



Mid-Atlantic Network

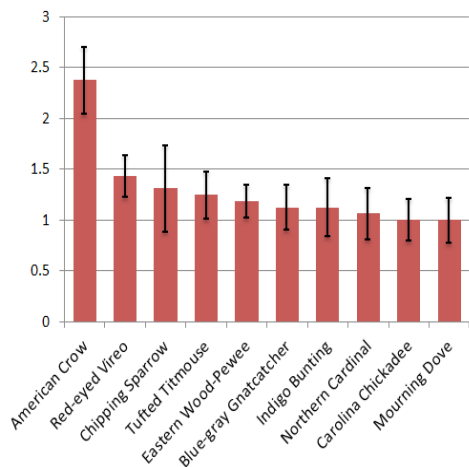
Breeding Bird Resource Brief



Baltimore Oriole

Booker T. Washington National Monument 2011 Status & Trends

This year, 16 bird monitoring stations were surveyed at Booker T. Washington NM, including 12 stations in forested habitats and 4 in grassland habitats. Six volunteer birders from the local birding community conducted an average of 3.5 surveys per station producing a total of 56 surveys for the season.



The 10 most commonly detected bird species at Booker T. Washington NM in 2011 and their associated relative abundance (average birds/station). Error bars indicate standard error, a measure of variation. Figure corrected September 2013.

Between June and July, 805 birds of 54 species were detected throughout the park. A few species were detected this year that were not in previous monitoring years including the Chimney Swift, Red-winged Blackbird, and Barred Owl.

The 10 most abundant species were the American Crow, Red-eyed Vireo, Chipping Sparrow, Tufted Titmouse, Eastern Wood-Pewee, Blue-gray Gnatcatcher, Indigo Bunting, Northern Cardinal, Carolina Chickadee, and Mourning Dove. This year was the year of the American Crow for Booker T. Washington NM, whose average abundance was 2.4 birds / station and crows were detected at nearly all the stations (93.8% of stations surveyed).

Species of conservation concern, as defined by Partners in Flight (PIF), were well represented in the park, with volunteers detecting 24 species (see table on back right). PIF further distinguishes

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.

species of concern as “watchlist” species, which face immediate threats, or “stewardship” species, which are representative of avifaunal biomes that may or may not be in immediate danger. Within the park, 11 watchlist species and 13 stewardship species were detected. Three species of concern, including a watchlist species (i.e. Eastern Wood-Pewee) and 2 stewardship species (i.e. Indigo Bunting and Carolina Chickadee), 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

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.



Tufted Titmouse

Management Applications

- A total of 54 species were detected across the park including 24 species of concern.
- The Eastern Wood-Pewee, a watchlist species, was the fifth most common species in the park.
- The park's forested stations maintained the highest ecological integrity rank measured 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...

stressors via bird community assessments, or "indices" (BCIs). Based on a BCI developed for the Piedmont/Coastal Plain region (O'Connell et al. 2003), forested stations surveyed in the park maintained their ecological rank

of "naturalistic", the highest rank available in the metric. All guilds scored highly with the exception of the pine associated guild, and none of the guilds deteriorated in ecological rank.

		2010		2011	
Guild		Percent	Rank	Percent	Rank
Structural	Forest Interior	43.05	Naturalistic	37.48	Naturalistic
	Pine Associated	1.42	Moderately Disturbed	0.38	Moderately Disturbed
	Urban/Suburban	29.08	Largely Intact	33.57	Largely Intact
Functional	Bark Prober	18.91	Largely Intact	19.44	Largely Intact
	Ground Forager	6.80	Largely Intact	5.52	Largely Intact
	Upper Canopy Forager	25.27	Naturalistic	23.84	Naturalistic
Compositional	Nest Predator/Brood Parasite	11.88	Largely Intact	12.68	Largely Intact
	Single Brooded	56.65	Naturalistic	52.83	Naturalistic
	Exotic	0.00	Naturalistic	0.00	Naturalistic
Total BCI Score		0.83	Naturalistic	0.83	Naturalistic

Avian forest guild summary and Bird Community Index (BCI) score for 2010-2011. 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: Marshall Daniels, Ingrid Freeborn, Laurie Greer, Tim Quinn, Anne Tucker, and Bill Tucker.

Species	Detections	% Occupied
Watchlist Species		
Brown Thrasher	1	6.3
Chimney Swift	1	6.3
Eastern Kingbird	4	18.8
Eastern Meadowlark	11	37.5
Eastern Towhee	11	43.8
Eastern Wood-Pewee	19	87.5
Field Sparrow	11	31.3
Grasshopper Sparrow	3	6.3
Prairie Warbler	2	12.5
Wood Thrush	16	62.5
Yellow-billed Cuckoo	12	62.5
Stewardship Species		
Acadian Flycatcher	7	37.5
Blue Grosbeak	1	6.3
Carolina Chickadee	16	75.0
Carolina Wren	15	68.8
Downy Woodpecker	5	31.3
Indigo Bunting	18	62.5
Northern Parula	2	12.5
Orchard Oriole	1	6.3
Pileated Woodpecker	8	43.8
Pine Warbler	1	6.3
Red-bellied Woodpecker	7	43.8
Red-shouldered Hawk	-	-
Yellow-throated Vireo	6	31.3

Number of detections of Partners in Flight (PIF) watchlist and stewardship species and percent of stations with detections at Booker T. Washington NM in 2011. Detections exclude flyovers and incidental encounters.

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:

Baltimore Oriole: Jim Schmidt
Tufted Titmouse: Bill Thompson



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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>

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