



Exotic Newcastle Disease Detected in Fresno

In early 1972, California was faced with one of the largest animal health emergencies in the United States in more than four decades. The viscerotropic form of Newcastle Disease, also known as Velogenic Viscerotropic Newcastle Disease (VVND), was diagnosed in poultry in the San Bernardino area of California. The disease took more than two years to eradicate. State and federal quarantines covered approximately 45,000 square miles, and nearly 12 million infected or exposed birds were destroyed after the inspection of more than 406 million birds (exotic and poultry). At the time, the cost of the control effort was nearly \$56 million.

CVDLS is an integral part of the state's surveillance system to ensure early detection of VVND or any other foreign animal disease entering the state of California. Since 1972, the surveillance efforts for VVND have been successful in identifying the virus in exotic birds, primarily psitticines, entering illegally across the Southern California border. In 25 years, more than a dozen isolates of VVND have been recovered by CVDLS from psitticines. In one instance, the virus was detected on a premise with more than 80 Amazon parrots. Immediate eradication efforts through the California Department of Food and Agriculture (CDFA) and the United States Department of Agriculture (USDA) have prevented the disease from spilling into susceptible poultry. In the same 25-year period, surveillance efforts showed no evidence of VVND in California poultry.

On May 24, 1998, 10 chickens from a 48-bird backyard flock of game chickens began showing signs of listlessness, respiratory distress and diarrhea. Two days later one game chicken was taken to a private veterinarian, who directed the owner to the CVDLS. The following day, the owner submitted one live and two dead game chickens to the CVDLS-Fresno laboratory. Necropsy findings included severe multi-focal hemorrhages and/or ulcers in conjunctiva, sinus, trachea, esophagus, proventriculus, ventriculus and intestine. Histology revealed severe, multi-focal hemorrhages in

the mucosa of respiratory and digestive tracts, vasculitis and necrosis of lymphoid tissue. The birds were serologically negative for Newcastle disease virus, consistent with acute infection. Electron microscopy indicated that a paramyxovirus was present in the affected tissues, and on May 29, paramyxovirus-1 was isolated and subsequently characterized as exotic Newcastle disease. On the same day an industry hotline, previously established for California poultry producers, was notified to ensure prompt communication within the commercial poultry industry.

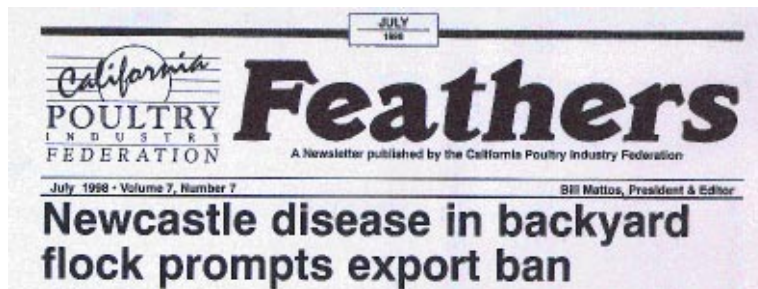
Chickens on the affected premises were immediately placed under hold order by the California Department of Food and Agriculture (CDFA), and by June 10 the premises had been depopulated, cleaned and disinfected to prevent possible spreading of the virus. A thorough

epidemiologic investigation by CDFA and the United States Department of Agriculture (USDA) officials were carried out, and no other premises were found to have birds with clinical signs or

evidence of exposure. The entire outbreak was limited to 48 backyard game chickens and was resolved within 14 days of observation of clinical signs.

