



## Plant Community Monitoring at Wilson's Creek National Battlefield

### Importance: *Preservation of a remnant of our natural heritage*

Boundless prairie and majestic oak savannas characterized the landscape that early settlers found in this area of the Midwest. Experts estimate that only about 2% of original tallgrass prairie remains and less than 1% of the savanna remains. The National Park Service has been restoring prairies and savannas in places where they complement the natural and cultural history of the site. Plant community monitoring detects and describes changes in conditions over time. By undertaking a long-term plant monitoring program, the network establishes status and tracks trends in the plant community conditions.



*The park has several vegetation communities from prairie to forest, dry uplands to riparian.*

### Long Term Monitoring: *Changing management strategy*<sup>1</sup>

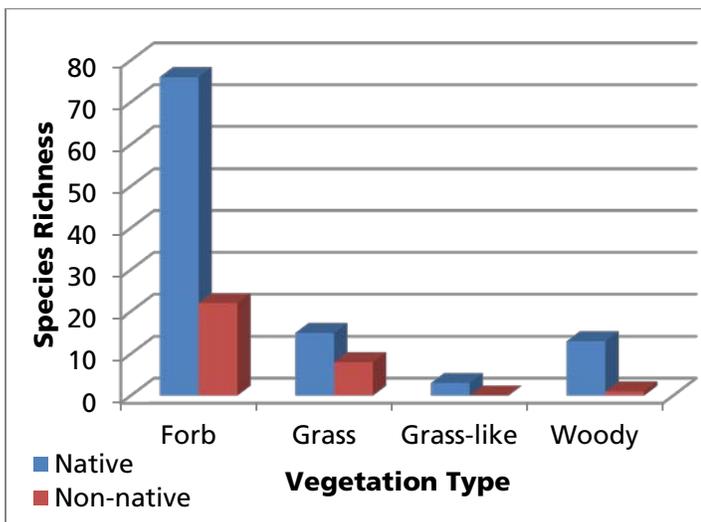
The Heartland Inventory and Monitoring Network began vegetation inventory and monitoring of four permanent sampling sites in the park's restored tallgrass prairie and savanna in 2008. This augmented ongoing vegetation monitoring at the park by assessing changes specifically in the prairie/savanna community. The Network quantified species composition, structure and diversity in the prairie/savanna community before and after prescribed burns. Monitoring occurred in May of 2008, 2009 and 2011.

### Status and Trends: *No directional trend detected*

Park management activities have occurred in the areas encompassing all four monitoring sites during the sample period. Most notable, prescribed fires were initiated in November 2008 and August 2010. In addition to prescribed fires, the areas around three sites were mowed in April 2011. This management activity results in short-term responses of the community that will eventually produce long-term outcomes. No trends were

detected in vegetation community composition or structure at the end of the sample period. More data will be required to determine long-term conditions. Additionally scientists found that:

1. Of the 140 species observed during the sample period, 110 were native species.
2. Foliar cover of Chinese bushclover (*Lespedeza cuneata*), an invasive plant targeted for control by the park, increased between 2008 and 2011 in all but a single monitoring site.



*Total species richness for each vegetation type with similar growth habit (guild) for the sample period 2008 – 2011.*

Heartland Inventory and Monitoring Network of the National Park Service. Visit [www.nps.gov/im/units/htln/index.htm](http://www.nps.gov/im/units/htln/index.htm)

*... protecting the habitat of our heritage*



<sup>1</sup> Mlekush, K. E. and K. M. James. 2012. *Vegetation community monitoring at Wilson's Creek National Battlefield, Missouri: 2008-2011. Natural Resource Data Series NPS/HTLN/NRDS—2012/234. National Park Service, Fort Collins, Colorado.*