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Determining Breeding Bird Occurrence and Distribution Using Fixed-Radius Independent Double-Observer Point Counts, Canaan Valley Resort State Park, West Virginia

John Northeimer and Marjorie Keatley

Introduction

State park lands represent a significant refuge for many species of plants and animals. Canaan Valley Resort State Park contains approximately 2,500 ha (6,200 ac) of land covered by a mixture of hardwood and mixed hardwood coniferous forests, shrub swamp wetlands, wet meadows, hawthorn savannahs, and grasslands. Over 180 bird species have been found on the park throughout the year including permanent residents, migrants, and breeding and winter species.

Development within parklands is generally limited to a small percentage of the area of a reserve, making parklands ideal for long-term studies. Development within Canaan Valley Resort State Park is limited to approximately 200 ha (494 ac) including a championship golf course, a downhill ski area, a campground and cabin area, and a main lodge complex. Access roads are restricted to the south-central and southwestern sections.

To develop management strategies for the Park's natural resources, some form of monitoring is necessary. Simple inventories produce species checklists but do not provide enough information to resolve long-term trends in species populations or to produce accurate estimates of species occurrence and distribution.

A fixed-radius, independent double-observer point count survey was conducted by the authors during 2002 and 2003 to characterize the avifauna of the entire park. Although the data set was created 20 years ago, it is significant for a number of reasons and should be explored. It established the presence and distribution of bird life during the breeding season during a fixed period intermediate between the first West Virginia breeding bird atlas (1984–1989) and the second (2009–2014). This detailed study of bird resources within Canaan Valley Resort State Park—covering 25 percent of the Canaan Valley area—complements studies conducted concurrently within the Canaan Valley National Wildlife Refuge. The information provides a more complete representation of the entire Valley's avian population and distribution. The survey resulted in the confirmed presence of seventeen species that breed within West Virginia and are listed by the Division of Natural Resources as of greatest conservation need—Ruffed Grouse, Black-billed Cuckoo, Northern Harrier, Broad-winged Hawk, Alder Flycatcher, Veery, Swainson's Thrush, Wood Thrush, Clay-colored Sparrow, Field Sparrow, Vesper Sparrow, Bobolink, Eastern Meadowlark, Northern Waterthrush, Golden-winged Warbler, Blue-winged Warbler, and Canada Warbler.

Survey Design Considerations

When preparing a sampling protocol, the goals of the survey must be considered. Any monitoring program for this purpose must be rigorous enough from both a design and an implementation standpoint so that informed decisions can be made by land managers. Important elements may include habitat structure and floristic composition, as well

as habitat, elevation, and hydrologic gradients (Wiens 1989). Season, availability of personnel familiar with the avifauna that may be encountered, and practical limitations also come into play.

Numerous methods have been employed to survey avian populations. Point counts have been a popular method for years. Most point counts use an unlimited radius; have been established in a systematic manner along roads or trails for convenience; or because of limited available access to the interior of areas to be sampled, and have provided limited coverage. Factors relating to detection probability must also be considered, or distortions may arise when attempts are made to estimate abundance or when estimating trends in bird populations over time for a defined area. To track population trends over time, points should be distributed among different habitats proportionately to their percentage of the land unit but should be evenly spaced throughout, without regard to habitat configurations (Ralph et al. 1993). To overcome some of these limitations, a survey method was selected that used a random sampling grid, covering the entire park with uniformly spaced points and using a systematic selection of points, along with providing for the important question of detectability. Many species would not have been detected, or would have been severely underrepresented, if points had only been established along roads or trails and the sample grid had not included the park interior.

The time available to complete surveys was a factor in designing the final sampling frame. A decision had to be made concerning the number of sample points to be established, the number of times each point was visited, and the spatial distribution of points within the study area. Maximizing the total number and spatial distribution of sample points was considered to be more important than selecting a fewer number of points so that repeat visits could be made. Terrain was a major controlling factor in establishing sample group routes. Distance to the interior sections of the park also was considered. Scouting trips were completed during 2001 to determine best point groupings and the most rapid travel route, including distance, to the starting point of each group.

