

April 2017



## Veterinary Services Staff

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## Thorne/Williams Wildlife Research Center (TWRC)

### Spring Cleaning

This was another busy and productive month for us here in the canyon. We got a lot of spring cleaning done in preparation for what will be a busy summer. Several of our storage sheds were cleaned out and organized, ditches cleaned, roads graded, and mowers serviced. We also spent some time touching up the floor coatings in our necropsy lab, walk-in cooler, and sheep handling facility to make them easier to clean.

### Trees Falling and Turkeys Calling

Mother Nature gave us an extra project this spring by blowing a tree onto our elk alleyway. This resulted in some unexpected work to remove the tree and cut out and repair the broken parts of the alleyway. We have also had a small flock of turkeys show up this month. It's pretty rare to see turkeys this far up the canyon and we've been enjoying watching them. So far they seem inclined to stick around and hang out near our fences.

### Final Bighorn Sheep and Mountain Goat Captures of the Season

In addition to spring projects, Matt went to Jackson and Alpine to assist with bighorn sheep and mountain goat captures in March.



*Small flock of local turkeys.*



*Collecting samples from a Mountain Goat*



*Tree damaging our elk alleyway.*

**CWD Surveillance:** The final report on the chronic wasting disease surveillance is complete for 2016! A total of 3,351 deer, elk, and moose samples were analyzed. The 2016 surveillance effort identified nine new deer hunt areas: HAs 7 and 17 in the northeastern corner of the state, HA 92 near Lander, HAs 110, 111, 113, and 121 near Cody, HA 128 near Dubois, and HA 145 in the Afton area (see maps below). Of the 3,351 total samples received, 83% were derived from hunter-killed animals, 7% from targeted, and 10% from road-killed deer, elk, and moose. It should be noted that the majority of road-killed surveillance occurs outside of the known endemic area for CWD, while targeted animals are submitted from within as well as outside the endemic area.

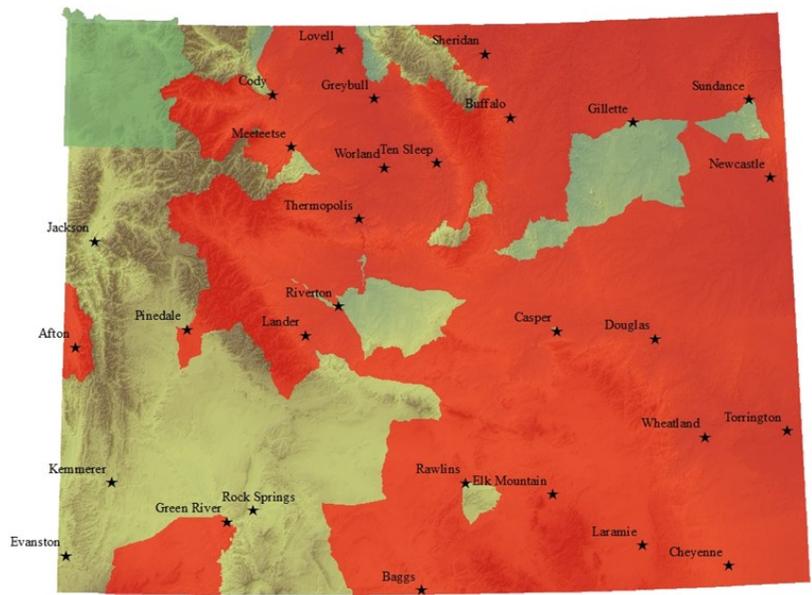
	Mule Deer		White-Tailed Deer		Elk		Moose		Total	
	Total	CWD Pos	Total	CWD Pos	Total	CWD Pos	Total	CWD Pos	Total	CWD Pos
<b>Hunter-kill</b>	1,480	92	345	18	923	5	29	0	2,777	115
<b>Targeted</b>	141	25	21	4	54	6	18	0	234	35
<b>Road-kill</b>	260	2	32	1	33	0	15	0	340	3
<b>Total</b>	1,881	119	398	23	1,010	11	62	0	3,351	153

Table 1. Distribution of samples and proportion of positives according to surveillance category

Due to an increased focus on CWD surveillance, significantly more samples were collected in 2016 when compared to surveillance efforts over the past four years (average ~ 1,790 samples each year from 2012-2015).

