Lyme disease is the most widespread vector-borne disease in the eastern United States. Lyme disease is caused by a bacterium, *Borrelia burgdorferi*, that is transmitted by a tick vector, most commonly *Ixodes scapularis*. In this study, 400 ticks were collected from around Upshur county, West Virginia, and tested by PCR for the presence of *B. burgdorferi* DNA. Tick specimen belong to *Ixodes scapularis*, *Rhipicephalus sanguineus*, or are unidentified. One unidentified sample, which tested positive for *B. burgdorferi*, has been tentatively identified as the new invasive *Haemaphysalis longicorni*. This is the first report of the Asian Longhorned Tick carrying *B. burgdorferi* in West Virginia. In the future, this ongoing project will expand its sampling techniques, as well as expand testing for the presence of other possible tick-borne diseases in collected samples.