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### Establishing Mosquitoes as Vectors of Amphibian Pathogens.

Pathogens are a leading cause of amphibian population decline and extinction. Amphibians commonly found in New England have tested positive for the chytrid fungus, Ranavirus, and trypanosomes in the past. Evidence suggests that frog-biting mosquitoes, such as *Culex territans* and *Uranotaenia sapphirina* found here in New England, may be vectors of these pathogens. In addition, there are several generalist mosquito species that will occasionally take blood meals from amphibians. Environmental factors have shown to increase virulence of pathogens and range of vectors, making the geographical distribution important to know in light of climate change. This initial investigation was conducted to establish the spatial distribution of amphibian disease across central Massachusetts so subsequent field seasons could be spent investigating the suitability of mosquitoes as vectors of amphibian pathogens. Skin swab samples, toe clips, and blood samples were taken from bullfrogs (*Lithobates catesbeianus*), green frogs (*Lithobates clamitans*), pickerel frogs (*Lithobates palustris*), and gray treefrogs (*Hyla versicolor*) from 10 field sites. Seventy percent of field sites tested positive for at least one amphibian pathogen. We also investigated whether environmental factors were correlated with the distribution of pathogens. Future directions of this study include sampling and testing adult mosquitoes for amphibian pathogens at established field sites, a laboratory study to confirm the results of the field study, and creating species distribution landscape models to project disease and vector range expansion/shifts in varying global environmental change scenarios.