Using Prescribed Fire and Grazing to Manage for Biodiversity in the Great Plains

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Presentation Description:

For millennia, wildland fire and grazing by large ungulates have been two of the most important disturbance processes in grasslands throughout the world. Though these disturbances can occur in isolation, they often interact via the process of pyric herbivory, defined by Fuhlendorf et al. in 2009 as "the spatial and temporal interaction of fire and grazing, where positive and negative feedbacks promote a shifting pattern of disturbance across the landscape". Pyric herbivory was clearly of great importance in the Great Plains (e.g. bison herds migrating from one recently burned area to another). Since the 1980s at least, some conservationists have restored pyric herbivory to Great Plains grasslands by implementing prescribed fire and grazing by cattle or bison. In my presentation, I will compare and contrast findings on the impacts of pyric herbivory on insects in this region. I will also present some best management practices with regards to using fire and grazing to better manage habitat for native invertebrates, particularly insect pollinators.