

The livers were swollen, friable, and had a semi-cooked appearance. In some birds multiple focal areas of necrosis were seen throughout the livers, and in one bird extensive fibrinous perihepatitis and peritonitis were seen. The spleens were enlarged, mottled, and had focal necrotic areas throughout. The lungs in the majority of birds appeared normal. Heavy nematode infestation of the gizzard was seen in the majority of birds.

Samples of liver, spleen, lungs, and bone marrow were taken from seven birds for bacteriological examination. *Pasteurella multocida* organisms were isolated from all samples.

This lake is inhabited by other birds and some of these were affected. Twenty-six dead ducks and 36 dead gulls were collected, but none of these were submitted to the laboratory. Ravens and eagles were seen scavenging cormorant carcasses but appeared healthy.

Avian pasteurellosis is known to occur in many wild and domestic species; however, we are not aware of any reports of this infection in cormorants.

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Incursion of bluetongue virus type 11 and epizootic hemorrhagic disease of deer type 2 for two consecutive years in the Okanagan Valley

Consecutive outbreaks of epizootic hemorrhagic disease of deer (EHD) type 2, and bluetongue (BT) type 11, occurred in the Okanagan Valley, British Columbia, in 1987. Extensive serological surveys, carried out in auction markets east and west of the Okanagan Valley, confirmed that the infections were confined to the valley (1). It was the first bluetongue incursion since 1975 (2).

In 1988, BT and EHD were monitored by means of five sentinel bovine herds. These herds were placed in the Okanagan Valley by the Veterinary Inspection Directorate of Agriculture Canada at locations where BTV had been isolated in 1987, or at sites where reactors had been identified as a result of investigations for the 1975-76 incursion (2).

Serological evidence of BTV-11 and EHDV-2 infections was uncovered in the Okanagan Valley for the second consecutive year. Antibodies to orbiviruses, which had been monitored since May 27, were suspected in the agar gel immunodiffusion (AGID) test in serum samples collected from sentinel bovine animals on August 3 and 4, 1988. The AGID results were confirmed by the competitive ELISA for BT and the serum neutralization tests for BT and EHD. On August 29, animals from three of the five sentinel herds had seroconverted to BTV and EHDV. The other two herds, located where BT had not been found in 1987, remained negative. BTV-11 was isolated from a pool of heparinized blood collected from one of the sentinel herds on October 4, 1988.

Serological evidence suggests that the 1988 epizootic was confined to the endemic zone established in 1975 and 1987. However, a serological survey is being conducted in areas adjacent to the endemic zone to determine whether or not extension of the infection occurred beyond the known infected site.

The Office Internationale des Epizooties was informed of the bluetongue findings on September 28, 1988. This change to Canada's bluetongue status was also communicated to the major trading countries whose importation policies may be affected by the recent BT incursion.

References

1. Dulac GC, Dubuc C, Afshar A, *et al.* Consecutive outbreaks of epizootic hemorrhagic disease of deer and bluetongue. *Vet Rec* 1988; 122: 340.
2. Thomas FC, Skinner DJ, Samagh BS. Evidence of bluetongue virus in Canada: 1976-1979. *Can J Comp Med* 1982; 46: 350-353.

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Cross-Canada Disease Report

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