Due to the quick response and collaboration of CDFA, USDA, California's poultry industry and the diligence of the surveillance program, California was able to prevent the spread of this devastating disease to commercial flocks in the surrounding area. Although no commercial flocks in California were infected, at least six countries closed their borders to the state's poultry products. Of the six, only Russia continues to impose trade restrictions, which appear to be in place for six months. This restriction is reported to be costing the California poultry industry approximately \$125,000/week. The United States, as a participant in the World Trade Organization (WTO), is obligated to report to the Office Epizootique Internationale (OIE) active infections of certain diseases such as VVND, which are potentially devastating to a country's livestock or poultry. While the

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Cattle

Heat stress was the probable cause of death in 36 beef heifers in a group of 200 during record heat in Solano County. Animals were purchased, vaccinated and moved onto lush pasture three days prior to death. Animals were moved onto another pasture at 2 p.m. By 5:30 p.m., several exhibited weakness and staggering, and many were dead. All diagnostic testing for infectious and toxicologic diseases were negative. **Heat stress** was probably also the major factor in the death of 15 adult Holstein cows in a group of 42 that were dried off at 8 a.m. and given Clostridial and 1.5 times the dose of *Leptospira* vaccines. Most deaths occurred between 4 and 8 p.m. the same day.

Propylene glycol toxicosis was diagnosed based on toxic serum levels in a first-calf heifer from a dairy at which 6 of 10 sick, postpartum heifers had died in five days. Animals were febrile and down or **weak and ataxic**. Heifers were drenched at freshening with propylene glycol and electrolytes. Concurrent *E. coli* bacteremia was found in two, and severe bacterial pneumonia and malnutrition in a third.

Bacterial septicemia due to *Actinobacillus lignieresii* was diagnosed in a 4-day-old calf that had been weak since birth. Multifocal inflammation was present in the lung, heart, liver, kidney and spleen.

Clostridium septicum caused **perivulvar malignant edema** with edema and crepitus of the caudal thigh in several postpartum first-calf heifers on one dairy, and vulvitis, pericarditis and sepsis in fresh heifers on another. Unvaccinated 12- to 16-month-old heifers experienced **septicemia** on one dairy, **myositis** on another and **meningitis** and brain infarction in a Jersey heifer, which was paddling and bellowing, on a third dairy. *Clostridium septicum* was isolated from all lesions.

Neurologic signs in cattle had various causes in the summer. **Fungal encephalitis** was found in a

6-month-old Brangus heifer that was unable to rise. *Haemophilus somnus* caused **meningoventriculitis and vegetative endocarditis** in yearling beef heifers in which three of 300 were febrile, depressed, stocking up, knuckling and stumbling. **Thiamine responsive polioencephalomalacia** caused blindness, paddling and frantic behavior in two of 15, 16-month-old beef heifers within one week of supplementing with molasses/urea. *Listeria sp.* encephalitis caused circling with a drooped ear in a cow. The brain stem cultures were negative but immunoperoxidase on fixed tissue was positive.

Pasteurella multocida, P. haemolytica, Mycoplasma bovis, M. arginini and *Haemophilus somnus* were commonly isolated in varying combinations from 2- to 4-month-old calves with **bronchopneumonia** on multiple calf ranches and dairies.

Thromboembolic pneumonia accompanied by severe pulmonary emphysema in two cases was due to *Fusobacterium necrophorum* in individual animals on three separate farms. Signs included respiratory distress in a beef bull, dairy heifer and Holstein cow. The latter also had a one-week history of anorexia and fever, and developed severe subcutaneous emphysema. Multiple liver abscesses, the source of the emboli, were found in the cow.

Salmonella typhimurium **septicemia and enterocolitis** resulted in the death of approximately 200 calves under 6 weeks of age in a two-week period. The organism was also isolated from the maternity pen water trough, a sample of colostrum, and milk from a cow in the hospital pen. Isolates from these other sources were sensitive to antibiotics, and their pattern differed from isolates obtained from calves. After chlorination, all water samples were negative for salmonellae. Several other dairies also experienced septicemia or, more commonly, enterocolitis and death in calves under 3 weeks of age due to *S. typhimurium* in June and July.

