

PATHOLOGIC CHANGES CHARACTERIZING TWO UNUSUAL BALD EAGLE MORTALITY EVENTS IN ARKANSAS AND WISCONSIN, WINTER 1994-95. Nancy J. Thomas, Lou Sileo, Carol Meteyer, Kim Miller, and Lynn Creekmore, National Wildlife Health Center, 6006 Schroeder Road, Madison, Wisconsin 53711.

During the winter of 1994-95, two bald eagle mortality events attracted public attention. In each event, deaths occurred in a restricted geographic site over a several week period. In each event, the deaths of multiple birds were linked by similar clinical signs, and gross and microscopic lesions. Both events have defied definitive diagnosis to date. In Arkansas, twenty-eight bald eagles were found sick or dead in two adjacent coves of DeGray Lake from November 24, 1994, to January 15, 1995. Sick birds were described as uncoordinated, weak, or unable to fly. The Arkansas bald eagles were in good body condition and had green stained fluid in the upper gastrointestinal tract. The consistent microscopic lesion in these birds was a spongiform change in the white matter of the brain and spinal cord, compatible with myelinic edema. In Wisconsin, 11 bald eagles were found sick or dead in Sauk and Columbia counties from January 1 to February 19, 1995. Sick birds displayed tremors and twitching. The Wisconsin eagles were in good body condition and consistently had a pale, soft liver that corresponded with microscopic evidence of pronounced hepatic fatty change in a periportal to diffuse distribution. Each Wisconsin eagle also had minimal to mild cerebral vasculitis and perivasculitis. No biologic or chemical agent has been confirmed as the cause of either mortality event.

MORTALITY FACTORS IN GREAT HORNED OWLS (*BUBO VIRGINIANUS*) SUBMITTED TO THE NATIONAL WILDLIFE HEALTH CENTER FROM 1975 TO 1994.

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Diagnostic findings for 133 great horned owls (*Bubo virginianus*) examined from 1975 to 1994 at the National Wildlife Health Center were reviewed. The carcasses were collected from 24 states, but most (58%) came from Colorado (n=21), Missouri (n=12), Oregon (n=12), Wyoming (n=11), Illinois (n=10), and Wisconsin (n=10). The most common cause of death was trauma, diagnosed in 47 (35%) cases. Twelve of these were shot. Forty-two (32%) of the owls were emaciated, but a presumptive cause for emaciation was found in only 16 (38%) of these. Other diagnoses included hydrogen sulfide and agricultural pesticide poisonings (n= 12), electrocution (n=9), and infectious diseases (n=8). Liver lead concentrations were determined for 60 (45%) carcasses; all were indicative of normal background exposure (<2 ppm, wet weight). These findings indicate that although disease and exposure to environmental contaminants account for some of the deaths in great horned owls in the United States, trauma and starvation may be more important mortality factors in this species.