

INITIAL SURVEY OF SOIL INVERTEBRATES IN AN OKLAHOMA DISTURBED GRASSLAND.

***ERICA A. CORBETT, DEPARTMENT OF BIOLOGICAL SCIENCES, SOUTHEASTERN OKLAHOMA STATE UNIVERSITY, DURANT OK 74701-0609**

Abstract: Soil invertebrates are a vital part of prairie ecosystems. Because soil invertebrates are small, belong to different taxonomic groups, and are difficult to observe, they have not been widely studied. Also, invertebrate populations vary between different regions, and over the course of a year. Relatively little is known about the effect of prairie-restoration efforts on the diversity or population sizes of soil invertebrates. We are currently in the process of restoring an upland site in southeastern Oklahoma to prairie. In addition to monitoring vegetation changes over time, I began sampling soil invertebrates from the site in 2009. Twenty soil samples from the site were taken in spring, summer, and fall. Invertebrates were extracted using both a Berlese funnel procedure and a floatation procedure. Invertebrates were preserved in 70% ethanol until identification and counting. For analysis, order-level data were used, as not all soil invertebrates could be identified to family. I calculated percent frequency for each order of soil invertebrates, and calculated Shannon index and Evenness for each season's sampling. The greatest number of invertebrates was found in Summer 2009, the least in Fall 2009. Summer 2009 also had the largest H' (1.322). However, Fall 2009 had greater evenness (.76 as opposed to .70 for Spring and .70 for summer). Abundance of different groups differed between sampling periods, with ants, beetles, and earwigs reaching a peak in the summer and collembolans being more abundant in the spring. The survey will continue once restoration treatments (burning) are initiated on the site.