



## Vegetation Monitoring at George Washington Carver National Monument

### Importance:

Boundless prairie and majestic oaks characterized the landscape that early settlers found in the Heartland. George Washington Carver NM focuses its natural resource management on restoration of a prairie. To determine trends in prairie condition, scientists need baseline data for indicators of condition against which they can compare.

### Long Term Monitoring:<sup>1</sup>

Plant community monitoring quantifies species composition, structure, and diversity within the prairie community. Scientists use monitoring to detect and describe changes in the community. The Heartland Network Inventory and Monitoring Program collected baseline data during 2004, 2005 and 2008 to quantify existing variability in key condition indicators within the restored prairie. To be the comparative data, scientists must consider the range of conditions measured in the baseline data to represent the normal variation. Using differences between sample events rather than the actual value for parameters for each sample event can provide a foundation for building a long term dataset from which scientists can determine trends over time.



The monument's prairie habitat

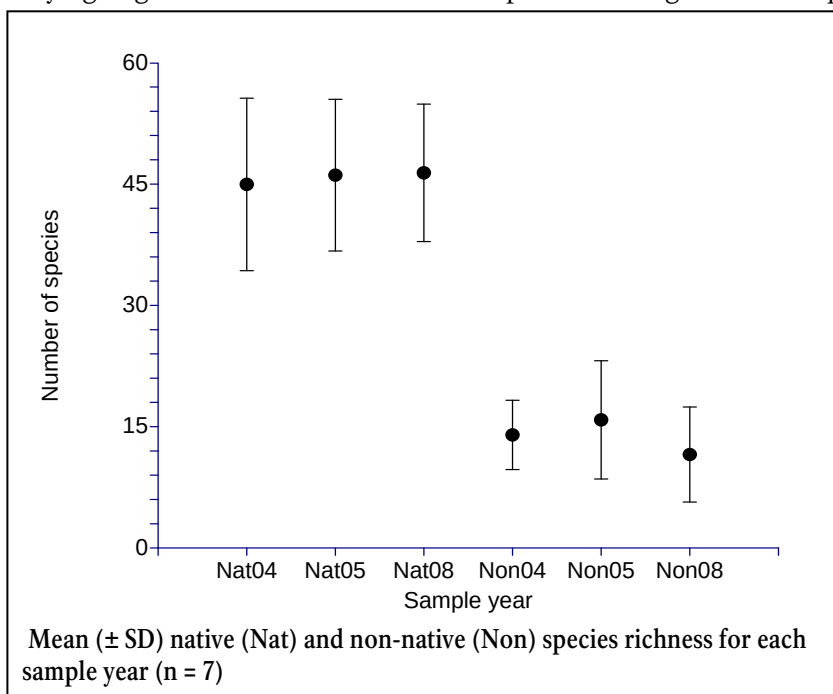
### Status and Trends:

The prairie is rich in plant species, but these species are patchy in distribution. This patchy richness reflects a prairie at varying stages of restoration. Non-native species are a significant component to the community and George Washington Carver NM, but they too are patchy and suggest varying stages of restoration. Additionally, scientists discovered that:

1. One hundred ninety nine (199) unique species occur in the seven monitoring locations of the monument.
2. Tests to determine directional change in plant community composition during 2004 to 2008 found that the data will serve as good baseline data because it lacks "trends" within the baseline years. The figure on the left shows the consistency in mean richness for native and non-native species.

Heartland Network Inventory and Monitoring Program 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> James, K.M. and G.A. Rowell. 2009. Plant community monitoring baseline report, George Washington Carver National Monument. Natural Resource Technical Report NPS/HTLN/NRTR—2009/190. National Park Service, Fort Collins, Colorado.