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COMPARING SPIDER (*ARANEAE*) DIVERSITY IN REMNANT VS RESTORED TALLGRASS PRAIRIE IN EASTERN SOUTH DAKOTA

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ABSTRACT

Anthropogenic influences on habitats has led to habitat destruction and species declines. The success of efforts to restore lost habitat has often been difficult to evaluate because of lost species, though groups of species (e.g., ants, spiders) have been used as bioindicators to gauge restoration success. Here we compare spider (Araneae) assemblages in remnant vs. restored tallgrass prairie in eastern South Dakota. Spiders were collected from June through August during 2012 and 2013, and each year from nine restored sites, ranging from 1 to 4 yrs after planting, and three remnant sites. Using single-factor ANOVA, we compared species richness of the varying-aged restoration sites with the remnant sites. For 2012, we found no significance between the restored sites and the remnant sites of any age. For 2013, we did find significance between the restoration sites and the remnant sites: 2 yr restored sites $P = 0.004$ ($F_{1,38} = 9.366$), 3 yr restored sites $P = 0.023$ ($F_{1,40} = 5.574$), and 4 yr restored sites $P = 0.005$ ($F_{1,34} = 8.631$). Thus, during the second year of our study we detected significant differences in species richness when comparing remnant vs. restored sites. These results indicate that that there is significant flux in the spider community soon after restoration, and longer-term studies are needed to assess restoration success.