Public Abstract
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Native tallgrass prairie has been reduced to 5% of its presettlement range. Along with the conversion of this prairie to cropland, grassland bird populations have declined. Current management techniques may be insufficient to reverse this decline. The remaining tracts of tallgrass prairie must be managed in a way to provide the diverse habitat needs of the avian community.

Recently, patch-burn grazing (PBG) has shown potential for enhancing grassland bird populations. PBG mixes spring burning and summer grazing to increase vegetation heterogeneity.

A PBG management technique was applied to four native tallgrass prairies in southwest Missouri to evaluate its effect on species richness and density of grassland birds. Treatment prairies were spring burned and grazed during the summer while control prairies were spring burned and ungrazed. Birds were identified while walking line transects in both the treatment and control units. Distances were measured to all birds using laser rangefinders, and estimated densities for each species were generated using Program Distance v5.0.

PBG prairies showed significantly greater species richness. Densities of Eastern Meadowlarks (Sturnella magna) and Grasshopper Sparrows (Ammodramus savannarum) also were greater in PBG prairies. The results of this study suggest that PBG is a viable management technique to increase richness and density of species associated with short grasslands while not significantly reducing the density of those species associated with tall grasslands.