## Chantelle Wimms 7/29/2021

Prairies are a rare but essential habitat for small mammals. Because of this, more restored prairies are getting active management plans implemented (regular burning and mowing). Still, there is some debate on how much time there should be between management regiments to maximize benefits. This study aimed to investigate the benefits and limitations of prairie restoration and burning on small mammals. This was done by 1) comparing plots at Tucker Prairie using small mammal abundance and species richness and 2) comparing Tucker Prairie and Prairie Fork using small mammal body mass. This study took place in Missouri at Tucker Prairie and Prairie Fork. Each prairie contains five plots that were used for the capture and release of small mammals. Captured mammals were tagged with an identification number with their weight, length, species, and sex recorded. A tissue sample and tick infestations were also collected. It was found that there was no significant difference between plot or year for species richness and abundance when compared using the Kruskal-Wallis Test. Though not significant, the diversity index and abundance were higher for plots four and five. The year 2020 also had higher diversity indexes and abundances compared to the year 2021. This suggests that differences in burn regimens could have a positive impact with some limitations. Body mass results will be discussed in the presentation. To look deeper into the limitations of burnings as a means of prairie management, I will focus on the survivorship of small mammals. I will also be creating a ranking of variables that most impact small mammals' survivorship in prairies.