Intestinal coccidiosis resulting in **dysentery** and death in 2- to 5-month-old dairy calves was found on several dairies, many of which reported diarrhea beginning two to four weeks after calves returned from a calf ranch. Other dairies reported resolution of diarrhea with amprolium in the water or feed, but recurrence when it was discontinued despite continuous feeding of ionophores in the feed. Three dairies reported a 30 percent morbidity and 10 percent mortalities and sporadic concurrent blindness. Calves had either pinkeye or polioencephalomalacia causing blindness.

Many cases of *Salmonella dublin* causing **enteritis and septicemia** were found in 3- to 10-week-old calves on dairies and calf ranches this summer.

Several dairies reported increased numbers of **premature live and stillborn** calves delivered two- to three-weeks early and/or increased incidence of **abortion** within one week after drying-off cows. No infectious agents were found in any of the fetuses, and the cause remained undetermined. One dairy discontinued Clostridial vaccination at dry off, and the problem seemed to wane.

IBR caused late-term **abortions** in a group of dairy heifers. Fetuses had typical lung, liver and spleen lesions, and the fluorescent antibody test of lung was positive.

BVD virus was found in the heart, kidney and liver of a beef fetus submitted from a herd with numerous **late-term abortions**. The fetus had subcutaneous edema, severe thymic atrophy, hemorrhage and necrosis in the liver and nephritis.

Vitamin A deficiency resulted in **premature births**, some **blind** calves, head tilts, stiff necks and inability to stand in Holstein calves. One 12-hour-old calf that had been **unable to stand** since birth but had normal vision, had thickening of the caudal dorsal skull resulting in compression of the brain, cerebellar dysplasia, coning and herniation.



Horses

Internal exsanguination and death

occurred after a workout in a 2-year-old Thoroughbred colt. Exsanguination was due to **tearing of the left brachial artery** by a bone spicule on a non-union fracture callus of the first rib.

Acute renal failure from myoglobinuric nephrosis developed three days after **azoturic rhabdomyolysis** in a 2-year-old Thoroughbred filly in training.

Multiple cases of **respiratory disease** were seen this summer. **Rhodococcus equi** caused broncho-interstitial and pyogranulomatous pneumonia in a couple of 2-month-old foals. **Mixed bacteria** (**Streptococcus zooepidemicus**, **Actinobacillus suis-like**, **Clostridia sp.**, **Prevotella sp.** and **E. coli**) caused fulminating pleuropneumonia in two racehorses. **Streptococcus zooepidemicus** caused pleuropneumonia in a pleasure horse, chronic pleuritis in a 3-year-old Thoroughbred mare and was isolated from tracheal washes of several 4- to 5-month-old Thoroughbred foals with respiratory signs on a breeding farm. **Streptococcus equi** caused a retropharyngeal lymph node abscess leading to pulmonary thrombosis, renal infarction and DIC in a racing Quarter Horse.

Equine influenza virus A2, causing fever, coughing, nasal discharge and occasional leukopenia continues to circulate in Northern California. Diagnosis is based on seroconversion to A2 or positive ELISA on nasal swabs during the acute phase.

Severe **diffuse fibrinous and proliferative chronic interstitial pneumonia** was found in a 4-month-old foal dying with non-responsive respiratory disease. Two other foals, 3- and 5-months-old on separate farms had similar lesions. No infectious agent was identified. The lesions are compatible with a condition in foals of unknown cause.

Silicate pneumoconiosis was diagnosed in samples from a Quarter Horse mare with chronic respiratory disease. Histologically, a severe granulomatous and fibrotic interstitial pneumonia was associated with crystalline material.

