The Prevalence of Babesia sp. Infections in a Population of Carolina Wren
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When an Ixodes tick takes a blood meal, it may transmit Babesia sp. parasites. Babesiosis, the disease resulting from this infection, may cause anemia and even death, being especially concerning for those with compromised or naïve immune systems. To understand the parasite’s transmission cycle, we shall determine infection prevalence across potential hosts, including birds. It has been observed that Carolina Wrens (CW) host greater numbers of Ixodes ticks than other songbirds in Eureka, MO. Therefore, of any songbird species found locally, CW may be most likely to be infected with Babesia. I hypothesized that CW will host Babesia parasites given their higher number of ticks. Moreover, juvenile birds were found to host more ticks than adults, therefore I hypothesized that infections will be more frequently found in juveniles. I captured birds using mist-nets, and for each individual bird captured, I collected a small blood sample to prepare thin smear. I stained each blood smear using Giemsa to make the cells visible under the microscope. During June and July, I spent 75.5 hours over 14 nonconsecutive days in the field collecting data. In total, I captured 66 birds, of which 24 were CW. I am analyzing the smears under the microscope to access the health and infection status of individuals, by looking for parasites, and counting and classifying white blood cells. My research will access the prevalence of Babesia infection in a non-model host species, improving the knowledge about Babesiosis, an emerging human disease in the United States.