

## **The fox-cinuating tale of *Echinococcus multilocularis* in Prince Edward Island**

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*Echinococcus multilocularis* is an emerging cestode in North America that poses a risk to humans and animals. In definitive hosts, such as foxes and coyotes, *E. multilocularis* is located in the small intestinal mucosa and causes subclinical infections. In intermediate and aberrant hosts, including humans and dogs, it induces alveolar cysts in the liver that mimic infiltrative tumors in a condition called alveolar echinococcosis. *E. multilocularis* was recently detected in Prince Edward Island (PEI) for the first time. This study aims to determine the prevalence and geographical distribution of *E. multilocularis* in wild PEI canids. Coyotes and foxes were hunted and trapped for other purposes and their small intestines collected for this study. Intestines were processed using a modified scraping, filtration, and counting technique where the intestinal content and the mucosa of each intestine were scraped, filtered, and screened for parasites. All isolated parasites were morphologically identified. *Echinococcus multilocularis* specimens were identified and species and haplotype confirmed by PCR and sequencing. *Echinococcus multilocularis* was found in 11/89 (12.3 %) intestines examined from PEI foxes and coyotes, with only coyotes being infected. No infected foxes were detected. So far, 3 animals were confirmed to be infected with the European *E. multilocularis* haplotype. The haplotype results of the other samples are pending. This study shows that *E. multilocularis* is established in PEI, indicating the importance of proper parasite prevention and risk mitigation in domestic pets. Further samples will be screened to better determine the prevalence and geographical distribution of *E. multilocularis* in PEI.

