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## Salmonella typhimurium INFECTION IN CAPTIVE WHITE-TAILED DEER FAWNS

The ability to raise wild ungulates for experimental studies presents many problems, paramount being diarrhea during the first few weeks of life. This report deals with 4 white-tailed deer (*Odocoileus virginianus*) which died suddenly in acute depression. All had been captured in the wild within a day of birth.

The first fawn (#1) was brought to the Veterinary College on May 29, 1963, and placed in a clean room in a building housing dogs, calves, chickens, and turkeys. It appeared normal until June 6, when it stopped eating and became lethargic; 200 mgm. chloromycetin was given intramuscularly twice during the day but it died that night..

Fawn #2 brought to the College on June 5 and fawns #3 and #4 on June 7 were within 1 week of age at the time of arrival. Each was given neomycin orally at the rate of 5 mgm/lb beginning June 7. On June 9, fawn #2 became lethargic and died within 12 hours. On June 10, fawn #3 became anorexic and lethargic and, despite parenteral fluid therapy and antibiotic treatment, died on June 11. Fawn #4 appeared normal until June 19 when diarrhea was noted but its appetite remained good until June 22. Despite oxytetracycline, chloramphenicol, furacin treatments, parenteral fluid therapy, and blood transfusions from a captive deer, fawn #4 died on June 26. One other deer captured at about the same time and placed in a different building remained normal and survived.

Necropsy findings were similar in the 4 animals. Most of the organs were pale and petechiae were commonly found in the kidneys and hearts. The intestinal tracts of all the animals, except #1, were empty. Many of the organs were edematous. Histophathological examination showed acute enteritis and submucosal edema. Bacteriological cultures yielded hemolytic *Escherichia coli* and *Salmonella typhimurium* from the small intestines of 3 of the 4 deer. Fawn #3 yielded only *E. coli* and *Pseudomonas species.*

A culture of *S. typhimurium* obtained from these animals and one of *S. typhimurium* isolated from the turkey poults housed in the same building were sent to the Laboratory Branch, Ontario Department of Health.

Results of antibiotic sensitivity and biochemical tests suggested that the strains were different. This was confirmed when phage typing was carried out at the Enteric Reference Laboratories of the Central Public Health Laboratories in London, England. The source of infection of the deer was not determined.

Cook (1966. A study of diseases in wildlife of South Texas. Ph.D. thesis. University of Wisconsin) reported the culture of *Salmonella* from 1 dead deer fawn and from 2 of 11 apparently normal fawns examined in the wild.

The rapidity with which the deer died of *S. typhimurium* infection, with minimum overt signs, makes it important that workers using deer for experimental research look for *Salmonella* infections when fawns die suddenly for no apparent reason.

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Miss Margaret Finlayson (Ontario Department of Health) kindly examined the cultures and referred them for typing. I am indebted also to Dr. E. S. Anderson, Central Public Health Laboratories, London, England, for the phage typing.

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