William Hedden
Advisor: Sara Helms Cahan
Differences in Fungi Infection Frequency in *Pogonomyrmex*

Interspecific hybridization is thought to provide heightened resistance to pathogen infection through the creation of novel genotypes. The harvester ants *Pogonomyrmex barbatus* and *P. rugosus* have historically interbred in the southwest USA, producing two hybrid lineages, the "H" lineage and "J" lineage. *Pogonomyrmex barbatus* occurs in mesic coastal plains, while *P. rugosus* is found in predominately drier desert habitat. To test whether the hybrids are more pathogen resistant, we exposed ant worker pupae from each taxon to soils from all of their native ranges and compared their infection rate and species of fungal infection. We found that the desert species *P. rugosus* was the most resistant to fungal infection, but the hybrid lineages did not have any advantage when exposed to pathogens in either hybrid or parental soils. Future work on identification of the fungi found on the pupae will determine whether the types of fungal pathogens differ between the two species and their hybrids. These results will lead to a better understanding of interspecies hybridization and the possible consequences it has on pathogen resistance.