The goal of this study is to examine parasitism rates of orthopterans (grasshoppers, katydids, and crickets) by parasitic roundworms in restored grasslands of varying ages. I am investigating potential effects of grassland age and host species on the parasitism rates of orthopterans and the species composition of the parasitic roundworms.

Orthopterans are important grassland herbivores and therefore affect plant diversity. They are in turn consumed by many other animals that depend on them for survival. If a significant proportion of these orthopterans are being parasitized it could drastically change the grassland habitat. If certain species of orthopterans have high infection rates or are parasitized by particularly deadly parasite species, this could affect orthopteran species composition.

This study was done at Nachusa Grasslands, a Nature Conservancy-owned grassland restoration preserve near Dixon, Illinois. Orthopterans were collected from grassland sites of various ages. I have dissected 7,493 orthopterans and out of those, 242 have been infected with parasitic nematodes. I am currently identifying the nematodes and the species of orthopterans. Abundance of parasites per host in relation to grassland age will be analyzed using regression analysis. Abundance of parasites per host in relation to host species will be analyzed using analysis of variance. Diversity of parasites in relation to grassland age and host species will be analyzed using analysis of similarity, which compares species composition of two or more groups.