



Mid-Atlantic Network

Breeding Bird Resource Brief



Red-eyed Vireo

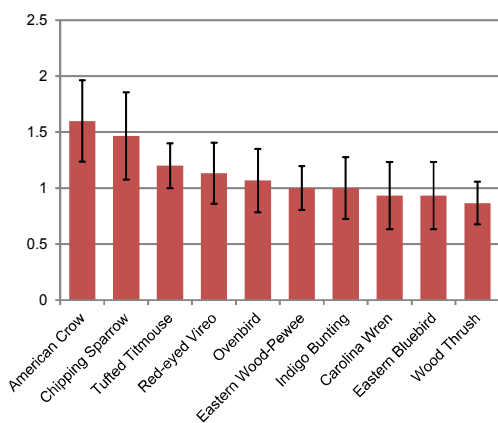
Booker T. Washington National Monument 2010 Status & Trends

A total of 15 stations were surveyed at Booker T. Washington NM during the 2010 breeding bird monitoring program, including 11 stations in forested habitats and 4 stations in grassland habitats. Four volunteer birders from the local birding community conducted an average of 3.13 surveys per station producing a total of 47 surveys for the season.

Between May and July, 698 birds of 60 species were detected throughout the park. Several species were detected this year that were not in previous monitoring years including the American Redstart, Blackpoll Warbler, Blue Grosbeak, Orchard Oriole, Worm-eating Warbler, and White-eyed Vireo.

American Crows were the most numerous species averaging 1.60 birds / station followed by Chipping Sparrows at 1.47 birds / station. The Tufted Titmouse and Eastern Wood-Pewee were the most prevalent species, occurring at 80% of the stations surveyed.

Species of conservation concern, as defined by Partners in Flight (PIF), were well represented in the park, with volunteers detecting 27 species (see table on back right). PIF further distinguishes species of concern as “watchlist” species, which face immediate threats, or “stewardship” species, which are rep-



The 10 most commonly detected bird species at Booker T. Washington NM in 2010 and their associated relative abundance (average birds/station). Error bars indicate standard error, a measure of variation.

Objectives

1. Determine annual changes and long-term trends in species composition and relative abundance.
2. Improve our understanding of relationships between breeding birds, habitats and park management.

resentative of avifaunal biomes that may or may not be in immediate danger.

Within the park, 12 watchlist species and 15 stewardship species were detected. Four species of concern, including 2 watchlist species (i.e. Eastern Wood-Pewee and Wood Thrush) and 2 stewardship species (i.e. Indigo Bunting and Carolina Wren), were among the 10 most abundant species.

Avian guilds, or groups of species occupying similar ecological niches, can be utilized for assessing response to environmental changes and ecosystem stressors via bird community assessments, or “indices” (BCIs). Based on a BCI devel-



Wood Thrush

Importance

In the densely populated Mid-Atlantic region, birds face numerous threats including urbanization, habitat loss, and fragmentation. National parks provide refuge from such threats with contiguous and protected tracts of habitat suitable for breeding birds. These parks host species of continental concern and other species that are declining throughout their range.

Birds are also excellent barometers of ecosystem health due to their high metabolism and prominent position in the food web. Detecting changes in bird populations may help alert park staff to ecological stressors such as invasive species, overbrowsing, detrimental park management practices, or climate change and help guide future management actions.

Management Applications

- A total of 60 species were detected across the park including 27 species of concern.
- The Eastern Wood-Pewee and Wood Thrush, both watchlist species, were among the 10 most common species in the park.
- The park's forested stations received the highest ecological integrity ranking, "naturalistic", using a Bird Community Index (BCI).

Long-term Monitoring

Between May and July of each year, volunteer birders conduct point counts at monitoring stations in forest and grassland habitats. Stations in forested areas are located within 125 m of forest vegetation monitoring plots enabling park staff to associate long-term trends in vegetation with avian population trends.

