UVM Student Research Conference

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Factors affecting coyote (*Canis latrans*) occupancy in the Champlain Valley, Vermont.

The eastern coyote (*Canis latrans*) is a relatively recent arrival in the ecosystem of the Champlain Valley and has in many ways filled the position of apex predator left open by the extirpation of timber wolves (*Canis lupus*) in the region (Johnson 1998). Coyotes may now perform important ecological functions within the ecosystem, such as maintaining balance of prey species populations and biodiversity. As a generalist carnivore species, coyotes have the ability to persist and even thrive in a variety of fragmented and human-influenced landscapes (Crooks 2002). To assess the influence of landscape characteristics and habitat fragmentation on the presence of coyotes in the Champlain Valley, I have documented coyote presence using remotely-triggered non-invasive camera traps in 50 forest fragments over two seasons (June 2011-Decemeber 2012). Landscape metrics obtained through aerial photos and the National Land Cover Dataset (USGS 2006) will be incorporated into a single-species, multi-season occupancy modeling framework to analyze the effects of fragment size, isolation, surrounding development and forest type on the likelihood of coyote presence. Increased knowledge of coyote ecology will aid in managing forest fragments for increased biodiversity and ecosystem function.