

Exploring the prevalence of lung and heartworms in Nova Scotia foxes

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Angiostrongylus vasorum, *Crenosoma vulpis*, and *Capillaria aerophila* are lungworms found in wild and domestic canids. *Angiostrongylus vasorum* adults are located in the right ventricle of the heart and pulmonary arteries, while adult *C. vulpis* and *C. aerophila* reside in the trachea and bronchi. All three nematodes are presumed to be present throughout the Atlantic Canadian provinces. *Angiostrongylus vasorum* was first discovered in Nova Scotia coyotes in 2018, while *C. vulpis* and *C. aerophila* are known to be present in Nova Scotia foxes. The purpose of this study was to investigate the prevalence and spread of lung and heartworms within the Nova Scotia fox population. Hearts and lungs of 90 foxes were dissected. Adult worms were recovered, screened, and separated by species and sex based on morphology. All foxes were infected with at least one lungworm species. *Angiostrongylus vasorum* was found in 36 foxes (40.0%), *C. vulpis* in 84 foxes (93.3%), and *C. aerophila* in 62 foxes (68.9%). This is the first study to report *A. vasorum* in Nova Scotia foxes and demonstrates that this parasite has successfully established in the population. Our findings further show that *C. vulpis* and *C. aerophila* are common throughout Nova Scotia foxes. Given their ability to infect domestic dogs, evaluating the prevalence and geographic distribution of these parasites will identify levels and areas of increased risk to pet owners. These findings will highlight the risks associated with lungworm infections and support veterinarians and pet owners in enhancing diagnosis and disease prevention.