

Endoparasite survey of foxes and coyotes on Prince Edward Island, Canada

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The Red Fox (*Vulpes vulpes*) and the Eastern Coyote (*Canis latrans*), which inhabit Prince Edward Island (PEI), Canada, are hosts to various parasite species. The diversity and distribution of helminths within these wild canids within PEI remains largely unknown. For instance, the French Heartworm (*Angiostrongylus vasorum*), which causes potentially fatal disease in dogs, has recently been identified in coyotes in Nova Scotia, a precedent for its likely spread to PEI. Additionally, in the last several years, sarcoptic mange has become an important emerging ectoparasitic disease and management challenge for both foxes and coyotes in PEI, and the potential relationship between helminth infection intensity and diversity, and risk of sarcoptic mange, has never been investigated. The aims of this study were to describe the diversity and distribution of helminths in wild canids on PEI; perform targeted surveillance for *Angiostrongylus vasorum*; and investigate a possible relationship between helminth burden and incidence of sarcoptic mange. In order to identify and quantify helminth diversity in wild canids, lung and GI parasite recovery procedures were conducted on trapper-sourced coyotes (n=30) and foxes (n=60) from PEI collected during the 2020-2021 trapping season. Results from a parallel sarcoptic mange study will be used to assess the relationship between sarcoptic mange and endoparasite load. Final results will follow once parasite recovery procedures on all specimens are complete. Preliminary findings include the discovery of the zoonotic tapeworm, *Echinococcus* sp., the first report of this important parasite in Prince Edward Island.

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