

What the fox is up with *Echinococcus multilocularis* in the Maritimes

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Echinococcus multilocularis is an emerging intestinal 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 intestine and is subclinical. However, in intermediate and aberrant hosts (such as humans and dogs), it causes alveolar cysts that mimic infiltrative tumors. While endemic in western Canada, *E. multilocularis* was recently detected for the first time in Atlantic Canada in Prince Edward Island (PEI). This study aims to determine the prevalence of *E. multilocularis* in foxes and coyotes in PEI and New Brunswick (NB). Coyotes and foxes were hunted for other purposes and their intestines provided for this study. Intestines were frozen at -80°C for 1 week before processing for biosafety reasons. After thawing, the intestinal content and mucosa were scraped, filtered, and screened using a modified intestinal scraping technique developed at the beginning of the project. All parasites found were identified and *Echinococcus* specimens were differentiated from *Echinococcus canadensis* (which was previously found in NB) when possible. Parasites were stored for further analysis. So far, *Echinococcus* species have been found in 2 coyotes from PEI out of 28 samples screened and in one coyote from NB out of 12 samples screened. Definitive *Echinococcus* species confirmation using PCR techniques is currently ongoing. This study shows that *Echinococcus* species are present within PEI and NB indicating the importance of proper parasite prevention and risk mitigation in domestic pets. Additional samples will be screened to better determine the prevalence and parasite spread.