Multiple **gastrointestinal disorders** were seen this quarter. **Right dorsal colitis** occurred in a 34-year-old Quarter Horse mare unassociated with use of NSAIDs. **Acute rupture of the transverse colon**, secondary to sand impaction, was found in a 20-year-old Pony of America gelding and a 4-month-old Friesen filly. **Strangulation of the small intestine** was caused by a pedunculated lipoma in a 10-year-old Arabian gelding. **Rhodococcus equi** was isolated from multiple **pericolonic abscesses** in a colicky 4-month-old foal. **Intestinal aganglionosis** (lethal white foal syndrome) resulted in colic and euthanasia of a 2-day-old Overo/Overo cross foal.

Theiler's disease (serum hepatitis) was the cause of colic, blindness, ataxia and death in a 10-year-old Quarter Horse mare that had received tetanus antitoxin two months before death.

Yellow star thistle-induced nigropallidal malacia resulted in the inability to swallow, causing dehydration and weight loss in a yearling Arabian colt.

Mixed T-cell cerebral lymphosarcoma was the cause of compulsive circling and altered mentation in an 18-year-old Thoroughbred gelding.

Cervical stenotic myelopathy (wobbler) syndrome caused a long history of incoordination in a 3-year-old Quarter Horse. The diagnosis was supported by narrowing of the cervical spinal canal with osteochondrosis of the vertebral articular facets and histologic evidence of Wallerian degeneration in the spinal cord.

Selenium deficiency was diagnosed in a third-trimester aborted donkey fetus with myocardial necrosis and mineralization in the heart, liver, kidney, brain, adrenal and placenta.



Small Ruminants

Copper deficiency caused **myelopathy** (enzootic ataxia), resulting in **paraplegia** in a 3-month-old Saanen crossbred goat, and caused weakness at birth, **inability to rise** and head tremors due to **cerebellar abiotrophy** and leukoencephalomalacia in a 2-month-old goat. Copper deficiency was commonly found in goats on multiple farms.

Caprine arthritis-encephalitis was diagnosed with polyarthritis, lymphocytic mastitis and thymoma in a 4-year-old Anglo-Nubian doe that was euthanized.

Intestinal coccidiosis caused variable diarrhea, fever, inappetance and deaths in 1- to 3-month-old goat kids on seven premises during the summer. Five herds had concurrent **selenium deficiency**. Copper deficiency was also common.

Multiple sheep flocks and goat herds experienced ill-thrift, weight loss, diarrhea, variable bottle jaw and anemia in 3-month-old to adult animals due to **Ostertagia** and **Haemonchus**. Several affected groups had been wormed two months earlier.

Listeria monocytogenes encephalitis in two adult goats caused acute onset of depression, blindness and death over a several day.

Polioencephalomalacia was diagnosed in a goat with a three- to four-day course of opisthotonus.

Mycoplasma mycoides subsp. mycoides and **Pasteurella haemolytica** were isolated from an adult goat with **pleuropneumonia**. Twelve other goats from a herd of 200 died during a two-day period. **Mycoplasma sp.** also cause polyarthritis in three, 4- to 6-week-old kids on another premise.

Spirochetes were found in a proliferative mass from the heel of a goat. Two percent of the herd had proliferative growths on the feet.

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Pigs

Greasy pig disease (exudative dermatitis) was diagnosed in five of six, 3-week-old Hampshire piglets. *Staphylococcus hyicus* was isolated from affected skin.

Hemorrhagic enteropathy due to *Lawsonia intracellularis* infection was diagnosed in a 2-year-old sow with a three-day course of bloody diarrhea, and death. Gross findings included a thickened small intestinal wall, and lumen filled with partly clotted blood. Histologic lesions of crypt epithelial hyperplasia with silver stain positive bacteria in the apical cytoplasm were diagnostic. The same organism caused **necrotic enteropathy** and death in a 5-month-old pig from a group of 70, in which 15 were sick and two had died. Affected pigs had weight loss, some were humped up and had diarrhea.

Pleuropneumonia due to *Actinobacillus pleuropneumoniae* resulted in deaths of 56 of 203 market hogs in the three days after their arrival following a two- to three-day transport.

