

IDAHO DEPARTMENT OF FISH AND GAME

Cal Groen, Director

Project W-179-R-9

Job Progress Report



WILDLIFE HEALTH LABORATORY

Study I, Job 1

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July 1, 2009 to June 30, 2010

**September, 2010
Boise, Idaho**

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PROGRESS REPORT SURVEYS AND INVENTORIES

STATE: Idaho **JOB TITLE:** Wildlife Laboratory
PROJECT: W-179-R-9
SUBPROJECT: Lab **STUDY NAME:** Wildlife Surveys and Inventories
STUDY: I
JOB: 1
PERIOD COVERED: July 1, 2009 to June 30, 2010

ABSTRACT

During the 2009-2010 project year, the Idaho Department of Fish and Game (IDFG) Wildlife Health Laboratory (WHL) in Caldwell, Idaho was actively involved in the collection of biological data in support of wildlife management and research with regard to various aspects of wildlife health. More than 2900 biological samples from over 28 wildlife species were collected for health assessments. Necropsies were performed on 428 animals to determine cause of death. Several papers and abstracts were submitted for publication, including collaborative efforts with other institutions. WHL personnel offered five animal restraint and drug handling courses. WHL personnel were involved in disease investigations and multi-agency research projects with the University of Idaho; Oregon Department of Fish and Wildlife; Washington Department of Fish and Wildlife; U.S. Department of Agriculture, Animal and Plant Health Inspection Service, Idaho State Department of Agriculture, and Idaho Department of Health and Welfare. Wildlife Health Lab personnel are active participants in the Western Association of Fish and Game Agencies, Wildlife Health Committee

OBJECTIVES

1. Provide laboratory services and field support for disease surveillance and investigation in support of the wildlife management and research activities of the Bureau of Wildlife.
2. Continually update procedures and techniques for data collection, determination, dissemination, and storage.
3. Provide other lab services upon request and as priorities dictate.

DISEASE SURVEILLANCE

One of the primary objectives of the WHL is to establish baseline data on diseases and disease exposure in wildlife populations and to monitor the health of these populations, through time, with continued sampling and analyses. Pathogens can be present in individuals or within a population without showing any significant signs of disease. As environmental and population conditions change with time, the significance of pathogens change. Factors that influence disease processes, including nutrition, trace mineral levels, stress, habitat quantity and quality, and human interactions, must be considered in evaluation and management of disease in wildlife.

BIOLOGICAL SAMPLES

During the 2009-2010 project year WHL personnel processed biological samples collected from different species of wildlife throughout the state. Brucellosis and Chronic Wasting Disease (CWD) surveillance continued throughout the state; with a primary emphasis for Brucellosis in Eastern Idaho. CWD samples were collected primarily from hunter check stations and other health related samples were collected for the following health-related surveillance: hematology, serology, serum biochemistry, virology, bacteriology, Mycoplasmosis, internal and external parasites, trace minerals and toxicology.

All animal health records are archived in an electronic database for dissemination and reporting on wildlife health. The database receives continuous data quality audits to ensure data accuracy and continuity.

FY2010 BIOLOGICAL SAMPLES PROCESSED	
CWD Samples (2009 Season)	1247
Blood samples for brucellosis	126
Live Animals sampled for disease surveillance	428
Necropsy/Tissue Samples	653
DNA Samples	477
Total Samples tested FY 2010 (07/01/2009 – 06/30/2010)	2931

NECROPSIES

The species examined included: bald eagle, bat, beaver, bighorn sheep, Canada goose, dove, golden eagle, elk, fox, black bear, grouse, moose, mountain goat, mule deer, river otter, owl, porcupine, red fox, red-tailed hawk, sage grouse, skunk, sharp-shinned hawk, snow geese, songbirds, squirrel, swan, tern, white-tailed deer and wolf

NECROPSY LOG SUMMARY	
Necropsies Performed	428
Bighorn sheep horn shavings	99
Wolf DNA samples	327
Black bear hair samples	27
Mountain lion DNA samples	24
Tissue samples analyzed	93
Total Necropsy entries FY 2010 (07/01/2009 – 06/30/2010)	998

Waterfowl mortality diagnosed by the WHL included trauma, botulism and organophosphate intoxication.

Ungulate mortality factors identified included pneumonia, gunshot (poaching), predation and other disease processes including exotic lice, *Bovicola tibialis* in mule deer in central Idaho.

Wolf necropsies indicated the continued presence of lice (*Trichodectes canis*) and tape worm (*Echinococcus granulosus*), previously detected, ~~last year~~, in Idaho.

RESEARCH ACTIVITIES

The WHL cooperated on statewide research projects in mule deer ecology, predator/ungulate ecology, wolverine disturbance, black bear population assessment, and bighorn sheep survival. The animals were captured using a variety of methods including net gunning, darting, drive netting, and various snares or traps. Animals were radio-collared, ear tagged, measured, evaluated for health status, and sampled depending on the capture protocols.

WHL personnel collaborated with private research foundations and BSU to continue investigation of West Nile Virus in raptors in SW Idaho.

