

Salmonellosis in a Wild Turkey

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been identified in cervids in other locations in Wyoming. Nothing is known about the importance of this disease in the mule deer population.

The relationship of these viruses to poxviruses present in domestic animal populations in Wyoming is unknown. Contagious ecthyma is common in sheep flocks in Wyoming and many sheepmen vaccinate sheep with a live virus vaccine. Bovine papular stomatitis and pseudocowpox, bovine diseases caused by parapox viruses, have been identified in a few animals in the state within the last two years. Other poxviral diseases of domestic or wild animals may have gone unrecognized. Characterization of the deer viruses and

transmission studies are presently underway to investigate some of the questions raised by the presence of poxviral-induced disease in free-ranging mule deer.

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Salmonellosis in a Wild Turkey

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In May 1982, an emaciated adult female free-ranging wild turkey (*Meleagris gallopavo*), weighing 2.27 kg, was killed in Dallas County, Alabama, because it was exhibiting unusual behavior. The carcass was frozen and subsequently submitted for necropsy.

At necropsy, there were miliary pinpoint yellow-white foci scattered throughout the liver. The ceca were distended severely by large cores of caseous debris, and the cecal mucosa was ulcerated extensively and covered by a thick yellow diphtheritic membrane. Samples of cecum, liver, spleen, kidney, lung, and heart

were fixed in 10% buffered formalin, embedded in paraffin, sectioned at 7 μm , and stained with hematoxylin and eosin. Gram's and acid-fast stains also were applied to sections of liver and cecum.

Histologically the liver contained multiple granulomas, 100 μm to 500 μm diameter, characterized by a central core of macrophages surrounded by a single layer of multinucleated giant cells (Fig. 1). Myriads of gram-negative, non-acid-fast bacterial rods were observed within many of the granulomas. Sinusoids immediately surrounding the granulomas contained hyaline fibrin thrombi (Fig. 1). Similar thrombi also were present in sinusoids throughout the liver unassociated with granulomas. The cecal mucosa was dif-

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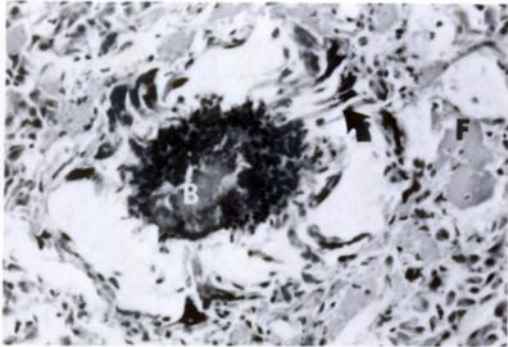


FIGURE 1. Hepatic granuloma with central core of macrophages surrounded by single layer of multinucleated giant cells (arrow) in a wild turkey. Note myriads of bacteria within granuloma (B) and fibrin in adjacent sinusoids (F). H&E, $\times 300$.

fusely ulcerated, with damage extending to the tunica muscularis in some areas. Multinucleated giant cells and macrophages lined the base of the ulcerated area separating the cecal wall from the layers of necrotic inflammatory cells and fibrin which formed a cast in the cecal lumen. Masses of bacteria similar to those in the liver were present throughout the cecal cast and both free and within macrophages along the base of the ulcer.

Salmonella Group B was isolated in pure culture from liver in thioglycollate broth. The isolate was serotyped as *S. typhimurium* by the National Veterinary Services Laboratories, Ames, Iowa.

Salmonella typhimurium is the most common *Salmonella* reported in wild avian species (Steele and Galton, 1971, *In Infectious and Parasitic Diseases of Wild Birds*, Davis et al. (eds.), Iowa State Univ. Press, Ames, Iowa, pp. 51–58). In domestic fowl, it is the serotype most frequently involved in systemic cases (Williams, 1984, *In Diseases of Poultry*, Hofstad et al. (eds.), Iowa State Univ. Press, Ames, Iowa, pp. 65–129). Although there is serologic and cultural evidence that salmonella organisms, including *S. typhimurium*, infect free-ranging wild turkeys (Hensley and Cain, 1979, *Avian Dis.* 23: 62; White et al., 1981, *J. Wildl. Dis.* 17: 327–330), we believe this to be the first reported case of clinical disease.

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