



UC DAVIS

VETERINARY MEDICINE

California Animal Health and
Food Safety Laboratory System

CAHFS CONNECTION

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UPDATE: Virulent Newcastle Disease

Ongoing surveillance and testing by California Department of Food and Agriculture (CDFA) and the United States Department of Agriculture (USDA) in the virulent Newcastle disease (VND) incident in Southern California has resulted in the detection of a new case on August 14 at a retail feed store in western San Bernardino County and on August 30 at a property in the Ramona area, San Diego County. These were the first detections of VND since June 4 and the first time a positive has been confirmed in San Diego County since the VND incident began in May 2018.

The CDFA and USDA, with the laboratory support of CAHFS, have made significant progress toward eradicating VND, but these two recent cases remind all bird owners in Southern California to remain aware of VND signs, practice good biosecurity, stop illegal movement of birds from property to property, and report any sick birds immediately to the Sick Bird Hotline, 866-922-2473.

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Welcome Dr. Kate Watson Whitaker

We are pleased to introduce Dr. Katherine (Kate) Watson Whitaker to the CAHFS family. Dr. Watson joined the CAHFS faculty effective August 1, 2019 as a pathologist in the Davis laboratory. She completed a dual DVM/PhD degree from the University of California, Davis in 2016 and 2014, respectively and recently completed a 3-year pathology residency program at the Veterinary Medical Teaching Hospital, University of California, Davis.



Sarcocystis cruzi myocarditis caused sudden death in a 28-month-old Hereford heifer on pasture. On gross examination, there were extensive green tinged areas and tan firm nodules in the myocardium. The green areas corresponded to severe eosinophilic granulomatous myocarditis associated with protozoa (positive for *Sarcocystis* spp. by immunohistochemistry). Similar lesions were seen in the esophagus. The tan heart nodules corresponded to B-cell lymphoma. The heifer was seropositive for bovine leukemia virus.

Continued

Bovine

Clostridium septicum was the cause of severe necrotizing and ulcerative abomasitis in an approximately 10-day-old dairy calf. The abomasum was dark gray to black and contained milk curd and brown to red fluid. *Clostridium septicum* was detected by fluorescent antibody technique in the abomasum wall.





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Equine

***Actinobacillus equuli* septicemia** caused the death of a 3-day-old foal that died after being unable to stand or nurse. On gross examination there was marked pleuritis and epicarditis. *A. equuli* subspecies *equuli* was isolated from the thoracic cavity and lung in large numbers. *A. equuli* ssp. *equuli* can cause acute and overwhelming septicemia and enteritis in neonatal foals and uncommonly peritonitis in adult horses.

Pig

Pneumocystis pneumonia was found in a 5-month-old potbelly pig with a 2-week history of respiratory signs. On necropsy, the lungs were diffusely dark red and firm. This pig had concurrent porcine circovirus infection, which is thought to have led to immunosuppression predisposing to *Pneumocystis* spp. pneumonia.

Small ruminants

Severe **cystitis and urethritis** resulted in a 2-day course of frequent, painful and low volume urination, fever and vocalizations in a 9-year-old crossbred doe one month after breeding. *Corynebacterium renale* was isolated from the bladder and urethra. On gross exam, the urethra and bladder were hemorrhagic and showed fibrinous necrosis. Gritty material was found in the bladder and there was bilateral hydronephrosis. Foxtails embedded in the vulva and vagina also caused inflammation and hemorrhage.

Nasal bots (*Oestrus ovis*) caused antibiotic-unresponsive nasal discharge of 6-months duration in a flock of six sheep. One of these animals, a 4-year-old Suffolk cross ewe submitted for concurrent weight loss over one year also had chronic bronchopneumonia due to *Mycoplasma* spp., *Bibersteinia* spp. and *Trueperella* spp., abomasal parasitism with *Haemonchus* spp. and *Teladorsagia* spp., and copper and selenium deficiency.

Poultry and Other Avian

***Mycoplasma synoviae* (MS)** caused **joint and tendon infections** and **keel bursitis** in 15-week-old turkey hens from two houses of 7,500 birds each. Mortality

ranged from 19-33/day. Affected birds were depressed, not eating or drinking and had swollen hock joints. A few birds showed also mild sneezing and coughing. The affected hock and foot joints had cloudy fluid and caseous exudate extending into tendon sheaths. MS infection was confirmed by PCR on tracheal swabs and joint fluid.

Infectious laryngotracheitis virus (ILT) caused **respiratory problems** and increased mortality (25/day) in a 12,500 bird house of 15-week-old layer chickens. At necropsy, the larynx and upper trachea contained increased mucus or fibrin plugs. ILT infection was confirmed by PCR on tracheal swabs.

Duck Viral Enteritis virus was detected via PCR in two Muscovy ducks submitted from a flock of 24 in which 16 had died. Ducks inhabited an open pond and had intermittent contact with wild waterfowl (mainly mallards). Main gross lesions included hemorrhages in the epicardium, and watery and bloody intestinal fluid. Both ducks had lymphoid depletion, and herpesviral inclusion bodies adjacent to necrotic foci in the liver, esophagus, and intestinal mucosa.

Circovirus infection was the cause of death of two red-bellied parrot siblings that died four days apart with pancytopenia. Both birds had anemia associated with bone marrow aplasia and marked lymphoid depletion in the bursa and spleen. No inclusions were seen in any of the tissues. Circovirus was detected by in situ hybridization in the bursa of both birds. Pancytopenia has been reported in African grey parrots infected with circovirus. Red-bellied parrots (*Poicephalus*) are closely related to African grey parrots.

