



[Yellow-breasted chat by Andrew Weitzel](#)

Breeding bird monitoring at Fredericksburg and Spotsylvania National Military Park: 2019 status and trends

For the last 10 years, the scientists of the National Park Service's Mid-Atlantic Network have worked with 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 2019 breeding bird monitoring results for Fredericksburg and Spotsylvania National Military Park.

In the summer of 2019, 4 volunteers conducted 66 surveys at 33 sites across the park. During a survey, volunteers 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 maintain the acreage of native warm-season grasses to benefit birds. Results from 2019 show that some grassland-associated birds, like field sparrows — a regional species of conservation concern — are relatively abundant (see Species of Regional Concern, right).



The park uses prescribed fire and herbicide treatments to maintain native warm-season grass meadows. These native grasslands provide habitats for many increasingly rare and threatened birds. NPS / John Stoddard.

Highlights

- During the summer of 2019, 4 volunteers conducted 66 surveys at 33 sites across the park.
- Several species of regional concern were documented in relatively high numbers, including eastern wood-pewees, wood thrushes, and field sparrows.
- Forest bird community index scores suggest high 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 2019 bird monitoring.

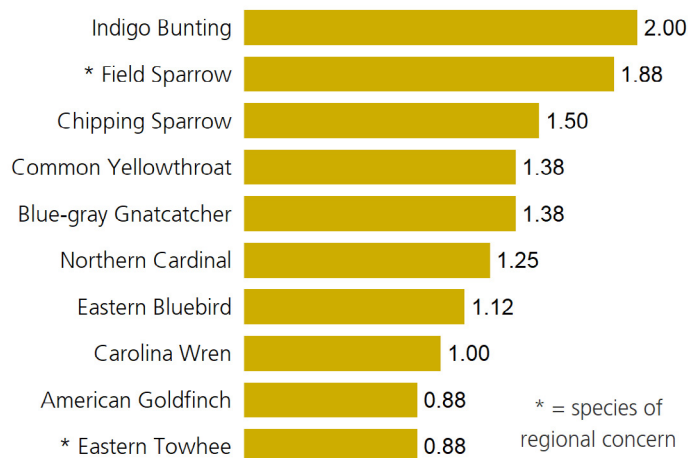
Below are the top ten most abundant species of regional concern observed in the park in 2019:

<u>Common name</u>	<u>Number of observations</u>
Eastern wood-pewee	58
Wood thrush	53
Field sparrow	39
Eastern towhee	16
Prairie warbler	16
Yellow-breasted chat	14
Yellow-billed cuckoo	13
Northern flicker	2
Eastern kingbird	1

Despite population declines of more than 50% across the region, field sparrows were the 2nd most common bird observed in grasslands at the park. Nevertheless, most of the birds observed in grassland sites were habitat generalists. More grassland specialists would be present under ideal habitat conditions. Continued and improved management of warm-season grass meadows should support an increase in grassland-dependent species.



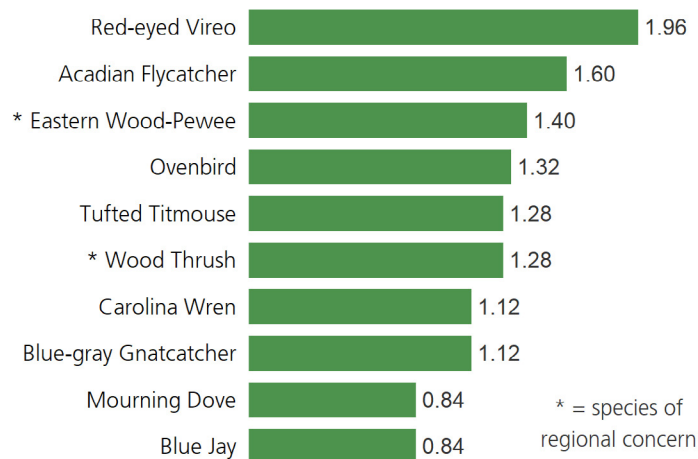
Ten most abundant birds in grassland sites (average number observed per site)



The most abundant bird in forested monitoring sites in 2019 was the red-eyed vireo, a widespread and common forest bird. Interestingly, eastern wood-pewees and wood thrushes, both species of regional conservation concern, were also relatively abundant. Wood thrushes depend on larger intact forest ecosystems. With increasing urbanization around the park, the relatively high abundance of wood thrushes shows the importance of park forests to local bird populations.



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



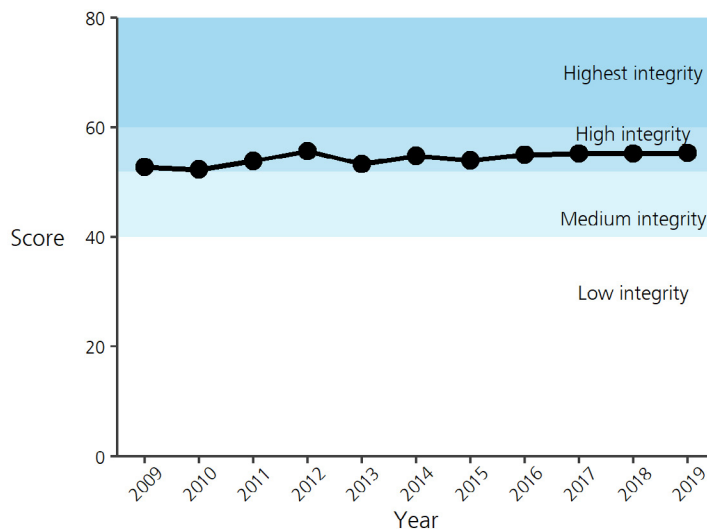
Scientists can study the abundance of all the bird species in an area to determine the overall health of the bird community. The forest bird community index score (O'Connell et al., 2000) for the park shows that the forest bird community in the park is healthy (i.e. has "high integrity"). Continued management for mature forest habitat will help maintain this high score. That said, given the park's relatively small size and fragmented geography, conservation of mature forests on surrounding private lands may be important for the long-term persistence of the park's forest bird communities.

For more information, [see the park's 2019 breeding bird monitoring report \(Johnson, 2020\)](#).

Citations: Johnson, M.J. 2020. Breeding bird monitoring: Fredericksburg and Spotsylvania National Military Park 2014–2019 summary report. NPS/MIDN/NRDS—2020/1276. NPS. Fort Collins, CO.

O'Connell, T.J., 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 (2009-2019)



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