REVIEW

Source: Bulletin of the Wildlife Disease Association, 5(1) : 10

Published By: Wildlife Disease Association

URL: https://doi.org/10.7589/0090-3558-5.1.10

Further opportunity to test the method was offered in March, 1964, when several animals were autopsied in connection with another investigation. Blood was drawn from seven animals immediately prior to slaughter and sent to the laboratory for bio-assay. Autopsy revealed that 5 of the 7 were pregnant but the bio-assay indicated that only 2 were pregnant. Rectal palpation (Greer and Hawkins, 1967, J. Wildl. Mgmt. 31:145-149) appears to be the most satisfactory method for determining pregnancy in elk.

Blood levels of 17-OH were tested by the Glenn-Nelson method (Glenn and Nelson, 1953, Clin. Endocrin. and Metab. 13:911) using the Porter-Silber reaction (Porter and Silber, 1950, J. Biol. Chem. 185:201-207). It was assumed that 17-OH levels would increase under psychological stress. There are no previous records or standards for comparison of 17-OH levels in elk, so these may have their greatest value when used in future comparisons. The sequence of sampling did appear to have a slight effect on 17-OH levels, with animals sampled near the beginning of the sample period showing higher average values than those sampled in the middle or near the end of the sample period. A regression line comparing 17-OH levels with the sequence of sampling indicated a slight downward trend ($b = -.25$) over the 5 hour period of sampling, beginning immediately after the animals were trapped. Correlation between 17-OH and sample sequence was computed as $r = -.55$. This indicates that the high levels of 17-OH produced while the animals were being driven into the trap with helicopters, were not sustained during the handling period.

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April 26, 1968

REVIEW

MARKLEY, MERLE H. *Wild Turkey Diseases and Parasites.*

This is part of a chapter on Limiting Factors in a book *The Wild Turkey and Its Management,* edited by Oliver H. Hewitt. It was published in 1967 by *The Wildlife Society,* 3900 Wisconsin Avenue, Washington, D.C. 20016, 589 pages, price $6.00. The section on diseases and parasites covers pages 230-243.

The wild turkey of North and Central America is steeped in history and tradition. These birds provided stock for the extensive commercial domestic turkey production not only in North America but in many other parts of the world. It is still an important wild game bird.

In this chapter Markley has attempted to document all published reports of diseases in both wild and domesticated turkeys. This chapter provides an excellent compendium of the parasites and other disease-causing organisms that have been reported. It should serve as important source material for any future investigator confronted with disease problems in this species.

Carlton M. Herman.

forward along the right side of the body. Subsequently these animals developed a more generalized involvement and both died approximately 30 hours post injection. The mice which had received antitoxin remained normal.

Discussion

The observation of typical tetanic spasms is generally regarded as diagnostic for tetanus. The presence of a wound with a considerable amount of devitalized tissue and with every opportunity for soil contamination, together with demonstration of toxin production by bacteria isolated from the wound, substantiate the diagnosis in this case. Compression wounds with marked tissue necrosis caused by leg hold traps would appear to fill all requirements for the germination and growth of *Cl. tetani,* but the occurrence of tetanus in animals escaping from such traps has not been documented previously.

This case demonstrates that tetanus, which occurs relatively commonly in man and domestic animals, must be considered as a disease entity in wild species.

Acknowledgement

I am indebted to E. Latta, Guelph Humane Society for submission of the specimen.

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August 20, 1968

REVIEW

TAYLOR, R. M. (Comp.). *Catalogue of the Arthropod-borne Viruses of the World.* PHS Publication No. 1760. LC Catalogue No. 67-60097. First ed., 1967. U.S. Government Printing Office, Washington, D.C., 908 pages. Available from the Superintendent of Documents, $5.25.

The *Catalogue of the Arthropod-borne Viruses of the World* is a published version of the famous *Arthropod-borne Virus Catalogue,* originally assembled by interested arbovirologists as a working catalogue for restricted distribution only. Rapid advances in arbovirological knowledge in recent years have been reflected by phenomenal growth of the working catalogue, from a mere 43 entries in 1960 to nearly five times that number in 1967, the cutoff date of the present published volume. The published volume includes, in brief form, details of original isolation, physical and chemical properties, antigenic characteristics, natural and experimental host range, pathogenesis, symptomatology, arthropod vector data and geographic distribution on 204 viruses provisionally classed as arboviruses. Thirty-six tables are also presented which summarize and analyze this large amount of accumulated data.

Roy W. Chamberlain.

All of the helminths listed above have been reported from domestic ruminants and none are believed to be primarily parasites of elk. With the possible exception of *E. schneideri,* no helminths were found in large enough numbers to produce disease in elk, and conditions were not favorable for a buildup to serious proportions. Elk, therefore, are probably unimportant in maintaining helminths of domestic animals in the areas mentioned here. Elk, however, are one of the principal hosts of *D. albipictus* and might be a source of infection to domestic animals utilizing the same ranges. Cattle graze the lower elevations of the elk ranges in moderate numbers and some areas are grazed by sheep. Only a few horses graze in or pass through these areas.

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Some of the material examined in this study was collected by K. S. Samson and R. W. Allen of this laboratory.
This work was carried out in cooperation with the New Mexico Agricultural Experiment Station and the New Mexico Department of Game and Fish.

REVIEW

Natural Nidality of Diseases and Questions of Parasitology. 1968. Edited by Norman D. Levine and Translated by Fredrick K. Plous, Jr. University of Illinois Press, Urbana, 483 pp.

This book, originally published in Russian in 1961, represents the proceedings of a conference held in September, 1959, at Alma-Ata, Kazakhstan, USSR. It contains translations of 125 papers, 25 on natural nidality of diseases, 19 on protozoology, 35 on helminthology, and 33 on arachnoentomology. It constitutes a worthwhile review of the research in progress on livestock and wildlife diseases and on zoonoses. Epidemiologic theories presented follow closely the pattern set by E. N. Pavlovsky and his associates, with emphasis on the concepts of natural nidality, or the natural focal persistence of infections, and landscape epidemiology. The first paper is by E. N. Pavlovsky himself. Many of the authors show commendable zeal to convert recently acquired knowledge to practical disease control methods. One gets the impression that wildlife diseases are studied not for the sake of wildlife conservation however, but only to protect man and his livestock.

The most frustrating deficiency in this book is the total lack of references in about half the papers and careless, incomplete presentation of literature citations in many others. For example, a review paper by E. V. Gvozdev, of 18 pages on helminths of wild fauna, makes reference to 265 papers by 118 authors, yet there is no list of references given! In other papers, citations in text do not appear in the lists of references appended. The usefulness of this book is thus severely limited. One presumes the fault lies with the original authors, and that Levine and Plous have done their best to present an accurate translation of the Russian text. In spite of the lack of references, this book stands as an open door to contemporary Russian epidemiology, a door otherwise generally closed to most western scientists.