



American goldfinch by
Enoch Leung / Flickr

Breeding bird populations at Petersburg National Battlefield: 2017–2018

Scientists of the National Park Service's Mid-Atlantic Network work with park staff and skilled local volunteers to monitor bird populations in national parks across the mid-Atlantic region. The information gathered is used to improve our understanding of the relationships between breeding birds, available habitats, and park resource management. The goal of the program is to develop the best available science so national parks can better understand and protect their resources. This brief provides a summary of breeding bird monitoring results for Petersburg National Battlefield for 2017–2018.

During the summers of 2017 and 2018, park seasonal staff conducted a total of 107 surveys at 36 monitoring sites. During a survey, staff documented every bird heard or seen over a 10 minute period. Sites in both forest and grassland habitat were visited multiple times during the breeding season.

For years, the park has been working to increase the acreage of native warm-season grasses to benefit birds. Results from 2017–2018 show that some grassland associated birds, like eastern meadowlarks — a regional species of conservation concern — are present but remain very rare (see Species of Regional Concern, right).



The park is working to convert more of its open landscapes into warm-season grass meadows to support bird species diversity. NPS / Tim Blumenschine

Highlights

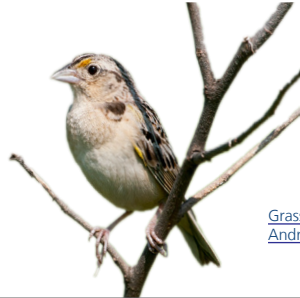
- During the summers of 2017 and 2018, park seasonal staff conducted a total of 107 surveys at 36 monitoring sites.
- Several species of regional conservation concern were documented in relatively high numbers, including eastern wood-pewees, wood thrushes, and yellow-billed cuckoos.
- Forest bird community index scores suggest moderate ecological health of park forest bird communities.

Species of Regional Concern

The Partners in Flight Program is a network of organizations involved in bird conservation in the Western Hemisphere. This program has identified a number of bird species that are declining and facing increasing threats across the mid-Atlantic region. These birds are of particular interest to park managers, and 9 species of regional concern were observed during 2017–2018 bird monitoring at Petersburg National Battlefield (see below).

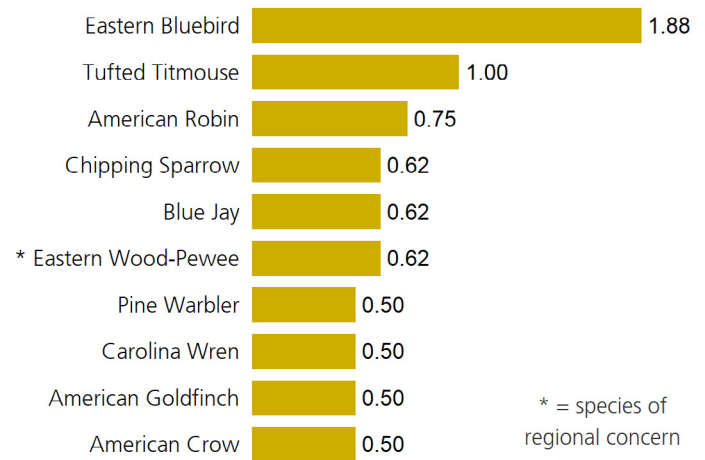
<u>Common name</u>	<u>Total number of observations</u>
Eastern wood-pewee	71
Wood thrush	22
Yellow-billed cuckoo	16
Northern flicker	9
Eastern towhee	5
Common yellowthroat	4
Eastern kingbird	2
Field sparrow	2
Eastern meadowlark	1

Eastern bluebirds, tufted titmice, and American robins were the three most common birds observed in grasslands at the park during 2017–2018. All of these species are relatively abundant and widespread across the region. Continued and improved management of warm-season grass meadows should support an increase in grassland dependent species that are currently very rare at the park, like grasshopper sparrows (not observed during 2017–2018 monitoring).



