



Trichodectes canis on the Gray Wolf and Coyote on Kenai Peninsula, Alaska 1

Author: Schwartz, Charles C.

Source: Journal of Wildlife Diseases, 19(4) : 372-373

Published By: Wildlife Disease Association

URL: <https://doi.org/10.7589/0090-3558-19.4.372>

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.

***Trichodectes canis* on the Gray Wolf and Coyote on Kenai Peninsula, Alaska¹**

Charles C. Schwartz, Alaska Department of Fish and Game, Moose Research Center, P.O. Box 3150, Soldotna, Alaska 99669, USA; **Robert Stephenson**, Alaska Department of Fish and Game, 1300 College Road, Fairbanks, Alaska 99701, USA; and **Nixon Wilson**, Department of Biology, University of Northern Iowa, Cedar Falls, Iowa 50614, USA

The dog biting louse (*Trichodectes canis*) has infrequently been reported on coyotes (*Canis latrans*) (Eads, 1948, J. Mammal. 29: 268-271; Gier and Ameal, 1959, Kansas State Univ. Agric. Exp. Sta. Bull. 91: 1-34; Foreyt et al., 1978, Vet. Med. Small Anim. Clin. 73: 503-505), red wolf (*Canis rufus*) × coyote hybrids (Wilson and Oliver, 1979, Southwest. Entomol. 4: 156-162; Pence et al., 1981, J. Med. Entomol. 18: 409-412), and gray wolves (*Canis lupus*) (Thompson, 1934, Can. Entomol. 66: 279-281) in the contiguous United States and southern Canada. However, its occurrence on more northern populations of North American wild canids was previously undocumented. This report describes the occurrence of *T. canis* on gray wolves and on a coyote from the Kenai Peninsula, Alaska.

During the winters of 1981-1982 and 1982-1983, lice were found and collected from several wolves that exhibited alopecia. In addition, lice were collected by a trapper from a coyote hide; the hide was not examined by a biologist but we have no reason to doubt the trapper's identification of the coyote. Lice were preserved in 90% ethanol after which they were identified and classified by stage and sex. Four of the most heavily infested wolves were also examined for *Sarcoptes scabiei* using skin scrapings taken from scalp samples from affected areas. Fresh scalp samples were obtained from recently killed individuals, and frozen until analysis.

Representative specimens of *T. canis* have been deposited in the Florida State Collection of Arthropods, Florida Department of Agriculture and Consumer Services, Gainesville Flori-

da 32602, USA under accession number 189-1982.

Eleven (2 adults, 9 pups) of 64, and 10 (5 adults, 5 pups) of 47 wolves harvested on the Kenai Peninsula during the winters of 1981 and 1982, respectively, were infested with the dog biting louse. Lice occurred on wolves from four different packs (Bear Lake, Point Possession, Swanson River, Elephant Lake) in 1981 and on five packs (Skilak Lake plus those listed above) in 1982 (pack affiliation according to Peterson, 1982, Final Report, U.S. Fish and Wildlife Service Contract No. 14-16-0007-81-5202 and 14-16-0008-2104, 134 pp). Density of lice on infested individuals was difficult to determine because most hides had been stretched and dried several weeks prior to examination. However, a pup examined immediately after death, and four pups examined while immobilized had densities ranging from two to eight mites/cm² in infested areas.

All wolves on which lice were observed exhibited varying degrees of alopecia. Guard hairs were missing or broken off 10-20 mm above the skin and underfur was matted and/or separated from the skin. Alopecia was most extensive between the shoulders and in the groin. In more severely infested hosts, hair loss extended from the shoulders down the back to the rump. Three of the 11 wolves examined had almost no guard hairs and alopecia over their entire bodies except for their heads, legs and tails. Pups exhibited a greater degree of infestation than adults based on hair loss, seborrhea, dandruff and lesions. All wolves, except one, were considered in good physical condition when fat deposits were compared to noninfested animals. The exception, a pup, was in extremely poor condition with no visible fat reserves. The dermis exhibited varying degrees of seborrhea and dandruff; there were also lesions and inflammation secondary to severe pruritus.

Received for publication 15 November 1982.

