Appendix H

BIGHORN SHEEP NECROPSY PROTOCOL

Introduction. Anytime a bighorn sheep dies naturally or is euthanized for management reasons, a thorough necropsy should be performed. Preferably, the entire carcass would be shipped to the Wyoming State Veterinary Laboratory (WSVL) so the necropsy can be conducted under controlled conditions (arrangements for delivery should be made with Hank Edwards of WGFD (307) 745-5865 or directly with WSVL (307) 742-6638). At times it is nearly impossible to deliver an intact carcass. When this occurs, trained personnel should perform field necropsies. This appendix is meant to serve as a check list and reminder of the tissues that need to be collected on field necropsies of bighorn sheep.

Methods. Please follow and fill out the necropsy form provided (additional forms available from Walt Cook at WSVL). Relevant animal information should be noted (location, disease history etc.). When possible, the animal can be weighed. Hair coat quality should be subjectively estimated. The hair coat should be thoroughly examined, and any external parasites noted and collected in a container filled with ethyl alcohol. Body muscle condition can be subjectively estimated on a scale of 0-5 (0=very poor; 5=excellent condition). Incisions can be made along the back at 1) tail base 2) cranial to hind quarter and 3) above the shoulder. Body fat is scored as follows: 0= no fat seen, 5= fat seen at 1 only, 10= fat seen at 1&2, 15= fat seen at all 3 locations. A subjective body condition can also be assigned (excellent, very good, good, fair, poor, very poor, emaciated).

The animal will then be opened per normal necropsy technique. The amount of fat may be measured (in mm) on the heart, kidneys, omentum and xyphoid. A femur may be cracked and the bone marrow examined for color and texture and taken for histology. Standard tissues should be sampled for histology; tissues need to be placed in a leak-proof container with plenty of 10% formalin (these are called "fixed" tissues). Be sure to sample at least 5 different areas of the lung. Any abnormal appearing tissues should be sampled for further evaluation at WSVL. A description of the abnormal tissue should be included on the necropsy form. Photographs of lesions/abnormalities are also useful.

Bighorn Sheep Necropsy Form

Herd name/location _____ Animal id (if any) _____

Location: Township _____ Range _____ Section _____ or UTM _____

WSVL Accession # _____ Date of necropsy _____

History/signs of disease prior to death:

Estimated Age _____ Sex _____ Weight (if available)_____

Hair coat quality: Excellent Good Fair Poor Very poor

Species and number of external parasites: Collected? _____

Body muscle (0-5) _____ Back fat score: 0 5 10 15

Mm Fat on: Heart_____ Kidneys_____ Omentum_____ Xyphoid_____

Bone Marrow Color _____ Texture _____Subjective Body Condition:_____

Internal Exam Notes:

Species and number of internal parasites: Collected? _____

Fetuses: _____ Weight: #1:_____ #2:_____ Sex: #1:____ #2___

Crown-Rump: #1:_____ #2_____ Crown- nose #1:_____#2:_____

Tissues fixed:

Heart _____
Liver _____
Spleen _____
Lung _____
Tongue _____
Muscle _____
Kidneys _____
Rumen _____
Reticulum _____
Omasum _____
Abomasum _____
Ileum _____
Gonads _____
Brain _____
Pancreas _____
Ileocecal LN _____
Bladder _____
Bone Marrow

Tissues taken for laboratory evaluation:

Fecal (parasitology) _____
Blood (red tops) x2 _____
Blood (green top) _____
Blood (purple top) _____
Teeth (both I1s) for aging ___
Lungs _____
Tonsil swab in Port-A-Cul __
Liver _____
Kidneys _____
Brain _____
Rumen contents _____
Feces _____
Fat _____
Nasal Swabs _____
Ear Swabs _____

Fetal Tissues Fixed:

Liver

Others (list):

Fetal Tissues Fresh:

Kidney _____
Eyeball _____
Abomasum