Although the prevalence of CWD remains low in the majority of hunt areas across state, prevalence levels approaching 20% or above are becoming more common in many deer hunt areas (e.g. HAs 15, 59, 60, 61, and 66) that surround the core endemic area (Laramie Mountain and South Converse mule deer herds). The prevalence of CWD is also increasing in many deer hunt areas of the Bighorn Basin, where prevalence is approaching or exceeding 10% (e.g. HAs 41, 51, 120, and 124). It is important to note that sample sizes achieved through our annual CWD surveillance are too low to estimate prevalence with good precision. Therefore the annual prevalence rates provided here represent rough estimations of true prevalence.

For a complete surveillance report and lots of other information on CWD, please visit our redesigned CWD website: <https://wgfd.wyo.gov/Wildlife-in-Wyoming/More-Wildlife/Wildlife-Disease/Chronic-Wasting-Disease> and tell us what you think!



Current distribution of CWD in Wyoming, including deer HA139 near Pinedale where a positive doe mule deer was found in March of 2017.

**Respiratory Disease Surveillance and Body Condition Monitoring of Bighorn Sheep:** Once again the laboratory staff completed culture work on sheep captured by Dr. Kevin Monteith’s crew from University of Wyoming Cooperative Fish and Wildlife Research Unit. This spring, 47 sheep were captured for disease research combined with 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, but Temple Peak was

Twenty diagnostic cases were submitted for necropsy during March. Eleven cases are pending.

Species	Date Received	County	Diagnosis
Mule Deer	3/8/2017	Natrona	CWD, capture myopathy
Mule Deer	3/8/2017	Converse	Rumenitis, <i>Bovicola tibialis</i>
Pronghorn	3/8/2017	Natrona	Adenovirus negative
Cottontail Rabbit	3/10/2017	Sheridan	Coccidial enteritis
Magpie (2)	3/22/2017	Sublette	Undetermined
Bighorn Sheep	3/22/2017	Park	Sinus tumor
White-tailed Deer (2)	3/24/2017	Sheridan	Undetermined

### Disease of the Month: Diarrhea or “Scours”

In central and western Wyoming, the winter of 2016-2017 has been tough with significant mortality seen in mule deer and pronghorn. Those mule deer and pronghorn that manage to survive will soon be greeted with a green up of lush vegetation sprouting from all the winter moisture. This rapid change in diet can cause the animals to develop diarrhea (often referred to as “scours”) at a time when they are greatly in need of nutrients to recover body fat and muscle metabolized during the winter.

Diarrhea due to a rapid change in diet is common, but mortalities caused by scours also occur most years during the summer months, particularly in pronghorn. Determining the cause of the condition in these animals is a challenge. Scours appears to be more prevalent in young pronghorn or animals feeding on alfalfa, but a variety of bacteria, viruses, and parasites have also been identified as potential causes. Animals are seen with a soiled hind end and may be listless and appear unkempt. Extensive testing often fails to identify a single definitive cause of death. In these cases, scours may be caused by a combination of environmental or disease agents. Scours in pronghorn is not a recent phenomenon and reports can be found dating back to the 1950's. Sixty years later our level of understanding of the processes involved in scours related mass mortalities in pronghorn remains limited.

To that end, a collaborative effort involving the Wildlife Health Lab and personnel from the Wyoming Veterinary Diagnostic Lab is planned for the spring and summer of 2017. The plan is to conduct intensive field necropsies on freshly dead or euthanized animals in an attempt to advance our understanding of the factors involved in scouring pronghorn. For this effort, carcasses must be very fresh. The quality of samples obtained from animals that have been dead for more than six hours is greatly reduced. If you observe pronghorn or other ruminants with scours, please contact the Wildlife Health Laboratory to discuss sample submission or the possibility for field investigation.



*Typical presentation of pronghorn with diarrhea or "scours." Note the fecal staining around the rump and on the hind limbs.*