

**Analysis of *Borrelia* in *Lipotena cervi* (Deer Keds) as a Model of Infection in the White Tailed Deer Population of New York State.**

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Lyme disease or Lyme borreliosis is the most prevalent tick-borne disease in America. The etiological agent of Lyme disease is the *Borrelia* spirochete. Transmission of Lyme disease in North America is through the deer tick, which take blood meals from infected white tailed deer. The hypothesis of this study is that *Lipotena cervi* (ked flies), which also take blood meals from the white tail deer, carry this bacteria. PCR analysis was used to detect the presence of the *B. burgdorferi* flagellin B (*flaB*) gene in DNA from ked flies. Of 40 ked flies tested, 8 were positive for the *flaB* gene, yielding an infection rate (20%) that is very similar to that found in ticks taken from the regional deer population (25%). Gel electrophoresis showed that the PCR product was approximately 30 base pairs smaller than the predicted size for *B. burgdorferi*. This is also consistent with variation in the *flaB* gene among strains of this bacteria and may indicate a unique strain of *B. burgdorferi* in ked flies. It is possible that the strain of *Borrelia* cycling in ked flies may be different from that in regional deer tick populations.