

Occurrence of the ear canker mite, *Otodectes cynotis* (Hering), on the Wolverine, *Gulo gulo* (L.)

Authors: Nixon Wilson, and Randall L. Zarnke

Source: Journal of Wildlife Diseases, 21(2) : 180

Published By: Wildlife Disease Association

URL: <https://doi.org/10.7589/0090-3558-21.2.180>

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.

Occurrence of the ear canker mite, *Otodectes cynotis* (Hering), on the Wolverine, *Gulo gulo* (L.)

Nixon Wilson, Department of Biology, University of Northern Iowa, Cedar Falls, Iowa 50614, USA; and Randall L. Zarnke, Department of Fish and Game, 1300 College Road, Fairbanks, Alaska 99701, USA

The ear canker mite of carnivores, *Otodectes cynotis* (Hering) is a well known pest of domestic cats and dogs and has also been recorded from the arctic fox (*Alopex lagopus*), red fox (*Vulpes vulpes*), ferret (*Mustela putorius furo*), and hedgehog (*Erinaceus europaeus*) under natural conditions (Sweatman, 1958, Can. J. Zool. 36: 849-862; Evans et al., 1961, The Terrestrial Acari of the British Isles, British Museum (Natural History), London, England, 219 pp.). The mite usually lives deep in the ear canal near the eardrum; however, it is known to cause lesions on the body of the host. Ear infections cause intense irritation characterized by head shaking and ear scratching. Ulceration of the auditory canal and convulsions are not unusual. Alopecia has been associated with body infestations.

Sweatman (1958, op. cit.; 1962, N.Z. Entomol. 3: 15-23) was unable to culture mites from the ferret *in vitro* when epidermal material from the ears of marten (*Martes americana*), fisher (*Martes pennanti*), ermine (*Mustela erminea*), mink (*Mustela vison*), badger (*Taxidea taxus*), and river otter (*Lutra canadensis*) was used. Under similar *in vitro* conditions he was successful using epidermal material

from the coyote (*Canis latrans*), gray wolf (*Canis lupus*), and black bear (*Ursus americanus*), all hosts more distantly related to the ferret. He could offer no explanation for such unusual host relationships.

Recently, we identified a large number of *O. cynotis* collected from a pelt of a wolverine (*Gulo gulo*). The host was trapped near Ophir, Alaska on 27 December 1983. The freshly dried and stretched hide was taken to Robert Pegau, the local Area Biologist of the Alaska Department of Fish and Game, as required by law. He reported there were so many mites at the tips of the hairs that the fur had an unusual brown tint. Approximately 1,500 specimens were easily collected by running an open vial through the fur. The pelt appeared normal and there was no sign of alopecia or other pathological conditions. This is the first parasitic mite (Acari) reported from the wolverine. The wolverine is the second member of the family Mustelidae recorded as a host for *O. cynotis*. We have an additional Alaskan record of this mite collected from a domestic cat at Palmer in January 1975 by B. A. Gore. These two records are the first for *O. cynotis* from the state.

Voucher specimens have been deposited in the U.S. National Parasite Collection, Beltsville, Maryland 20705, USA (Accession No. 78100).

Received for publication 10 September 1984.