Both Melles et al. (2003) and Bolger et al. (1997) considered replication in space to be more important (provided greater certainty) than repeat visits to a lower number of sampling points when deriving associations between species and habitat. Smith et al. (1993) found that sampling a larger number of points once better described the bird community than when a smaller number of points was sampled more than once.

Recording time spent at each point was five minutes. The proportion of species present during a count that are detected generally increases with a longer count period (Hutto et al. 1986; Lynch 1995). Time at each point, however, was constrained by travel distances and times to the park interior. Also, counts longer than 10 minutes can add variability and are less efficient at sampling the bird community (Smith et al. 1993). Although a longer count period may have provided more detections, the authors believed it was more important to maximize the number of points sampled during each year of the survey rather than extending the recording time at each point, which would have extended the census duration beyond the optimum boundaries of the breeding season and reduced the number of points sampled.

Successful implementation of the selected protocol was due in part to pilot studies conducted during 2001. This preparation was done to minimize time spent at individual sample points, to increase understanding of count protocol, and to learn the appropriate interaction between observers during and immediately following the counts at each sample

point. The pilot study included points within five general habitat types—hardwood forest, spruce/mixed forest, forest/field ecotone, hawthorn/shrub, and field—stratified by habitat type, with routes established within accessible areas along trails and roads, or open areas.

Sampling Frame Design and Recording Methodology

Agreements were reached with the West Virginia Division of Natural Resources, Parks Division, for access to park lands and approval of sampling methods. A 250 m (820 ft) grid was overlaid on the park area. The grid was oriented by selecting a random point on the map and rotating the grid a random number of degrees using the initial point as the axis. The centers of the grids were established as potential sample points. Sample points were then selected systematically (every other point) using a random start.

Selected points falling within inaccessible or highly developed areas (on top of buildings, golf course, ski slopes) or open water were either skipped in the selection process or were offset from the grid center to the closest accessible point. Sampling points were not stratified by habitat and those falling on divisions between two different habitat types were not rejected. In no case, however, was a sample point-count area allowed to overlap with that of another point.

One hundred and sixty-two sample points were selected within the study area. Each of the points was sampled using a 100 m (328 ft) radius, encompassing an area of 3.14 ha (7.76 ac). A total of 508.68 ha (1,757 ac) were sampled, representing approximately 21 percent of the total park area (2,430 ha; 6,005 ac) selected for sampling. Universal Transverse Mercator coordinates were generated for each sample point and each point was located in the field using a GPS receiver, topographic features, and aerial photographs. Points were grouped into 14 routes of 10–13 points each. Order of route completion was randomly selected each year to avoid time of season bias. The number of points was adjusted for each route according to ease of access, topography, and vegetation characteristics. All points were sampled once for each of the two years from June 1 to June 20, 2002, and June 6 to June 30, 2003.

Bird species and numbers present were recorded during a five-minute period at each point using a 100 m fixed-radius point count protocol (Hutto et al. 1986; Ralph et al. 1995; Hamel et al. 1996). An independent double-observer protocol was used to address the question of detectability—the probability of detecting a bird that was present and singing during the sampling period (Nichols et al. 2000). Thompson (2002) and Pendleton (1995) outlined the importance of using point counts that are adjusted for detection probability when calculating densities.

Counts were delayed one minute after arrival at each point to allow birds to settle. Point counts began 30 minutes prior to local sunrise and generally ended by 9:30 a.m. with an absolute cutoff of 10:30 a.m. for some remote count points. Counts were canceled if fog, rain, or wind created conditions that would reduce the detection of birds.

The location of each bird detected was marked within two concentric circles on a field data sheet. The circles represented a distance of 50 m (164 ft) and 100 m from the center of the sample point. Each of the two observers independently recorded birds on a separate field sheet. Individual birds recorded by both observers were noted, as well as birds recorded by a single observer (the individual observer was identified). Birds flushed while approaching the point were recorded if they were within the 100 m distance from the point center. Counts for aerial species, such as swallows, were based on the highest

number observed at one time during the count period for each observer. Juveniles of all species were excluded from the count.

