

**IDAHO DEPARTMENT OF FISH AND GAME**

**Cal Groen, Director**

**Project W-179-R-8**

**Job Progress Report**



**WILDLIFE HEALTH LABORATORY**

**Study I, Job 1**

**Prepared By:**

**Brad Compton  
Mark Drew, D. V. M.  
Julia Mulholland  
Constance Hay  
Tricia Hosch-Hebdon, M.S.  
Karen Rudolph, Ph.D.**

**July 1, 2008 to June 30, 2009**

**September, 2009  
Boise, Idaho**

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**PROGRESS REPORT  
IDAHO DEPARTMENT OF FISH AND GAME**

**STATE:** Idaho                      **JOB TITLE:** Wildlife Laboratory  
**PROJECT:** W-179-R-8  
**SUBPROJECT:** Lab                      **STUDY NAME:** Wildlife Surveys and Inventories  
**STUDY:** I  
**JOB:** 1  
**PERIOD COVERED:** July 1, 2008 to June 30, 2009

**ABSTRACT**

During the 2008-2009 project year, the Idaho Department of Fish and Game (Department) 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 2800 biological samples from over 37 wildlife species were collected for health assessments. Necropsies were performed on 174 animals to determine cause of death. Several papers and abstracts were submitted for publication, including collaborative efforts other institutions. WHL personnel offered four 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 2008-2009 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.

<b>FY2009 BIOLOGICAL SAMPLES PROCESSED</b>	
CWD Samples (2008 Season)	984
Brucellosis	193
Other Health-Related Tests	1194
Tests ordered at necropsy	435
<b>Total Samples tested FY 2009 (07/01/2008 – 06/30/2009)</b>	<b>2805</b>

## NECROPSIES

The species examined included: bald eagle, bat, bighorn sheep, Canada goose dove, golden eagle, elk, finch, fox, grizzly bear, grouse, harlequin duck, moose, mountain goat, mule deer, otter, owl, pine siskin, prairie dog, raccoon, red fox, red-tailed hawk, robin, sage grouse, sharp-shinned hawk, snow geese, songbirds, squirrel, swan, tern, turkey, weasel, white-tailed deer and wolf

<b>NECROPSY LOG SUMMARY</b>	
Necropsies Performed	174
Bighorn sheep horn shavings	24
Wolf DNA samples	47
Tissue samples only, no necropsy	26
<b>Total Necropsy entries FY 2009 (07/01/2008 – 06/30/2009)</b>	<b>339</b>

Necropsy results on songbirds indicated diseases associated with bird feeders including Salmonellosis, Avian pox and Trichomoniasis. Waterfowl mortality diagnosed by the WHL included trauma, botulism and organophosphate intoxication.

The most common cause of bighorn sheep mortality diagnosed by the WHL was acute bronchopneumonia caused by *Pasteurella multocida*, *Mannheimia (Pasteurella) haemolytica*, and *Mannheimia (Pasteurella) trehalosi*. Other ungulate mortality factors identified included gunshot (poaching) and predation and other disease processes including pneumonia and an exotic louse, *Bovicola tibialis* in mule deer in central Idaho.

Wolf necropsies indicated the continued presence of lice (*Trichodectes canis*) and tape worm (*Echinococcus ganulosus*), previously detected, last year, in Idaho. Most wolves received were lethal removals by USDA WS personnel for suspected depredation of livestock.

## **RESEARCH ACTIVITIES**

The WHL cooperated on statewide research projects in mule deer ecology, predator ungulate ecology, and bighorn sheep survival. The animals were captured using a variety of methods including net gunning, darting, and mugging on drive net operations. 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 44 Department personnel and 17 personnel from outside agencies were certified through 4 training classes in 2009.

## **LIAISON WITH OTHER AGENCIES**

The WHL works with other state, federal, and private organizations on wildlife health issues. The Wildlife veterinarian represents the Department 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 the Department 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 Department/WHL projects and research at the 2009 United State Animal Health Association Meeting and the 2008 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., and A. Ward. 2008. Bighorn sheep interactions with livestock, 1994-2008. Wildlife Disease Association Annual Meeting, Edmonton, Alberta, Canada.

Drew, Mark L. 2008. Surgical placement of abdominal transmitters in two mule deer (*Odocoileus hemionus*). Wildlife Disease Association Annual Meeting, Edmonton, Alberta, Canada.

Drew, Mark L., and A. Ward. 2008. Bighorn sheep interactions with livestock, 1994-2008. Wildlife Disease Association Annual Meeting, Edmonton, Alberta, Canada.

Drew, Mark L. 2008. Surgical placement of abdominal transmitters in two mule deer (*Odocoileus hemionus*). Wildlife Disease Association Annual Meeting, Edmonton, Alberta, Canada.

Drew, Mark L., and G. C. Weiser. 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.

Stauber, Erik., Julia A. Mulholland, , E. W. Levine., Y. Suzuki., and J. Hall 2008. Successful Rehabilitation of a Severely Injured Peregrine Falcon. *Journal of Avian Medicine and Surgery* 22: 346-350.

Submitted by:

Mark Drew, D.V.M.

Wildlife Veterinarian

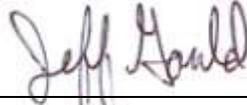
Approved by:

IDAHO DEPARTMENT OF FISH AND GAME



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Brad Compton, Assistant Bureau Chief  
Bureau of Wildlife



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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.