Salmonella choleraesuis septicemia caused death losses of 1-2 pigs per day in a group of 50 pigs purchased at sales yards. Pigs up to 200 lbs. exhibited intermittent diarrhea, respiratory signs and fever. PRRS infection was also present.

Isospora suis enteritis resulted in diarrhea, weight loss and death of four per week, 2-week-old piglets on one farm.

Project pigs on three farms experienced diarrhea and death due to **swine dysentery** and **severe whipworm infection**.



Chickens

Several cases of **encephalomalacia** were diagnosed in one commercial broiler operation involving several different ranches. These cases occurred within a month of each other and were associated from a single feed source. Additional

problems observed in this operation included infectious bursal disease, bursal cryptosporidia and coccidial enteritis. A different operation also had problems with encephalomalacia. Two chicken flocks at 4 weeks of age were showing neurological signs. At necropsy, occasional petechial hemorrhages were observed in the cerebellum. Multifocal malacia of cerebellum was observed histologically. Vitamin E levels were below normal.

Myelocytomatosis was diagnosed in 51-week-old broiler breeders. An increase in mortality (from 35 to 70 birds per day) occurred in a house of 10,000 birds. A slight drop in egg production also was observed. Necropsy revealed hepatosplenomegaly. Livers were pale, some with multifocal white to tan spots and/or ecchymotic hemorrhages. Histopathology of the liver and spleen were typical of myelocytomatosis with severe infiltration of mononuclear cells and myelocytes containing large nuclei and granules in their cytoplasm. Myelocytomatosis is the histologic tumor caused by subgroup J avian leukosis virus.

Several commercial flocks had increased **condemnation at slaughter** associated with neoplasia involving several viscera, including spleen, liver and skin. Gross and histologic characteristics of these neoplasia were consistent with **Marek's disease**. Tissues were negative for the leukosis subgroup J virus by PCR.

Upper respiratory disease associated with *Mycoplasma gallisepticum* infection continues to be a problem in several large commercial layer flocks. Diagnosis was confirmed by immunohistochemistry, PCR and characteristic histopathology. In some flocks, MG was isolated.

Marek's disease occurred in two commercial layer flocks at 7 and 19 weeks of age, respectively. The younger flock showed signs of co-existent infectious bursal disease.

Attaching-effacing E.coli was the cause of enteritis, diarrhea and a 10-fold increase in mortality in 5-week-

old Leghorn chicks. Mortality stopped on the second day of antibiotic treatment.

Infectious bursal disease continues to be a problem in layer growout facilities despite intensive vaccination. Secondary complications included ill-thrift or viral-type encephalitis in some flocks.

A backyard flock of 2- to 3-year-old chickens were experiencing an increase in mortality due to **complicated respiratory disease**. Gross examination revealed serous conjunctivitis, sinusitis, mucoid tracheitis and slight airsacculitis. Infectious laryngotracheitis virus, *Haemophilus paragallinarum* and *Mycoplasma gallisepticum* were all isolated from the respiratory tissues.



Turkeys

Erysipelas was diagnosed in 59-week-old turkey breeders. Mortality increased from 10 to 100 birds per day in a house of 4,000 birds. Necropsy revealed moderate hepatosplenomegaly and airsacculitis. *E. rhusiopathae* was isolated from trachea, air sacs, heart sac, liver and spleen.

An increase in mortality (0.5 percent/day) occurred in a house of 40,000 1- to 2-week-old turkeys. Birds were seeking heat, reluctant to walk, down on their legs and off feed. Some birds had soft bones. Necropsy revealed **synovitis** and **osteomyelitis** with *Staphylococcus aureus* isolated from joints.

Encephalomalacia due to **vitamin E deficiency** was diagnosed in several groups of 2- to 3-week-old turkey poults with neurological signs and increased mortality. Most of the birds had hemorrhagic cerebellums and liver or serum vitamin E levels were low.