Determining Vegetation Characteristics

Vegetation classification and mapping had previously been completed from aerial and satellite photography and on-ground verification (Cowardin and Golet 1979; Snyder et al. 1996; Fortney 1997). This work complemented vegetation information collected at each point. Vegetation type and structure were recorded at each point within a 50 m radius of each point center. Dominant species were recorded for canopy, understory, and shrub layers. Gottschalk et al. (2005) stressed the importance of using vegetation data that are contemporary with the time of the bird survey. Cover density was estimated and scored as absent, sparse (>0%, <50%), moderate (≥ 50%, < 75%), or dense (≥ 75%). Canopy, understory, and shrub density estimates at each sample point were used to create interpolated maps for each cover type within the entire park. Vegetation surveys were conducted during June 2002 and reevaluated during June 2003.

The survey was primarily designed to represent the avifauna within the entire park by maintaining point distribution proportionally to the area of each habitat type and without regard to habitat configuration. The authors realize that this approach resulted in an unequal number of sample points within different habitat types. Vegetation cover class for all points was compared against the vegetation coverage maps generated by Fortney (1997) to determine if the sampled area was representative of the entire park. The area sampled for individual habitat categories was generally overrepresented. Upland unvegetated anthropogenic cover, however, was underrepresented by 70 percent due to the elimination of the golf course, ski area, and other anthropocentric cover areas from the selection of potential sample points. When this reduction was accounted for, the differences among the other habitat categories were lessened. The largest cover type was upland forest (78 out of 162 points) and adjusted differences were slight—upland deciduous forest was then underrepresented by 0.4 percent, and upland mixed forest underrepresented by 0.3 percent.

Points were placed into five broad habitat types (forest, woodland, ecotone, shrub, and field), based on point vegetation survey data, for general habitat associations (Appendix A). These associations treated the structural elements of the habitat but did not consider specific floristic characteristics or site hydrology. These important elements—floristic type and composition, and site hydrology—were used for more detailed individual species-habitat associations. An additional 62 points from a 2001 pilot study were included to supplement presence/absence and habitat associations for selected species and habitats not fully represented by the park sampling grid. These point counts followed the same protocol as in 2002 and 2003, except that points were established systematically and stratified by habitat. The counts included points within Canaan Valley Resort State Park and the east flank and crest of Canaan Mountain.

Results and Discussion

The sampling design was established to be compatible with analytical software available at the time. The independent double-observer point count data were analyzed using DOBSERV software (Hines 2000) from Patuxent Wildlife Research Center Software Archive to generate detectability estimates. DOBSERV uses counts, by species, of

individuals detected by both observers; and counts of individuals detected by each observer as the input file. Estimates are based on six different models that are selected based on the differences in detection probabilities between observers and between species. DOBSERV outputs the standard error for the detectability estimate and an estimated population size with standard error and 95 percent confidence intervals.

A cumulative average of 1,053 birds, representing 74 species, was recorded over 162 sample points during the two survey periods. The top five birds in total detections were the Red-eyed Vireo, Black-throated Green Warbler, Common Yellowthroat, Swamp Sparrow, and Red-winged Blackbird. Appendix B contains a complete listing of species distribution across all habitat types. Active nests were confirmed for Hermit Thrush (2), Veery (1), Ovenbird (2), and Eastern Towhee (1). A Winter Wren was observed carrying food to, and disappearing within, a moss covered stump but the entrance and a nest could not be located.

Table 1 lists the species whose total number detected was greater than 10 for either year. Probabilities for detection of a bird when present were equal to or greater than 95 percent for all species listed in Table 1, on all counts, with the exception of Blue Jay (2003) and Red-winged Blackbird (2003).

