

SPATIAL VARIATION OF FIRE EFFECTS WITHIN A *JUNIPERUS-QUERCUS* SAVANNA

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ABSTRACT

Spatial dependence among fuel, fire behavior, and fire effects has been largely overlooked in fire research of grasslands and savannas. We measured fuel loading and continuity, fire behavior, and effects of summer fire on woody plants at the Texas A&M Agricultural Experiment Station on the Edwards Plateau. Vegetation is a midgrass and shortgrass matrix interspersed by *Juniperus* and *Quercus*. Crown scorch and change in canopy cover of woody species were quantified along permanently established transects. We found that fire effects on woody plants in this savanna vary with fire behavior, constrained by variation in fine fuel load. We will use these results to test the hypothesis that a feedback between fuel load and fire effects sustains a spatially fixed vegetation mosaic across fire events in savannas. Additional research will explore interactions between spatial aspects of fuel availability and fire effects with change in fire climate.

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