Airsacculitis with typical caseous granulomas due to *Aspergillus* was diagnosed in several 13- to 14-week-old turkeys with respiratory signs. Birds were predisposed by severe hot weather.

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(VVND from page 1)

identification of VVND is causing financial loss to California producers, the disease (VVND) was recognized and quickly eliminated before it had a chance to spread to the state's commercial production industry, which would have resulted in much more severe losses (e.g., \$56 million in 1972) and more serious trade restrictions.

Newcastle disease is caused by paramyxovirus type 1 and can infect chickens, turkeys, waterfowl and exotic birds. The three strains of Newcastle disease virus include: 1) mildly pathogenic (lentogenic); 2) moderately pathogenic (mesogenic); and 3) severely pathogenic (velogenic). Currently, exotic Newcastle disease is defined as, "any velogenic strain that produces an acute rapidly spreading and usually fatal viral disease of birds and poultry." The lesions are highly variable, reflecting the variation in organ tropism and pathogenicity of the virus. Petechiae in the serous membranes, hemorrhages of the proventricular mucosa and the intestinal serosa occur and are accompanied by necrotic areas on mucosal surfaces. Congestion and mucoid exudates may be seen in the respiratory tract with opacity and thickening of the air sacs.

The natural spread of the disease is chiefly through exudates, excreta and offal of infected birds. The digestive and respiratory routes constitute the major channels of natural infection; however, entry of the virus by the ocular and cloacal routes may be quite common. The clinical signs of a milder form of the disease closely resemble or are identical with those of a number of infectious diseases, such as infectious bronchitis, laryngotracheitis, coryza, leukosis, mycosis, pullorum disease and infectious sinusitis of turkeys. The common nervous expression of Newcastle disease—lameness, paralysis, incoordination and torticollis—are often similar to those seen in avian encephalomyelitis, botulism, heavy metal poisoning or deficiencies in riboflavin, vitamin E, vitamin A and sometimes vitamin D (rickets). Distinction between Newcastle disease and respiratory disease, such as infectious bronchitis, laryngotracheitis and mycoplasmosis, is particularly difficult in flocks of growing and laying birds in which typical nervous manifestations of the disease are lacking. Nervous signs may be absent or fail to appear until late in the course of the outbreak, thus complicating or preventing clinical diagnoses. A sudden drop of production among layers and the development of nervous signs in chicks often suggest Newcastle disease. In severe form of the disease, mortality can approach 100 percent. With the velogenic strain's potential for rapid spread, it is important that an active surveillance program is continuously maintained.

The CVDLS continues its dedication to the prompt recognition of potentially devastating diseases and supporting efforts to eliminate those conditions before they have the opportunity to spread. Surveillance has

taken on a new dimension in recent years with the ever-expanding, agricultural urban interface. The recent finding of VVND within the boundaries of a major Central Valley city emphasizes the need for aggressive disease surveillance.

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Respiratory disease in 6- to 10-week-old turkeys associated with *Bordetella avium* and *Ornithobacterium rhinotracheale* continued to be a common finding.

Poult enteritis associated with **attaching and effacing *E. coli*** continues to be a problem in 2- to 7-week-old turkey poults. The affected flocks are uneven in size and report diarrhea and increased mortality. Some of the birds had concurrent infections with viruses and protozoa.

Sporadic cases of **turkey viral hepatitis** and myocarditis were seen in 3- to 6-week-old turkeys with diarrhea and increased mortality. The cause of myocarditis is not known, but picornavirus has been associated with turkey viral hepatitis.



Game Birds & Ratites

Cerebral hemorrhage caused neurological signs in a 3-month-old ostrich that also had cardiomyopathy. Liver levels of vitamin E were low. The significance of this low vitamin E level is not known, but vitamin E deficiency has been associated with hemorrhage in the brain in poultry and heart lesions in other species.

