

April 2016



## Veterinary Services Staff

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## Veterinary Services Newsletter

### Wildlife Health Laboratory

#### Respiratory Disease Surveillance and Body Condition Monitoring of Bighorn Sheep

Once again the laboratory staff and Kevin Monteith's crew from University of Wyoming Cooperative Fish and Wildlife Research Unit was in field this March capturing 33 bighorn sheep for disease research and body condition monitoring. This cooperative project is designed to determine how body condition may influence what species of respiratory pathogens a particular sheep (or herd) may carry. This research involves capturing bighorn ewes twice a year (December and March), sampling for respiratory pathogens, and assessing their body condition by measuring their fat depth ultrasonically. Several northern herds were selected for this research including Whiskey Basin, Jackson and Absaroka. This is the second year of this project, and to date, no direct relationship between body condition and pathogen presence has been established.



*Hank Edwards collects samples from a bighorn sheep that will be used to detect pathogens that can cause respiratory disease.*

#### Elk Movement Study in the Bighorn Mountains

Unfortunately, two elk that were collared in the Bighorns in February were found to be blood test positive for brucellosis. The ramifications of this disease becoming established in the Bighorn Mountains are very serious, and therefore the decision was made to euthanize and necropsy the two positives. In addition to removing the potentially infected animals from the population, this also provided an opportunity of collect lymph nodes for culture of the organism. Obtaining a *B. abortus* culture from at least one of the positive elk would allow genetic analysis that would likely determine which infected source population that elk may have originated from; thereby shedding some light on how this disease may have arrived in the Bighorn Mountains.

Unfortunately, after culturing ten tissues from each animal and one fetus from one of the cows, we were unable to isolate *B. abortus* from any of the culture plates. This bug can be difficult to culture, with only about half of all blood-test positive animals being culture positive as well.



*Culturing tissues for Brucellosis (*Brucella abortus*).*

## Wildlife Necropsy Summary

Twenty-seven wildlife cases were submitted for diagnostics in March.

Species	Date Received	County	Diagnosis
Mule Deer	3/8/2016	Fremont	Bovicola tibialis
Elk	3/10/2016	Converse	Chronic Wasting Disease
Moose	3/9/2016	Carbon	Pending
Skunk	3/10/2016	Fremont	Pending
Pronghorn	3/9/2016	Platte	Pending
Mule Deer	3/10/2016	Fremont	Adenovirus negative
Bighorn Sheep	3/10/2016	Niobrara	Pending
Mule Deer (2)	3/10/2016	Fremont	Pending
Mule Deer	3/16/2016	Sheridan	Emaciation
White-tailed Deer	3/16/2016	Sheridan	Malignant catarrhal fever
Mule Deer	3/17/2016	Natrona	Pending
Pronghorn	3/17/2016	Sheridan	Pending
Bat	3/18/2016	Fremont	Rabies negative
Mule Deer (2)	3/18/2016	Fremont	Pending
Bighorn Sheep	3/18/2016	Fremont	Pending
Mule Deer	3/18/2016	Park	Truperella lymphadenitis
Mule Deer	3/18/2016	Park	Parasitic pneumonia
Magpie	3/21/2016	Park	Pending
Mule Deer	3/21/2016	Bighorn	Pending
Pronghorn	3/21/2016	Campbell	Pneumonia, pancreatitis
Moose	3/22/2016	Fremont	Pending
Mule Deer (4)	3/28/2016	Carbon	Pending

### Case of the month

Wyoming Game and Fish Warden Brady Frude responded to a call of a sick mule deer fawn near Lander, where a homeowner reported the deer had been acting odd for 3 or 4 days and wouldn't flee when approached. The deer was euthanized and submitted to the lab for diagnostic testing.

A necropsy revealed an emaciated deer with hair loss on the neck, ears and between the hind legs. Thousands of small brown lice (*Bovicola tibialis*) were observed in the hair. This louse has been identified as a significant cause of fawn mortality in Washington State, but infections in WY have been sporadic. This is the first confirmed case in Fremont County and only the eighth case from the state. In addition to the lice, ear ticks were found in the ear canals and this animal had numerous tapeworms in the intestines.



Chewing lice (*Bovicola tibialis*)



Tapeworms visible through the intestinal wall. (Note the lack of fat on the intestines).

The effects of seasonal malnutrition often become evident during the late winter. The mixed parasite burden of lice, tapeworms, and ear ticks coupled with the stresses of winter all contributed to the emaciated condition of this mule deer fawn.

## Thorne/Williams Wildlife Research Center

### Sheep handling facility.....done?

Wait...did that just say done? March/April at the Thorne/Williams Research Facility found the crew on a month long dash to finish up the last bits of remaining work on the Bighorn sheep handling facility. All of the catch pens and alleys were buttoned up as well as a funnel into the building complete with 8' walls and a catwalk for working sheep. Plastic paneling was finished on the walls and ceiling creating a watertight room for cleaning and disinfecting. The interior electrical was finished and the room heater and hot water heater were installed. We installed a stainless steel sink and counter tops along one wall and a built-in scale was installed and calibrated in the alley. After 2 long years of work, the facility is now complete. Next step is to start working sheep to see how well it works!



*Funnel for herding sheep into the handling building.*



*Chute system inside the handling building.*



*Catwalk on the back side of the funnel for working sheep into the handling building.*

### CWD Elk Study

While the majority of the month was spent on finishing up the handling facility, we did also find time to vaccinate the 11 remaining elk in our CWD vaccine study. This will be the last year they are vaccinated and the study is coming to a close. We plan to continue to follow the remaining elk over time to see if genetic differences in the elk affect the outcome; however, we will no longer vaccinate.

### Lemmy gets a trim!

Amongst all of the chaos, we also found the time to trim hooves and give an annual exam to our hand-reared bighorn sheep, Lemmy. She is the only lamb we've been able to successfully rear out of a group of chronically ill bighorn ewes. While she is not a research sheep, her presence at our facility helps to remind us what we are working towards: finding ways to improve the health of our wild bighorn sheep populations in the face of respiratory disease.



*Lemmy with her elk buddies and Matt after getting a trim.*