



UC DAVIS

VETERINARY MEDICINE

California Animal Health and
Food Safety Laboratory System

CAHFS CONNECTION

LEADING DIAGNOSTICS NATIONALLY, PROTECTING CALIFORNIA LOCALLY • DECEMBER, 2018



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UPDATE: Virulent Newcastle disease in California

As of December 1, 2018, USDA has confirmed 185 cases of vND in backyard birds in California: 104 in San Bernardino County, 41 in Riverside County, 39 in Los Angeles County and 1 in Ventura County. This disease continues to be restricted to backyard chickens. CAHFS continues working with the California Department and Food and Agriculture (CDFA) and the United States Department of Food and Agriculture in the eradication of this outbreak. Biosecurity is paramount to prevent spread of vND.

For more information please refer to [CDFA's web site](#) or call the Sick Bird Hotline at 866-922-2473

Equine

Oleander toxicosis was identified in a 3-month-old miniature pony that died following a less than 24-hour period of anorexia, depression and late onset of mild fever. On gross examination, there was pulmonary congestion and edema, and sub endocardial hemorrhage in the left ventricle of the heart. Histologically, the heart had multifocal hemorrhages, and myocardial necrosis with neutrophilic infiltration. Oleander leaves were found among the drylot leaf samples submitted. Analysis of the liver identified oleandrin, the toxic principle of oleander.

Holiday Schedule & Courier Service

In observance of the University of California's winter holidays, CAHFS will be open with limited services on Monday, Dec. 24, 2018; accepting submissions from 8 am-noon. CAHFS will be closed on Tuesday, Dec. 25, 2018.

CAHFS will be open with limited services on Monday, Dec. 31, 2018; accepting submissions from 8 am-noon and closed on Tuesday, Jan. 1, 2019 in observance of the New Year's holiday.

While CAHFS will be open December 26-28, the UC Davis campus will be closed. If shipping samples to the CAHFS Davis laboratory, please ensure with your courier that they will deliver to the Davis laboratory even though the campus is closed.

Bovine

Ruminal acidosis was the cause of death in two 9-month-old Black Angus steers from a herd of 36 in which five showed clinical signs. Steers were purchased three days prior to the onset of clinical signs. Upon arrival at the feedlot the animals were given a small amount of grain and started on a growing ration. The morning of the third day, five animals were down with distended fluid-filled rumens (aka 'water bellies'). One was dead in the afternoon and a second died two days later. At necropsy, both animals were severely dehydrated and had severely distended rumens containing abundant watery green fluid mixed with moderate amounts of forage. Ruminal acidosis occurs following a sudden increase in consumption of carbohydrates, commonly grain, leading to changes of the rumen bacterial flora and a drop in pH.





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CAHFS' New Look

CAHFS has changed the look of its web site. Check it out at <https://cahfs.vetmed.ucdavis.edu>. We would appreciate receiving your feedback.

Continued

Vitamin A deficiency contributed to the **still-birth** of a full-term Hereford fetus born to a first calf heifer. Postmortem examination revealed marked subcutaneous head and neck edema suggestive of dystocia. Malformation and caudal skull with thickening of the cranium bones due to failure to remodel resulted in cerebellar herniation commonly seen with vitamin A deficiency. Histopathology also revealed optic nerve degeneration. Liver vitamin A was deficient at 0.4ppm (normal 1.5-4.5ppm).

Poultry and Other Avian

Erysipelothrix rhusiopathiae septicemia caused increased mortality (up to 200/day) and drop in egg production in a cage-free indoor/outdoor housed flock of 10,000, 16-month-old layer chickens. Affected birds had hepatitis, splenitis and myocarditis. The organism was isolated from lung, liver and spleen.

Systemic Trichomoniasis was diagnosed in three juvenile pigeons from two different lofts with a history of increased mortality in the flock. The organs affected were oral cavity, esophagus, crop, sinus, larynx, trachea, lung, liver, kidney and pancreas. The diagnosis was confirmed by immunohistochemistry. Trichomoniasis, most commonly called 'canker', is caused by the protozoan flagellate, *Trichomonas gallinae*, which generally causes lesions in the upper digestive tract but can cause systemic infection depending on the virulence of the strain of the organism involved.

Duck viral enteritis (DVE) caused sudden death of a male duck in a group of six that were rescued from a facility a week earlier. Another duck had also died. The esophagus between the crop and proventriculus had a thin pseudo-membrane. Esophagitis and hepatitis were confirmed histologically. DVE was confirmed by PCR on the liver.

Small ruminants

Histophilus somni caused **meningitis** in a 10-month-old white-faced ewe and a 3-year-old Hampshire ewe on separate premises. The younger ewe had seizures, opisthotonus and blindness for one day before death. At necropsy, exudate was noted in the meninges over the ventral brain stem and in the lateral ventricles. The older ewe was reluctant then unable to rise, off feed and had a high fever for one day before death. This ewe also had *Corynebacterium pseudotuberculosis* abscesses in the lung and *Histophilus somni* associated myocarditis. Both ewes were copper deficient and the older ewe was also selenium deficient.

Francisella tularensis septicemia caused the death of a wild jackrabbit found at an illegal marijuana grow site. The liver had many pinpoint off-white spots; the lungs had pinpoint red foci and the intestinal serosa had many raised 1-2mm tan nodules. Histologically, necrosis and inflammation was seen in the lungs, liver, lymph nodes and intestinal serosa. The diagnosis was confirmed by immunohistochemistry.

Baylisascaris larval migration in the brain of a juvenile California ground squirrel found at a golf course, caused lateral recumbency, head tilt, spinning on its side, rhythmic motions and enhanced startle reflex. The squirrel was taken to a wildlife care facility but symptoms worsened and the animal was euthanized after four days. In the brain there was severe multifocal necrotizing encephalitis with intralesional larvae compatible with *Baylisascaris* spp., which were thought to be *Baylisascaris procyonis*, the common roundworm of raccoons.

