BioOne COMPLETE

Blackbuck Antelope (Antilope cervicapra), a New Host for Psoroptes cuniculi (Acari: Psoroptidae)

Authors: Wright, Fred C., and Glaze, Robert L.

Source: Journal of Wildlife Diseases, 24(1) : 168-169

Published By: Wildlife Disease Association

URL: https://doi.org/10.7589/0090-3558-24.1.168

BioOne Complete (complete.BioOne.org) is a full-text database of 200 subscribed and open-access titles in the biological, ecological, and environmental sciences published by nonprofit societies, associations, museums, institutions, and presses.

Your use of this PDF, the BioOne Complete website, and all posted and associated content indicates your acceptance of BioOne's Terms of Use, available at www.bioone.org/terms-of-use.

Usage of BioOne Complete content is strictly limited to personal, educational, and non - commercial use. Commercial inquiries or rights and permissions requests should be directed to the individual publisher as copyright holder.

BioOne sees sustainable scholarly publishing as an inherently collaborative enterprise connecting authors, nonprofit publishers, academic institutions, research libraries, and research funders in the common goal of maximizing access to critical research.

Downloaded From: https://complete.bioone.org/journals/Journal-of-Wildlife-Diseases on 28 Mar 2024
Terms of Use: https://complete.bioone.org/terms-of-use

Journal of Wildlife Diseases, 24(1), 1988, pp. 168–169

Blackbuck Antelope (*Antilope cervicapra*), a New Host for *Psoroptes cuniculi* (Acari: Psoroptidae)

Fred C. Wright[1] **and Robert L. Glaze,**[2] [1] U.S. Livestock Insects Laboratory, Agricultural Research Service, U.S. Department of Agriculture, P.O. Box 232, Kerrville, Texas 78029, USA; [2] Glaze Veterinary Clinic, Fredericksburg Highway, Kerrville, Texas 78028, USA

ABSTRACT: Information was requested on the cause of extensive lesions and death of a blackbuck antelope (*Antilope cervicapra*). *Psoroptes cuniculi*, the ear mite of domestic rabbits, was identified as the cause of the lesions. Death of the antelope was attributed to a secondary bacterial infection. This is the first report of *P. cuniculi* on blackbuck antelope. The potential impact of these mites on blackbuck antelope and other exotics in Texas is unknown.

Key words: Blackbuck antelope, *Antilope cervicapra*, psoroptic mange, *Psoroptes cuniculi*, case report.

Blackbuck antelope (*Antilope cervicapra*) are native to India and were introduced originally into the hill country of Texas in the 1930's. According to a 1984 statewide survey of exotic big game animals by the Texas Parks and Wildlife Department (4200 Smith School Road, Austin, Texas 78744, USA), the populations of blackbuck antelope numbered approximately 19,000 distributed throughout 70 counties on 222 ranches. Blackbuck antelope accounted for 16% of all exotics in Texas and were second in number only to axis deer (*Cervus axis*). The majority of blackbuck antelope (83%) were on 155 ranches located in 27 counties on the Edwards Plateau.

Blackbuck antelope in Texas are normally relatively free of ectoparasites, but the lone star tick (*Amblyomma americanum*) and the biting louse (*Tricholipeurus parallelus*) of white-tailed deer (*Odocoileus virginianus*) have been found on blackbuck (Thornton et al., 1973). Another biting louse (*Tricholipeurus balanicus balanicus*) was reported on blackbuck recently in Texas (Wright, 1985).

In January 1987, an adult female blackbuck antelope, found dead on a ranch (32°15′N, 99°55′W) in Taylor County (Edwards Plateau), was submitted to a veterinary clinic (Glaze Veterinary Clinic, Fredericksburg Highway, Kerrville, Texas 78028, USA) for examination. The animal was extremely emaciated and had extensive lesions resembling exudative and superficial perivascular dermatitis characterized by severe edema of the epidermis and dermis over most of its head and body. Thousands of mites could be seen grossly on the animal. The lesions resembled severe psoroptic mange typically seen on domestic rabbits and desert bighorn sheep (*Ovis canadensis mexicana*) (F. C. Wright, pers. obs.) and were so severe that patches of hair and epidermis could be easily removed exposing abraided, reddened skin. This observation was consistent to that seen on bighorn sheep with severe psoroptic mange, but the length of time from death to examination of the blackbuck may have contributed to postmortem breakdown of tissues. Samples of the scabs from the ears, head, and body were obtained for mite identification.

At necropsy of the blackbuck, the internal organs appeared to be normal with some degeneration of tissue, probably due to the length of time from death to discovery and transportation to the veterinarian. Death of the antelope was attributed to a secondary factor, probably a bacterial infection. Contributing stress factors included cold weather, emaciation, loss of hair, and the overall weakened state of the animal.

Seventeen adult male mites were mounted in Hoyer's medium on microscope slides from which 32 outer opisthosomal setae were measured. The average length of these setae was 71.2 μm (range 25.0–90.9 μm) and were within the range of setal lengths characteristic of *Psoroptes cuniculi* (Sweatman, 1958). Voucher specimens have been deposited in the U.S.

Downloaded From: https://complete.bioone.org/journals/Journal-of-Wildlife-Diseases on 28 Mar 2024
Terms of Use: https://complete.bioone.org/terms-of-use

National Parasite Collection (Beltsville, Maryland 20705, USA; Accession number 79691). To our knowledge, this is the first report of *P. cuniculi* found on blackbuck antelope. This mite, commonly called the rabbit ear mite, has a variety of hosts, including domestic rabbits and goats, whitetailed deer, mule deer (*Odocoileus hemionus*), ibex (*Capra* sp.), and horses. The origin of the mite on this blackbuck antelope is unknown. The potential impact of *P. cuniculi* on resident herds of blackbuck antelope and other exotics in Texas should be investigated. Severe cases of psoroptic mange can be very debilitating to hosts, often contributing to mortality if uncontrolled (Cole et al., 1984).

The authors thank Jayme C. Riner, U.S. Livestock Insects Laboratory, Agricultural Research Service, U.S. Department of Agriculture, Kerrville, Texas 78029, and R. L. Smiley, Systematic Entomology Laboratory, Insect Identification and Beneficial Insect Introduction Institute, Agricultural Research Service, U.S. Department of Agriculture, Beltsville, Maryland 20705, for the identification of these mites. This paper reports the results of research only. Mention of a proprietary product does not constitute an endorsement or a recommendation of this product by the U.S. Department of Agriculture.

LITERATURE CITED

COLE, N. A., F. S. GUILLOT, AND C. W. PURDY. 1984. Influence of *Psoroptes ovis* (Hering) (Acari: Psoroptidae) on the performance of beef steers. Journal of Economic Entomology 77: 390–393.

SWEATMAN, G. K. 1958. On the life history and validity of the species in *Psoroptes*, a genus of mange mites. Canadian Journal of Zoology 36: 905–929.

THORNTON, J. E., T. J. GALVIN, AND R. R. BELL. 1973. Parasites of the blackbuck antelope (*Antilope cervicapra*) in Texas. Journal of Wildlife Diseases 9: 160–162.

WRIGHT, F. C. 1985. *Tricholipeurus balanicus balanicus* (Werneck, 1938) (Mallophaga, Trichodectidae) on blackbuck antelope (*Antilope cervicapra* L.) in Texas. Journal of Wildlife Diseases 21: 68.

Received for publication 12 June 1987.

Downloaded From: https://complete.bioone.org/journals/Journal-of-Wildlife-Diseases on 28 Mar 2024
Terms of Use: https://complete.bioone.org/terms-of-use