CHEMICAL IMMOBILIZATION TRAINING

WHL personnel are responsible for instructing biologists and conservation officers in wildlife capture techniques using chemical immobilization and certification for use of controlled substances. A total of 46 Fish & Game personnel and 11 personnel from outside agencies were certified through 5 training classes in 2010.

LIAISON WITH OTHER AGENCIES

The WHL works with other state, federal, and private organizations on wildlife health issues. The Wildlife veterinarian represents IDFG on the Wildlife Health Committee of the Western Association of Fish and Wildlife Agencies. This committee provides information to the agency directors about disease issues in wildlife and to coordinates disease surveillance and dissemination of current disease problems in the western USA.

The WHL veterinarian represents IDFG at the U. S. Animal Health Association through membership on the Captive Wildlife and Alternative Livestock, Brucellosis, Tuberculosis and Wildlife Disease Committees. These committees provide discussion forums on specific topics and information for federal and state regulatory agencies on wildlife disease issues and their relationship with livestock diseases.

Strong affiliations are also in place with the University of Idaho, Washington State University, and Boise State University. These affiliations help the WHL direct and collaborate on research projects on wildlife health. In addition, the WHL has worked cooperatively with the National and Idaho Chapter of the Wild Sheep Foundation. WHL personnel also work with the Peregrine Fund and its activities in monitoring birds and nest sites.

PUBLICATIONS, ABSTRACTS AND PRESENTATIONS

WHL personnel made presentations on IDFG/WHL projects and research at the 2010 United State Animal Health Association Meeting and the 2009 Wildlife Disease Association Meeting. Presentations were made on brucellosis in elk in Idaho at several regional and local meetings. WHL personnel collaborated on several publications during the project year.

Drew, Mark L, C. Hay, and T. Hebdon. 2009. Wildlife Health Laboratory, Job Prog. Rep. W-179-R-8, Idaho Dep. Fish and Game, Boise.

Drew, Mark L. 2009. Idaho Chronic Wasting Disease Surveillance Plan Update.

Drew, Mark L. 2009. IDFG Wildlife Restraint Manual.

Drew, Mark L., and S. Stopak. 2009. Aleutian disease in feral and wild carnivores in Idaho. Wildlife Disease Association Annual Meeting, Blaine, WA.

Drew, Mark L., 2009, Governor's Brucellosis Plan Annual Report

Weiser, G. C., D. S. Miller, Mark L. Drew, J. C. Rhyan and A. Ward. 2009. Variation in *Pasteurella* (Bibersteinia) and *Mannheimia* spp. following transport and antibiotic treatment in free-ranging and captive Rocky Mountain bighorn sheep (*Ovis canadensis*). Journal of Zoo and Wildlife Medicine 40:117-125.

Foryet, W. J., Mark L. Drew, M. Atkinson and D. McCauley. 2009. *Echinococcus granulosus* in gray wolves and ungulates in Idaho and Montana, USA. Journal of Wildlife Diseases 45:2008-2012.

Drew, Mark L., K. Rudolph, G. C. Weiser, and A. C. S. Ward. Long term monitoring of BHS in contact with domestic livestock. In preparation.

Drew, Mark L., and G. C. Weiser. Disease survey of domestic goats and their potential relationship to disease in BHS. In preparation.

Hosch-Hebdon, Tricia, K. Rudolph, C. Hay, "Packaging and Shipping Forensic Evidence: Costly Risks of the Job" Society for Wildlife Forensic Sciences, April 2010 Abstract: In press.

Rudolph, Karen, T.T. Hosch-Hebdon, G. Wooten, J. Ruth, "Forensic Training of Wildlife Conservation Officers: Idaho's Approach" Society for Wildlife Forensic Sciences, April 2010, Poster.

Hosch-Hebdon, Tricia, K. Rudolph, J. Hunter, "Utilizing Wildlife Forensics to Protect Natural Resources: A Case Study in Catching a Bighorn Sheep Poacher." Northern Wild Sheep and Goat Council Proceedings of the Seventeenth Biennial Symposium – In Press, June 2010.

Submitted by:

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Approved by:

IDAHO DEPARTMENT OF FISH AND GAME

A handwritten signature in black ink that reads "Brad Compton". The signature is fluid and cursive, with the first name "Brad" and last name "Compton" clearly distinguishable.

Brad Compton, Assistant Bureau Chief
Bureau of Wildlife

A handwritten signature in black ink that reads "Jeff Gould". The signature is cursive, with "Jeff" and "Gould" written in a connected style.

Jeff Gould, Bureau Chief
Bureau of Wildlife

FEDERAL AID IN WILDLIFE RESTORATION

The Federal Aid in Wildlife Restoration Program consists of funds from a 10% to 11% manufacturer's excise tax collected from the sale of handguns, sporting rifles, shotguns, ammunition, and archery equipment. The Federal Aid program then allots the funds back to states through a formula based on each state's geographic area and the number of paid hunting license holders in the state. The Idaho Department of Fish and Game uses the funds to help restore, conserve, manage, and enhance wild birds and mammals for the public benefit. These funds are also used to educate hunters to develop the skills, knowledge, and attitudes necessary to be responsible, ethical hunters. Seventy-five percent of the funds for this project are from Federal Aid. The other 25% comes from license-generated funds.

