Public Abstract
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Title:BIODIVERSITY OF ANTS (HYMENOPTERA: FORMICIDAE) IN RESTORED GRASSLANDS OF DIFFERENT AGES

Grasslands are an endangered ecosystem. Unfortunately, few studies monitoring the health of grasslands have included arthropods, thus leaving out a vital component. Some insects are used as bioindicators, meaning their presence or absence in a habitat might indicate health of the habitat. Ants are one such candidate that has been proven a reliable indicator of restoration success in some habitats. Literature regarding the benefits of ants in ecosystems is abundant; however, studies examining ant grassland ecology are limited. The availability of Conservation Reserve Program (CRP) land of different ages allowed us to examine differences in ant communities at different times since being restored as grasslands. Four sampling techniques were utilized (pitfall traps, litter samples, hand collection, and soil core sampling) on four different ages of grassland in east-central Missouri. Efficacy of sampling methods was also examined. A total of 18,743 ants were collected, representing 28 different species. Ants were most abundant in older ages of CRP land. Species numbers peaked in mid-aged fields. Some ant species showed patterns of being either early colonizers, late colonizers, or present in all field ages. Pitfall traps were the most effective sampling method. The results of this study provide baseline information on how ants establish on restored grassland in the CRP and provide information for future studies using ants as bioindicators of restoration success.