¹ Supported in part by Federal Aid in Wildlife Restoration, P-R project W-21-2.

Although infestations of sarcoptic mange have sometimes occurred concomitantly with lice infestations (Gier et al., 1978, *In Coyotes: Biology, Behavior, and Management*, Bekoff (ed.), Academic Press, New York, 384 pp.; Pence and Custer, 1981, *In Worldwide Furbearer Conf. Proc.*, Vol. II, Chapman and Pursely (eds.), Worldwide Furbearer Conf., Inc., Frostburg, Maryland, pp. 760–845), there was no evidence of mange mites on the four hide samples examined in our study.

Trichodectes canis has not been previously identified on wild canid populations in Alaska, although it is found occasionally on dogs according to a statewide survey of veterinarians. Although no additional morbidity or mortality was observed, it seems obvious that severely infested wolves have a higher probability of contracting other diseases associated with stress or possibly suffer increased mortality from exposure during severe winters.

In addition, the extreme hair loss associated with heavy lice infestations reduced the com-

mercial value of pelts. Hides of most pup wolves and the coyote were worthless, while those of the adult wolves were worth one-third of their normal market value. If the prevalence of infestation on wolves from the Kenai Peninsula persists or increases, the commercial value of their hides and possibly those of coyotes will decrease significantly.

We thank S. Mersch who originally isolated and identified the louse; Dr. R. Zarnke for examining scalp samples for mange; T. Spraker, Game Biologist, for collecting lice specimens from sealed wolves; trappers J. Cook, W. Sather, C. Bierdaman, E. Jordan, and A. Horwath for providing samples of lice from harvested wolves; E. Bangs, Kenai National Wildlife Refuge Biologist, for data on physical condition of harvested wolves, B. Taylor for data on louse density and information from his statewide survey of veterinarians concerning *T. canis* occurrence on domestic dogs; and K. Schneider, A. Franzmann, W. Ballard, and S. Peterson for reviewing the manuscript.

Journal of Wildlife Diseases, 19(4), 1983, pp. 373–375
© Wildlife Disease Association 1983

Azodrin® Poisoning of Waterfowl in Rice Fields in Louisiana

Donald H. White and Christine A. Mitchell, U.S. Fish and Wildlife Service, Patuxent Wildlife Research Center, Gulf Coast Field Station, P.O. Box 2506, Victoria, Texas 77902, USA; **Elizabeth J. Kolbe**, U.S. Fish and Wildlife Service, Patuxent Wildlife Research Center, Laurel, Maryland 20708, USA; and **William H. Ferguson**, U.S. Fish and Wildlife Service, Post Office and Courts Bldg., Lake Charles, Louisiana 70601, USA

During the period 2–4 April 1981 about 100 birds, mostly ducks and geese, were found dead and dying in a rice field near Sweet Lake, Calcasieu Parish, Louisiana. Fresh specimens were collected to determine the cause of mortality. Birds were placed individually in polyethylene freezer bags, tagged, and frozen soon after collection. Four snow geese (*Chen caerulescens*), two blue-winged teal (*Anas discors*), one green-winged teal (*Anas crecca*), and one mottled duck (*Anas fulvigula*) were shipped to the National Wildlife Health Laboratory (NWHL), Madison, Wisconsin, for necropsy and pathological examination. Ten snow geese, 10 blue-winged

teal, three green-winged teal, three great-tailed grackles (*Quiscalus mexicanus*), and eight red-winged blackbirds (*Agelaius phoeniceus*) were transported to the Gulf Coast Field Station, Victoria, Texas, for brain acetylcholinesterase (AChE) activity determinations and preparation for chemical residue analysis. Additionally, apparently healthy specimens of the affected species were collected near Lake Charles, Louisiana, and Victoria, Texas, to serve as controls in the analyses.

Brain AChE activities of birds found dead and of controls were determined by the Ellman et al. (1961, *Biochem. Pharmacol.* 7: 88–95) technique as described by Hill and Fleming (1982, *Environ. Toxicol. Chem.* 1: 27–38). Most of the proventriculi of the birds found dead

Received for publication 27 April 1983.