During each 10-minute count, the volunteer records environmental

conditions, how the bird was detected (visually or aurally), and the distance and minute of first detection.

Each site is visited at least once, but volunteers are encouraged to make multiple visits in a season. Multiple visits are especially important for obtaining accurate density estimates as information on variability due to observers, weather, etc. can be accounted for.

Status & Trends Continued...

oped for the Piedmont/Coastal Plain region (O'Connell et al. 2003), forested stations surveyed this year received the highest ranking of "naturalistic". This was an increase from the 2009 ranking of "largely intact". Rankings, when broken out by guild, also show medium

to high ecological integrity (see table below). Forest interior, single brooded, upper canopy forager, and exotic guilds showed particularly high ecological integrity, because species like the Eastern Wood-Pewee, Ovenbird, and Wood Thrush were well represented whereas exotic species were uncommon.

		2009		2010	
Guild		Percent	Rank	Percent	Rank
Structural	Forest Interior	34.93	Naturalistic	43.05	Naturalistic
	Pine Associated	0.00	Humanistic	1.42	Moderately Disturbed
	Urban/Suburban	43.59	Largely Intact	29.08	Largely Intact
Functional	Bark Prober	16.73	Largely Intact	18.91	Largely Intact
	Ground Forager	6.48	Largely Intact	6.80	Largely Intact
	Upper Canopy Forager	17.32	Largely Intact	25.27	Naturalistic
Compositional	Nest Predator/Brood Parasite	18.30	Moderately Disturbed	11.88	Largely Intact
	Single Brooded	45.78	Largely Intact	56.65	Naturalistic
	Exotic	0.00	Naturalistic	0.00	Naturalistic
Total BCI Score		0.72	Largely Intact	0.83	Naturalistic

Avian forest guild summary and Bird Community Index (BCI) score for 2010. Percents indicate the average percent guild membership at monitoring locations across the park. Total BCI scores range from 0-1 with 1 having the highest integrity.

A Final Note

It is important to note that the data presented in this brief is preliminary as variability in the dataset has not yet been accounted for. For more information on this protocol, please see the full annual report accessible from the protocol website linked below.

We'd like to thank all our volunteers for walking off the beaten path in the summer heat to count birds: Alyce Quinn, Tim Quinn, Anne Tucker, and Bill Tucker.



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Protocol Website:
More information and full annual reports may be found at
<http://science.nature.nps.gov/im/units/midn/ProtocolBirds.cfm>

Species	Detections	% Occupied
Watchlist Species		
Baltimore Oriole	2	13.33
Eastern Kingbird	2	6.67
Eastern Meadowlark	12	33.33
Eastern Towhee	9	33.33
Eastern Wood-Pewee	15	80.00
Field Sparrow	6	26.67
Grasshopper Sparrow	6	20.00
Northern Flicker	4	20.00
Prairie Warbler	4	26.67
Wood Thrush	13	66.67
Worm-eating Warbler	1	6.67
Yellow-billed Cuckoo	4	13.33
Stewardship Species		
Acadian Flycatcher	9	53.33
Blue Grosbeak	2	6.67
Carolina Chickadee	10	53.33
Carolina Wren	14	46.67
Downy Woodpecker	4	20.00
Indigo Bunting	15	60.00
Northern Parula	-	-
Orchard Oriole	-	-
Pileated Woodpecker	4	26.67
Pine Warbler	3	20.00
Red-bellied Woodpecker	11	66.67
Red-shouldered Hawk	2	13.33
Summer Tanager	1	6.67
White-eyed Vireo	-	-
Yellow-throated Vireo	6	40.00

Number of detections of Partners in Flight (PIF) watchlist and stewardship species and percent of stations they were detected at Booker T. Washington NM in 2010. Number of detections exclude flyovers and incidentals.

References:

O'Connell, et al. 2003. A bird community index for the Mid-Atlantic Piedmont and Coastal Plain. Final Report to the USGS - Patuxent Wildlife Research Center. Report No. 2003-02.

Photographs by:
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