Determining the prevalence and distribution of *Echinococcus canadensis* in Nova Scotia's wild fox population

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In Canada, 2 members of the genus *Echinococcus* have been identified: *Echinococcus multilocularis* and *Echinococcus canadensis.* Both are zoonotic helminth parasites that can cause disease in humans after accidental ingestion of the embryonated eggs. *Echinococcus canadensis* cycles between wild cervids, primarily moose; and canids, such as coyotes, wolves, and foxes. It is endemic across Northern, Western, and Central Canada and the United States. New geographic records however describe the presence of *E. canadensis* in Nova Scotia and Newfoundland, likely due to the natural range expansion of wild canids. Increasing prevalence among wild canids in Nova Scotia could elevate the risk of transmission to the endangered mainland moose population. As intermediate hosts, infected moose can develop hydatid cysts in their liver and lungs, leaving them more vulnerable to predation. The objectives of this study are to 1) document the occurrence of *E. canadensis* in the Nova Scotia fox population, and 2) identify areas with a high risk of transmission. Fox carcasses were donated by hunters and government wildlife personnel for dissection. The small intestines were removed, ligated, and frozen at -80 ℃ for 7 days to inactivate potentially zoonotic eggs. Intestines were processed using a modified intestinal scraping and filtration method, after which the samples were screened for parasites under a dissecting microscope. Of the 60 samples processed to date, none tested positive for *Echinococcus canadensis;* the study is ongoing. Encouragingly, these preliminary results suggest limited emergence and spread of *E. canadensis* among fox populations in Nova Scotia. This may reflect the limited scavenging behavior of wild foxes in the province.

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