

2016, 31st July - 5th August

65th Annual International Conference of the Wildlife Disease Association



Conference Programme

Parasites of wolverines (*Gulo gulo*) from northwestern Canada

Abstract

Wolverines (*Gulo gulo*) predate or scavenge a variety of prey, exposing them to a range of food-borne parasites. Wolverine are widely distributed across temperate, boreal and polar regions in the Northern Hemisphere, however, there is little information available about their parasites from much of their range. We analysed small intestine (n=197), fecal (n=125), and tongue and diaphragm muscle (n=192) samples from carcasses of trapped wolverines collected from five locations in the Northwest Territories (NT) and 13 eco-regions in Yukon (YT), Canada, to establish prevalence and distribution of intestinal parasites and *Trichinella* spp. Intestines were examined for adult helminths, fecal samples were analysed using a double quantitative centrifuge sucrose flotation for parasite ova, and muscle samples were artificially digested to recover first stage *Trichinella* larvae. *Trichinella* spp. were found in 74% of carcasses. *Baylisascaris devosi* was the most common parasite found in intestines (43%) and on fecal flotation (16.0%). *B. devosi* has a direct life cycle which may involve small mammal paratenic hosts. *Taenia* spp. cestodes were found in 37% of tracts, no *Echinococcus* spp. adults were detected. Ova from *Taenia* spp. (6.4%), *Alaria* spp. (2.4%), *Physioleptera* spp. (2.4%), and *Trichuris* spp. (4.0%) were detected in feces. A 446 bp region of the COX 1 mitochondrial gene from seven and 18 *Taenia* cestodes from NT and YT, respectively, was sequenced. In NT wolverines, 5/7 were *T. krabbei* and 2/7 were *T. twitchelli*. In YT, 1/18 were *T. krabbei* and 17/18 were *T. twitchelli*. This is the first report of wolverine as definitive host for *T. krabbei*. Intermediate hosts of this parasite include ungulates like moose (*Alces americanus*) while porcupines (*Erethizon dorsatum*) are the intermediate host of *T. twitchelli*. These results demonstrate inter- and intra-regional differences and contribute to our understanding of the presence and distribution of internal parasite infections in wolverines.

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Topic Areas

Topics: Parasites , Topics: Terrestrial Mammals

Session

THU-PS1 » [Poster Session & Break](#) (10:00 - Thursday, 4th August, Main Lobby)