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HELMINTHS RECOVERED FROM BLACK BEARS IN THE PEACE RIVER REGION OF NORTHWESTERN ALBERTA

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Abstract: A total of 91 free-ranging black bears (*Ursus americanus*) from the Peace River region of northwestern Alberta was examined for helminths. Four species, *Baylisascaris transfuga*, *Taenia krabbei*, *Taenia hydatigena* and *Dirofilaria ursi*, were found. None of the bears was heavily infected. Results are compared with other similar North American surveys.

INTRODUCTION

Published reports of helminths occurring in black bears (*Ursus americanus*) in Canada are limited primarily to studies in the east.^{1,2,4,10} Wolfgang¹¹ described a new species of hookworm, *Dochmoides yukonensis*, from black bears of the Yukon Territory but no other western studies are known. This paper presents data on helminths of black bears collected in the Peace River region of northwestern Alberta.

MATERIALS AND METHODS

Ninety one free-ranging black bears were submitted to the Peace River Regional Veterinary Diagnostic Laboratory, Alberta Agriculture by staff of the Alberta Fish and Wildlife Division between May, 1976 and September, 1977. At necropsy, which in most cases was performed within 24 h after death, the intestinal tract, lungs, liver, kidneys and peritoneal cavity were examined grossly for parasites. The entire intestinal tract was opened and scraped. The intestinal ingesta recovered were washed through screens with decreasing mesh openings of 2 mm, 850 μ m, 425 μ m and 250 μ m. Material trapped on the screens was diluted with tap water and examined for helminths. Questionable items were viewed under a stereoscope at 25 \times . All helminths found were placed in 10% neutral buffered formalin. Cestodes were

relaxed in cold tap water before fixation. For identification they were stained with Semichon's acetocarmine, cleared in methyl salicylate and mounted in balsam. Representative specimens have been deposited in the National Museums of Canada, Invertebrate collection, Ottawa, Ontario. Accession numbers are NMCIC (P) 1978-196 to 1978-199 inclusive.

RESULTS AND DISCUSSION

Helminths were found in 69 of 91 bears examined. They included: *Baylisascaris transfuga*, *Taenia krabbei*, *Taenia hydatigena* and *Dirofilaria ursi*. *B. transfuga* was found in the large and small intestine of 56 (62%) bears. Numbers of worms varied from 1 to 31 (mean 10) per bear. Gravid adults of *T. krabbei* and *T. hydatigena* were found in the small intestine of 10 (11%) and 3 (3.3%) bears, respectively. Their numbers varied from 1 to 30 (mean 7.9) and 4 to 5 (mean 4.3), respectively. Nine *D. ursi* were found in the periesophageal area of the thoracic inlet of one bear.

Findings in this study are similar to those of recent studies from other regions.^{3,4,6} *D. ursi*, though prevalent in black bear of eastern Canada,⁴ is rare in the south eastern United States,⁴ Wisconsin⁶ and Alberta (this study). *B. transfuga* is ubiquitous and probably is the most common intestinal helminth.⁷

Rausch^{8,9} has reported *T. hydatigena* and *T. krabbei* from captive black bears in Alaska. In a recent study in Quebec,⁴ *T. hydatigena* and *T. krabbei* were found in one and two of 55 bears, respectively. Although the wolf (*Canis lupus*) is the primary definitive host for *T. krabbei* in Alberta,⁵ the prevalence and intensity of gravid adult *T. krabbei* in this study (11%) suggest that black bears may play more than an incidental role in transmission in northwestern Alberta.

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