	2002			2003			
Species	X	P	N	X	P	N	Avg X
Red-eyed Vireo	113	0.998	113.20	103	0.997	103.20	108.0
Black-throated Green Warbler	80	1.000	80.00	117	1.000	117.00	98.5
Common Yellowthroat	71	0.982	72.26	71	0.998	71.12	71.0
Swamp Sparrow	53	0.983	53.87	66	0.998	66.13	59.5
Red-winged Blackbird	55	0.970	56.66	62	0.943	65.68	58.5
Song Sparrow	67	0.957	69.97	46	0.996	46.15	56.5
Blue-headed Vireo	38	1.000	38.00	39	0.984	39.60	38.5
Magnolia Warbler	39	0.989	39.41	36	0.954	37.71	37.5
Hermit Thrush	38	0.996	38.12	36	1.000	36.00	37.0
Ovenbird	33	1.000	33.00	38	0.989	38.39	35.5
Dark-eyed Junco	33	0.972	33.95	36	0.977	36.84	34.5
Alder Flycatcher	30	0.971	30.88	26	0.980	23.47	28.0
Indigo Bunting	24	1.000	24.00	33	1.000	33.00	28.5
House Wren	28	0.991	28.24	23	0.980	23.47	25.5
American Robin	26	0.960	27.06	20	0.980	20.40	23.0
Black-capped Chickadee	31	0.981	31.58	15	1.000	15.00	23.0
Savannah Sparrow	18	1.000	18.00	20	1.000	20.00	19.0
Field Sparrow	24	1.000	24.00	12	1.000	12.00	18.0
Eastern Towhee	17	0.971	17.50	18	1.000	18.00	17.5
Blue Jay	19	0.950	20.00	15	0.895	16.75	17.0
Cedar Waxwing	11	0.950	11.57	18	1.000	18.00	14.5
Black-throated Blue Warbler	12	1.000	12.00	17	1.000	17.00	14.5
Scarlet Tanager	13	0.993	13.09	15	1.000	15.00	14.0
Chestnut-sided Warbler	11	0.990	11.11	13	1.000	13.00	12.0
Winter Wren	7	0.978	7.15	13	1.000	13.00	10.0

Table 1: Detection Probabilities for species with 10 or greater detections for either year. X = Total detections. P = detection probability. N = Adjusted total.

Bird Diversity

Sampling points were treated individually and also as replicates within each general habitat type. Species richness values were calculated from the total number of species detected at each individual sampling point and from all points within each habitat type for both years combined. Shannon diversity and evenness were calculated per point and cumulatively within each habitat type by summing the number of individuals detected for each species from all points within each habitat type and also for both years combined by using the average of the sum of detections for each year (Table 2). No adjustments were made for the different number of sample points surveyed within each habitat type.

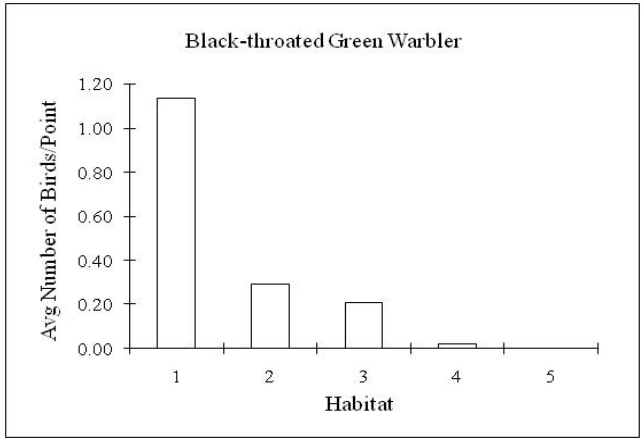
The ecotone habitat type had the highest species richness and diversity and the third highest number of birds per point. This would be expected as the contrast between adjoining plant communities would be expected to increase the variety and density of bird life (Smith and Smith 1998). Evenness was highest in the woodland habitat type and lowest in the forest and field habitat types. The low evenness in the forest and field may be due to the dominance of a few bird species of those present and multiple species represented by single detections. Average number of individuals per point was highest in the field habitat type. The species richness of 74 for the entire park was just above the mean and median for the 469 priority blocks included in *The Second Atlas of Breeding Birds in West Virginia*.