Grasshopper sparrow by Andrew Weitzel / Flickr

Top ten most abundant birds in grassland sites (average number observed per site)

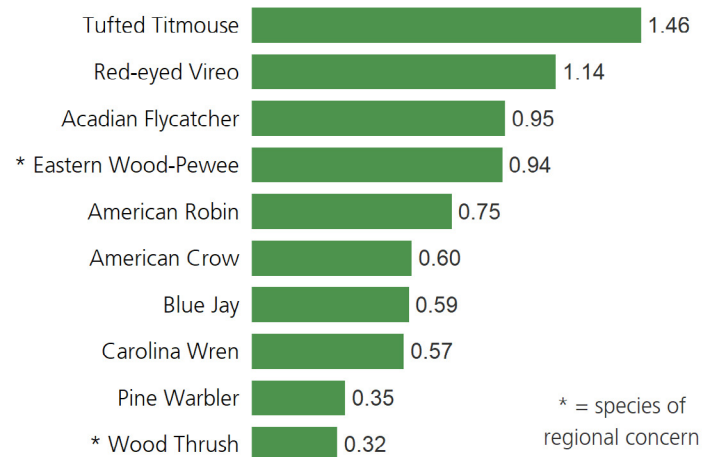


The three most abundant birds in forested monitoring sites during 2017–2018 were the tufted titmouse, the red-eyed vireo, and the Acadian flycatcher. The eastern wood pewee and the wood thrush were also relatively abundant and both of these species are of regional conservation concern. Wood thrushes depend on mature forest ecosystems. Given the increasing urbanization occurring around the park, high wood thrush abundance shows the importance of park forests for local bird populations.



Wood Thrush by Claudine Lamothe / Flickr

Top ten most abundant birds in forested sites (average number observed per site)



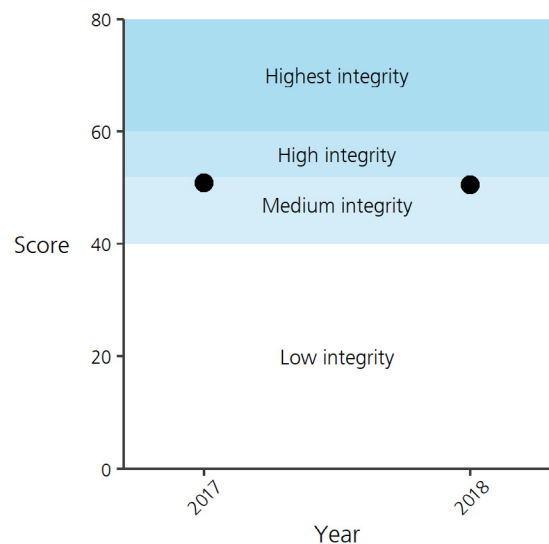
Scientists can study the abundance of all the bird species in an area to determine the overall health of the bird community. The forest bird community index score (O’Connell et al., 2000) for the park shows that the forest bird community is moderately healthy (i.e. has “medium integrity”). Continued management for mature forest habitat should help maintain or increase this score. That said, given the fragmented nature of park land holdings, conservation of mature forests on surrounding private lands may be important for the long-term persistence of Petersburg National Battlefield forest bird communities.

For more information, see the park’s [2017–2018 breeding bird monitoring report \(Johnson, 2020\)](#).

Citations: Johnson, M.J. 2020. Breeding bird monitoring: Petersburg National Battlefield, 2017–2018 summary report. NPS/MIDN/NRDS - 2020/1288. NPS, Fort Collins, CO.

T.J. O’Connell, L.E. Jackson, and R.P. Brooks. 2000. Bird guilds as indicators of ecological condition in the central Appalachians. *Ecological Applications*, 10(6).

Forest bird community index score (2017 and 2018)



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Network parks:

Appomattox Court House NHP • Booker T. Washington NM • Eisenhower NHS • Fredericksburg & Spotsylvania NMP • Gettysburg NMP • Hopewell Furnace NHS • Petersburg NB • Richmond NBP • Shenandoah NP • Valley Forge NHP

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