



## Bird Monitoring at Hopewell Culture National Historical Park

### Importance: *An important component of the park ecosystem*

Birds intrigue and excite visitors, having become an important part of park interpretive programs. Beyond the pleasure that birds provide, they are an important component of park ecosystems. Their high metabolism and position in the food web make them indicators of change in an ecosystem – the canary in the coal mine, so to speak. Preserving habitat for the wellbeing of bird populations preserves entire ecosystems for the benefit of all species.

### Long Term Monitoring: *Assessing change*<sup>1</sup>

The Heartland Inventory and Monitoring Network monitors changes in bird community composition and bird abundance to determine the health of the community. Network staff accomplish this by surveying seasonal and year-round resident birds in the park during the breeding season to determine bird community composition and abundance. Scientists use breeding bird surveys to assess the integrity of the habitat over time with consideration of management actions. The network initiated a bird survey in 2005 to provide plot-specific, habitat-specific, and park-wide data on bird populations and the impacts of resource management within the park. Over several years, scientists have characterized habitat structures, assessing the amounts of grassland, old field and woodland vegetation.



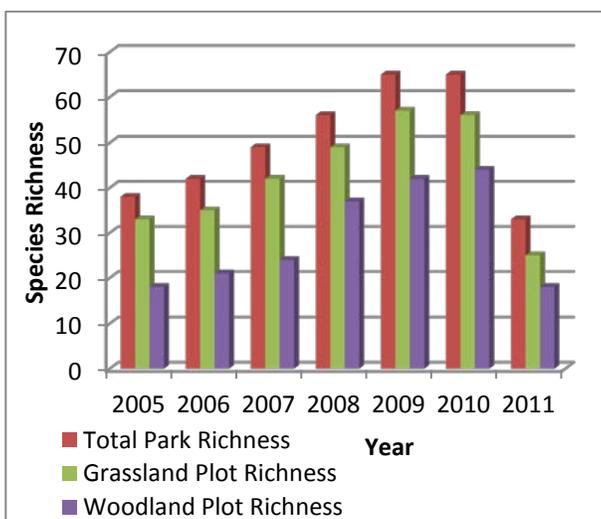
Red-winged Blackbird is the most common species in grasslands  
NPS file photo

### Status and Trends: *Baseline data give reference point for evaluating management actions*

Results from 2005 through 2011 recorded 96 species of birds with 89 species breeding in the park. The remaining seven species are migrants, except one winter resident, Bald Eagle (*Haliaeetus leucocephalus*). Six species breed only in grasslands, which are considered a declining habitat type continentally. The park has been restoring grasslands, and may improve breeding habitat through this action.

Additionally, scientists found:

1. The observation of 15 species of continental importance (species in decline across the continent) demonstrated the importance of the park to bird conservation.
2. Grassland (open) habitats dominate the park, but woodlands make a component of the bird habitat as well. This mix of habitats across the park contributes to a rich and diverse bird community.
3. Single year abnormalities in field surveys may demonstrate an actual change in populations, or more frequently result from problems with sampling that year. Reductions in richness in 2011 may be an artifact of spring floods temporarily affecting breeding habitat and/or of heavy rains that interfered with surveying birds. Trends are watched over several years so as to see the real status of the populations.



Average values for bird community species richness as a total for the park and broken down by habitat types during the study period.

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> Peitz, D. G. 2012. Bird community monitoring at Hopewell Culture National Historical Park, Ohio: Status report. Natural Resource Data Series NPS/HTLN/NRDS—2012/232. National Park Service, Fort Collins, Colorado.