

## Necropsy / Veterinary Report

**Date:** July 12, 2010

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**Location/Event:** Owyhee HMA, Tuscarora Gather

**History:** Day 2 following capture and the day after clinical signs and deaths attributed to water starvation/dehydration and subsequent water intoxication first occurred. Weather has been mild, temps in the 70s at night, highs in the low 90s during the day.

**Examinations:** Five horses were down or dead when we arrived at the temporary holding corral, 7AM. The 16YO grey mare from yesterday that had been down all day was up, eating and drinking normally. A 5MO colt in the wet mare pen was lying down and showing signs of discomfort. He stood up and moved off when I approached and later appeared to have fully recovered without treatment. One smaller young bay stud horse was dead in the stud pen near the chute (necropsy #4). The big bay stud from yesterday was still down, treated with banamine first thing this morning. His condition deteriorated over the first hour and he was euthanized (necropsy #5). A smaller bay stud was down in the corner of the stud pen near the chute. He was treated with banamine, moved out of the corner and within minutes got up, moved off and recovered fully over the next 30 minutes. A small 3YO smoky colored palomino stud was down against the outer perimeter panels. Notable by his unusual color, he was specifically noted as eating the day before with no clinical signs of illness at that time. His condition was grave when we arrived at the corral, he was treated, failed to respond, was exhibiting neurologic signs (muscle rigidity, tremors, nystagmus, intermittent paddling). He was euthanized about an hour after the initial treatment.

Most of the horses this morning appeared to be eating and drinking normally. The horses as a group were notably more active, stronger and more reactive, more flighty than is typical the second day of holding in the corrals.

About 8AM a 4 month old colt that had been brought to the corral on foot was pulled from the wet mare pen and moved into the alleyway with the leppy colt. During the gather a mounted rider had gone out into the HMA about a half mile from the trap to rope the colt at the pilot's request because it was having trouble keeping up with the herd, after roping the rider dismounted and walked in to the trap pushing the colt ahead as it walked next to his saddle horse. The colt was removed from the big pen because it looked weak and seemed distressed and to be having difficulty breathing. He was given water and milk replacer, he drank some but not vigorously. He had a large hard swelling on the right side of his face and was having increasing difficulty breathing. About an hour later he died (necropsy #6, partial).

#### **Necropsy #4**

A wrangler working with the contractor assisted me during this necropsy. Small, 4 year old, bay stud that was found dead in the pen this morning. The stomach and small intestine contained small amounts of clear yellow or red fluids. The cecum contained a moderate amount of wet chewed and partially digested hay, the large colon also contained a moderate amount of wet, partially digested plant material and the small colon contained moist formed fecal balls that extruded water when compressed. No other significant findings were noted in the abdominal cavity. When the skull was opened, the brain pushed out above the margins of the skull flap. It was shiny and wet with free fluid oozing from the brain case. The gyri seemed rounded and swollen, sulci were less prominent. Cut surfaces were wet and shiny and cut portions of the brain seemed heavier than expected.

#### **Necropsy #5**

Alan Shepherd assisted me during this examination. A large 4 year old bay stud that was euthanized after being down with signs of colic yesterday and neurologic signs today. He did not respond at all to treatment. Findings in the stomach, small intestine, small and large colons and cecum were as described for necropsy #4. The brain case was opened, some clear, free fluid was noted but I was unable to perform a complete examination of the brain due to damage by the euthanasia gunshot and damage caused when opening the brain case.

#### **Necropsy (partial) #6**

A contract wrangler and BLM employee assisted me during this examination. 4 month old bay colt. I examined and opened the hard 2cmx4cm swelling along the right side of the colt's face. It was located along and above the rostral end of the facial crest. It was formed of bone, on cross section a purulent tract was found extending from the oral cavity, through a molar to a pocket in the center of the bony enlargement and on into the underlying sinus. The sinus contained thick caseous, purulent material. No further examination was performed.

#### **Differentials/Dx/Conclusions:**

The two adult necropsies described above indicate these horses had been rehydrated and eating and drinking relatively normally within the last 24 hours. The clinical signs related primarily to a central nervous system disorder. The condition of the brain in necropsy # 4 was consistent with cerebral edema and the history, clinical signs and presentation support the diagnosis of water intoxication following water starvation.

The condition of the foal examined suggests he also died from complications related to water starvation, starvation and an upper respiratory/sinus infection secondary to a tooth abscess. This combination caused weakness and difficulty breathing; ultimately the foal would not eat or drink well enough to regain his strength.