Habitat	No. of Points	Sample Size (hectares)	Number of Individuals	Species Richness	Diversity (Shannon)	Evenness (Equitability Index)	Average Number of Individuals/Point
Forest	78	244.92	428.0	50	3.895	0.690	5.48
Woodland	12	37.68	63.0	29	4.111	0.846	5.25
Ecotone	29	91.06	218.5	55	4.340	0.750	7.53
Shrub	24	75.36	181.5	47	3.970	0.714	7.56
Field	19	59.66	162.0	38	3.475	0.662	8.53
Total	162	508.68	1053.0	74	4.468	0.719	6.5

Table 2: Species richness, diversity, evenness, and average number of individuals for all points combined and per point within each habitat type.

Bird Species Distribution Across Habitats

Charts were created for species with 20 or greater detections for either year. The average number of individuals per point within each habitat type was plotted from forest to field (Figures 1-5). These general associations treated the structural elements of the habitat but did not consider specific floristic characteristics or site hydrology.



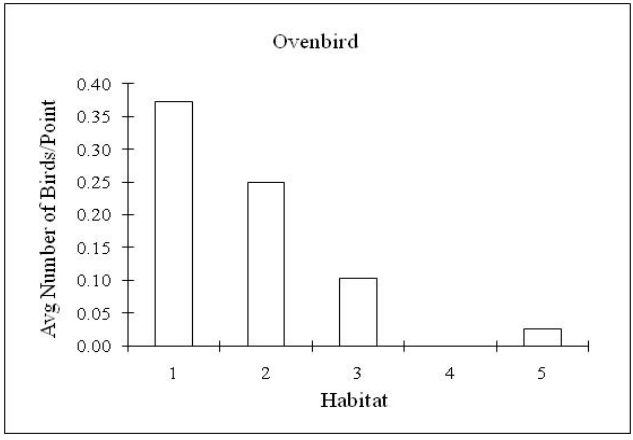
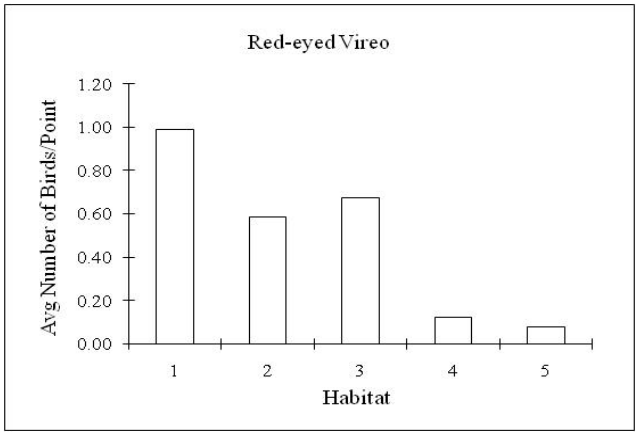
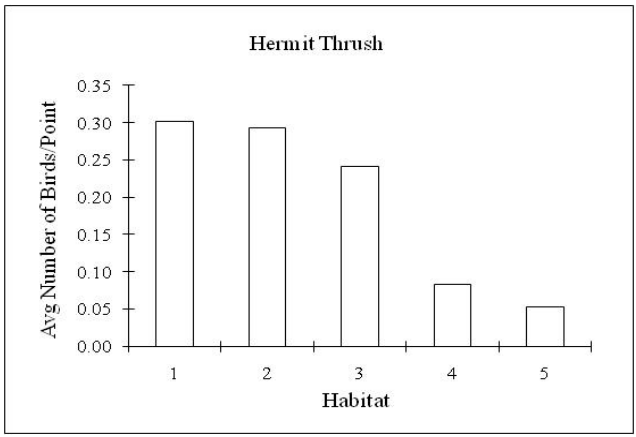


