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Factors influencing Swallow Bug (*O. vicarius*) populations within Cliff Swallows nests

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Hematophagous ectoparasites such as swallow bugs (*Oeciacus vicarius*) have been shown to have a profound negative impact on infested bird chicks, and one study shows that *O. vicarius* populations are positively correlated with large colonies. In this study, we investigated the abundance of *O. vicarius* and other arthropods within Cliff Swallow nests, and performed statistical analysis of the results to find any variables that correlated with *O. vicarius* population size. We expected the number of *O. vicarius* would be positively influenced by urban surroundings and large Cliff Swallow colony size, and that samples collected in the fall would be larger than those in the spring. We also expected to see a relationship between the population of *O. vicarius* and the population of other arthropods within the nest. Seventy-four nests were collected from sites in Larimer County during the fall of 2014 and the spring of 2015, and were stored at 4° Celsius before arthropod specimens were collected by using a Berlese funnel. Our results confirmed that *O. vicarius* population size positively correlates with the size of the colony, urban surroundings, and the population of other arthropods. However, there was no significant difference between fall and spring populations. In the future, the sizes of individual *O. vicarius* specimens will be measured and analyzed, and we expect to find that many of the variables that positively correlate with population size will also positively correlate with individual size. This study is important because influences on ectoparasite population are poorly understood. Our study is also unique because it is the first study to compare the populations of *O. vicarius* with that of other arthropods, and it is also the first study that has been done on Cliff Swallow nests in Larimer County.