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Lyme disease is one of the most widespread vector-borne diseases in the Northern Hemisphere. In North America, it is mainly caused by the spirochete *Borrelia burgdorferi*. The main known transmission vector for *B. burgdorferi* is *Ixodes scapularis*, commonly referred to as the black legged tick. Through conducting this experiment, the presence and viability of *Borrelia burgdorferi* found within *Ixodes scapularis* and the prevalence of tick species found within West Virginia were examined. We collected different species of ticks via drag method in various locations throughout Upshur County,West Virginia. These ticks were identified, had their DNA extracted and amplified via PCR, and were run through gel electrophoresis to detect presence of *B. burgdorferi*. Results showed that around 5% of ticks collected contained the bacterium *B. burgdorferi* and a handful of other ticks showed non-specific bands of unknown extraneous DNA. Future studies include looking into a new, invasive tick recently introduced to the area and its capability to carry *B. burgdorferi*, as well as acquiring *Rickettsia* DNA and using a positive control containing it, to examine if the unidentified region makers found in the gels coincide with that particular bacterium