



UC DAVIS

VETERINARY MEDICINE

California Animal Health and
Food Safety Laboratory System

CAHFS CONNECTION

LEADING DIAGNOSTICS NATIONALLY, PROTECTING CALIFORNIA LOCALLY • FEBRUARY, 2021



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HOLIDAY SCHEDULE

CAHFS will be closed on Monday, February 15, 2021 in honor of President's Day.

CoVID VIRUS DIAGNOSED IN GORILLAS

Despite some public concerns, transmission of CoVID virus from humans to animals seems to be exceedingly rare and routine testing of animals is not encouraged. However, there are situations in which testing is warranted to determine the risk of disease transmission and/or to learn more about the epidemiology of the disease. All CoVID testing of animals has to be pre-approved by the California Department of Food and Agriculture and the California Department of Public Health before samples can be submitted to CAHFS. Samples from gorillas at the San Diego Safari Park, which developed coughing, tested positive for CoVID virus at CAHFS, and the results were confirmed by the National Veterinary Services Laboratory. It is suspected that the gorillas acquired the infection from an asymptomatic staff member, despite wearing full personal protective equipment. While research studies verified the susceptibility of some non-human primates to CoVID, this would be the first known case of natural transmission of the disease from humans to these primates. According to the San Diego Safari Park, all gorillas are doing well.



photo by San Diego Zoo Safari Park

Equine

***Streptococcus equi* subspecies *zooepidemicus* septicemia** was the cause of in utero death of a term Thoroughbred fetus. The mare was in labor but the dead fetus was malpositioned and attempts to reposition and remove the fetus were unsuccessful. The mare became decompensated and was euthanized; the foal and uterus were submitted. On necropsy, the fetus had hemorrhage around the head and neck. Microscopically, multifocal hemorrhages in the liver, spleen, and kidney were associated with gram positive cocci. Pure cultures of *Streptococcus equi* subspecies *zooepidemicus* were isolated from the lung and stomach content indicating septicemia that led to the in utero death.

scopically, these areas had severe damage due to coccidia. The urine was normal.

Bovine

Coccidiosis was the cause of bloody diarrhea in a 6-month-old Holstein dairy heifer. The history indicated that two heifers were possibly urinating or defecating blood. Necropsy of the heifer revealed bloody fluid content from the cecum through the rectum. The proximal 15cm of the spiral colon had extensive mucosal necrosis, fibrin in the lumen and submucosal and serosal edema. Micro-

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Campylobacter jejuni was the cause of **abortion** in an Angus cow from a herd of 14 cows that experienced two mid-gestation abortions within 5 days. Necropsy of the fetus submitted revealed diffuse placentitis with vasculitis. *Campylobacter jejuni* was isolated from the lung, abomasum content, and placenta.

Pig

Pneumonia due to bacteria, porcine reproductive and respiratory virus (PRRSV) and porcine circovirus type 2 (PCV-2) was diagnosed in all five, 47- to 64-day-old piglets exhibiting lethargy and general malaise in a ranch of 300 pigs. PRRSV and PCV-2 were detected in all five pigs by PCR and immunohistochemistry, respectively. *Streptococcus suis* and *Glaesserella* (formerly *Haemophilus*) *parasuis* were isolated from the lung of one pig each and *Pasteurella multocida* and *Trueperella pyogenes* were isolated from lungs of two other pigs. Moderate to severe lymphoid depletion (associated with PCV-2) was noted in all pigs.

Small Ruminant

Hydrocephalus with periventricular porencephaly was diagnosed in a 1-year-old Rambouillet ewe with fever, lethargy, anorexia, and neurologic signs including shaking, falling when trying to walk, blindness, hyperventilating and teeth grinding. The ewe had received blue-tongue virus (BTV) vaccine that was contaminated with bovine viral diarrhea virus (BVDv) (per company notification) one week prior to onset of clinical signs, and it was euthanized due to lack of response to treatment 25 days after onset. BTV or BVDv were not detected in tissues by PCR. However, antibodies to BTV, BVDv-1 and BVDv-2 were detected. Tissue copper was low but enzootic ataxia was not likely since clinical signs were not evident until one year of age. The specific cause of the porencephaly was not definitively determined.

Coccidiosis was the cause of sudden death in a 2.5-month-old Boer kid from a group of 20, of which other kids had diarrhea and 2 had died. Pathology findings included diffuse

enteritis associated with coccidia and >30,000 coccidia oocysts/gram in feces. The kid also had severe selenium deficiency (0.043ppm, normal 0.25-1.0ppm).

Wildlife

Canine distemper virus was diagnosed in a fox that was unable to stand or walk. On gross examination, the fox was emaciated, and had fleas and intestinal tapeworms. Microscopically there were viral inclusion bodies in the brain, necrotizing enteritis, and nematodes with morphology compatible with *Angiostrongylus vasorum* in the lungs. Canine distemper virus antigen was detected by immunohistochemistry.

Poultry and Other Avian

A combination of **ascites** due to round heart disease, myocarditis due to reovirus, salmonellosis and viral enteritis were responsible for increased mortality in 19-day-old turkey poults in a flock of 20,000 birds.

Vitamin A deficiency was diagnosed in chickens from a backyard flock in which 10 out of 50 had died over a period of two weeks, after showing depression, anorexia, emaciation and swollen eyes. Grossly, four chickens submitted had multiple, pinpoint, raised, tan foci in the esophageal mucosa, and friable, caseous material filling the bursa of Fabricius. Histologically, these lesions were compatible with vitamin A deficiency. Vitamin A was undetectable in liver of the four chickens, thus confirming the diagnosis. In addition, infectious bronchitis, fowlpox, and Marek's disease were diagnosed in this group of chickens. Outbreaks of vitamin A deficiency may occur in flocks if they are fed with homemade, inadequately formulated diets deficient in vitamin A.

