The study of mosquitoes is important because of their roles as members of food chains, carriers for human diseases, and as a sentinel taxon for climate change (Hoekman et al. 2016).. The National Ecological Observatory Network (NEON) will be collecting mosquito occurrence and pathogen data at 47 terrestrial sites over the next 30 years. The aim of this research project is to develop and provide future data users with methods and examples of working with NEON mosquito data to facilitate data analysis and visualization using the R programming language. We present a general workflow for downloading, merging, and processing data from NEON’s mosquito data product to explore and visualize species richness across all NEON sites. The tutorial includes examples of how to combine field observations with meteorological data to explore the relationship between mosquito species richness and temperature thresholds. The broad spatial distribution of NEON sites may enable early detection of mosquito species range expansion. We show how these data can be used to analyze the presence/absence of a single species, *Culex tarsalis,* across NEON sites.

Preliminary visualizations of NEON mosquito data seem to suggest that there is some sort of relationship between mosquito species richness and temperature where more species are observed in NEON locations where the average maximum temperature for the two preceding weeks was between 25 to 30 degrees Celsius.

With regards to the species *Culex tarsalis*, NEON data indicates that this species is now present in the Alaska where it was previously thought to be absent. Both of these findings suggest that NEON data is capturing trends in mosquito richness and changes in the habits of species like Culex tarsalis that researchers can explore further in the future.