

TITLE: THE SEARCH FOR *DIROFILARIA IMMITIS* AND LUNGWORMS IN PRINCE EDWARD ISLAND WILD CANIDS

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Background: *Dirofilaria immitis* is a heartworm of canids, with adults located in the pulmonary arteries and right ventricle. *Dirofilaria immitis* was found in a Prince Edward Island (PEI) coyote from 2021. *Angiostrongylus vasorum*, *Crenosoma vulpis*, and *Capillaria aerophila* are canid lungworms. *Angiostrongylus vasorum* adults inhabit the pulmonary arteries and right ventricle, while adult *C. vulpis* and *C. aerophila* reside in the airways. These lungworms are present in wild canids throughout PEI.

Hypothesis: Few PEI wild canids are infected with *Dirofilaria immitis*, whereas lungworm infections are common.

Objectives: Assess the prevalence of *D. immitis* and lungworms in PEI wild canids.

Methods: Hearts and lungs of 25 foxes and 84 coyotes were dissected using an established method. Adult worms were recovered, identified, and separated by species and sex based on morphology.

Results: All foxes were infected with at least one lungworm species. *Angiostrongylus vasorum* was found in 80.0%, *C. vulpis* in 76.0%, and *C. aerophila* in 76.0% of foxes. At least one lungworm was found in 57.1% of coyotes. *Angiostrongylus vasorum* was found in 29.8%, *C. vulpis* in 30.9%, and *C. aerophila* in 13.1% of coyotes. *Dirofilaria immitis* was not detected in foxes or coyotes.

Conclusion: Our findings indicate *D. immitis* is not prevalent among wild canids in PEI, whereas *A. vasorum*, *C. vulpis*, and *C. aerophila* are common. This identifies PEI as a lungworm risk area. Veterinarians should remain aware and continue to monitor for canine lungworm infections. Further studies are warranted to determine the prevalence of *D. immitis* in PEI.

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