

## ECOLOGICAL IMPACTS OF CATTLE GRAZING ON THE FLORA OF HILL PRAIRIE COMMUNITIES

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### *Abstract:*

For decades the general consensus among hill prairie researchers is that the impacts of cattle grazing are extremely detrimental to the long-term quality and diversity of native hill prairie flora. The degree of soil compaction and creation of favorable conditions for the colonization of non-native invasive species is well documented. However, a few sites have experienced some benefits from grazing, where it has delayed shrub and tree invasion and promoted conditions favorable to xeric short grasses such as *Bouteloua hirsuta*, a species that has disappeared from many “undisturbed” hill prairies. In 2007 the rediscovery of Bald Bluff Hill Prairie, located on the Mississippi River bluffs in northern Henderson County, Illinois was found to be heavily grazed by cattle for several decades. Yet Bald Bluff still retains an amazing diversity of native hill prairie forbs and grass species and presents a unique opportunity to investigate the role of grazing in maintaining species diversity. A solar-powered cattle exclusion fence was placed on the highest quality portion of this hill prairie in 2008 to prevent cattle grazing. Subsequent transects surveys were conducted within the fenced enclosure, in the remaining unfenced portion of Bald Bluff, and nearby “undisturbed” Tartan Bluff Hill Prairie. Our results support a quick recovery in the reduction in the amount of bare soil and increase in plant height within the fenced area.