the Necropsy Submission Form to the SCWDS veterinarian on duty.

Testing protocol:

1. All birds:
 - a. Radiograph (x-ray)
 - b. Gross pathology (include assessment of external transmitter site for injury/abrasions)
 - c. Histopathology

- d. Collect tissues for toxicology testing on all birds
 - i. Lead, mercury
 - ii. Organophosphates and carbamates
 - iii. Organochlorines
2. Perform microbiology and special stains if warranted by gross or histopathology findings
3. Send final diagnostic reports to submitter, Brian Millsap, and Sam Gibbs

FWS contacts:

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