Mycoplasma gallisepticum infection caused **respiratory signs** and increased mortality in 2-year-old chukar partridges.

Various **parasitic infections**, such as coccidiosis, capillariasis and roundworm infestation were identified as the cause of **digestive problems** in chukar partridges, pheasants and quail.

Erysipelothrix rhusiopathiae was isolated from the liver and spleen of 80-week-old commercial Pekin ducks, which were experiencing **increased mortality**.

Salmonella typhimurium caused increased mortality in young pigeons. Some pigeons also had concurrent infections with **circovirus and pox virus**.

Sporadic cases of **proventriculitis** due to the nematode, **Tetrameres sp.**, were seen in pigeons of various ages with a history of **diarrhea, ill-thrift** and anorexia.

Severe **necrotic enteritis**, probably due to **Clostridium sp.**, was diagnosed in a 2-year-old dove, and severe oropharyngeal and esophageal **trichomoniasis** in an adult dove from separate premises. Both aviaries were exhibiting **increased mortality** in the flock.

(Disease Updates continued on page 6)



Exotic Avian

Pox virus infection with **skin lesions** and some with **respiratory signs** continues to be a problem in canaries and finches from various aviaries.

Several 10-day to 4-month-old cockatiels with respiratory signs were submitted from different aviaries to the laboratory. Most of these birds had severe **tracheitis**, **airsacculitis** and some birds had pneumonia. **Bordatella avium** was isolated from the respiratory tract.

Necrotizing **hepatitis** and **hemorrhagic enteritis** associated with **adenovirus** was diagnosed in a yearling Cuban macaw and a juvenile Red-bellied parrot from separate premises. Both birds had hemorrhagic diarrhea.

Clostridium perfringens was isolated from a 12-week-old Scarlet macaw and an adult Mealy Amazon parrot with typical lesions of **necrotic enteritis**. A 7-week-old, Red-bellied parrot had severe segmental hemorrhagic necrosis in the jejunum due to this organism.

Pacheco's Parrot Disease, a herpesvirus, was diagnosed in several adult psittacines, such as a Double Yellow Head Amazon parrot, a Pionus and a cockatoo. In one aviary, the source of infection may have been from new birds introduced into the aviary.

Paramyxovirus 3 was isolated from an adult cockatiel with a **head-tilt**. The bird had nonsuppurative **encephalitis**, mild otitis and pancreatitis. Intranuclear inclusion bodies were seen in the ganglionic cells subjacent to the adrenal gland.

Mycobacteriosis was diagnosed in an adult cockatiel and a Mealy Amazon parrot. The cockatiel had granulomatous **conjunctivitis**, **dermatitis** and involvement of the liver. *Mycobacterium sp.* was isolated from the Mealy Amazon parrot, but further speciation could not be done.

Meeting Calendar

- Nov. 8-10** Conference of Research Workers in Animal Diseases, Chicago, IL
- Nov. 17-20** American College of Veterinary Pathologists, St. Louis, MO
- Dec. 1-4** California Cattlemen's Association Annual Meeting, Stateline, NV (Lake Tahoe)
- Dec. 6-9** American Association of Equine Practitioners Annual Meeting, Baltimore, MD
- Jan. 18-19** Southern Poultry Science Society Annual Meeting, Atlanta, GA
- Jan. 28-30** California Pork Spectacular Sacramento, CA

University holiday schedule

- Nov. 26-27** Thanksgiving Holiday. CVDLS will handle emergency cases only.
- Dec. 24-25** Christmas Holiday. CVDLS will handle emergency cases only.
- Dec. 31- & Jan. 1** New Year's Holiday. CVDLS will handle emergency cases only.
- Jan. 18** Martin Luther King's Birthday. CVDLS will handle emergency cases only.

Lab Notes is published quarterly by the California Veterinary Diagnostic Laboratory System, University of California, Davis, CA 95616; Phone (530) 752-8700; FAX (530) 752-6253.

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