Figure 1: Species distribution within each habitat type.
1 = Forest, 2 = Woodland, 3 = Ecotone, 4 = Shrub, 5 = Field





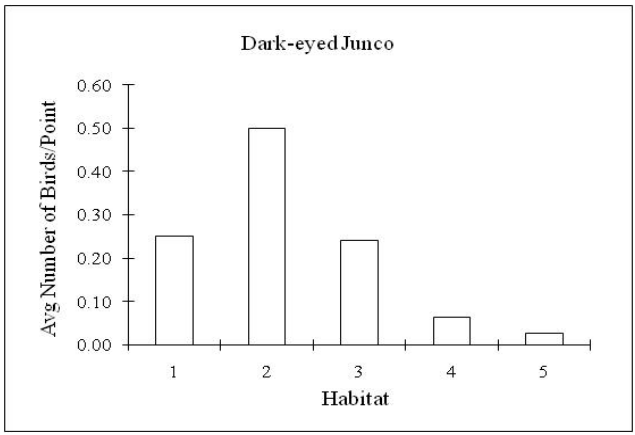
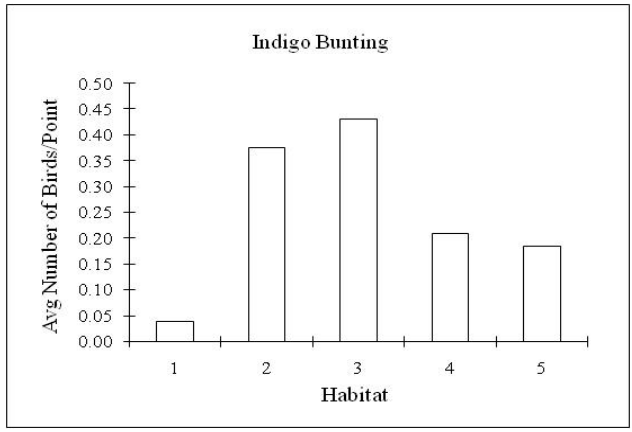
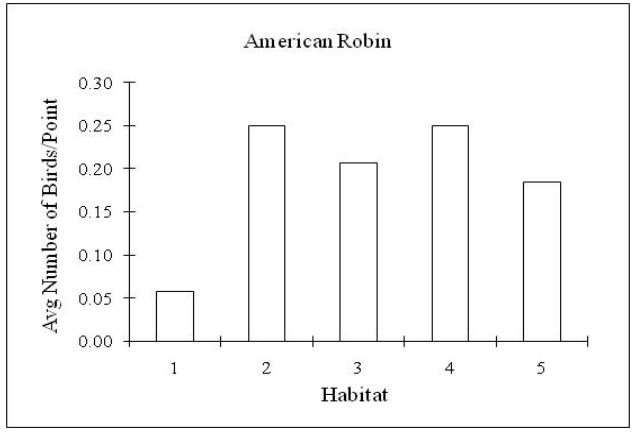


Figure 2: Species distribution within each habitat type.
1 = Forest, 2 = Woodland, 3 = Ecotone, 4 = Shrub, 5 = Field





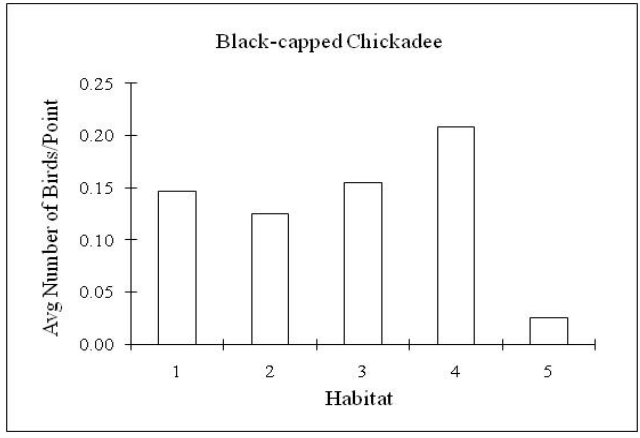
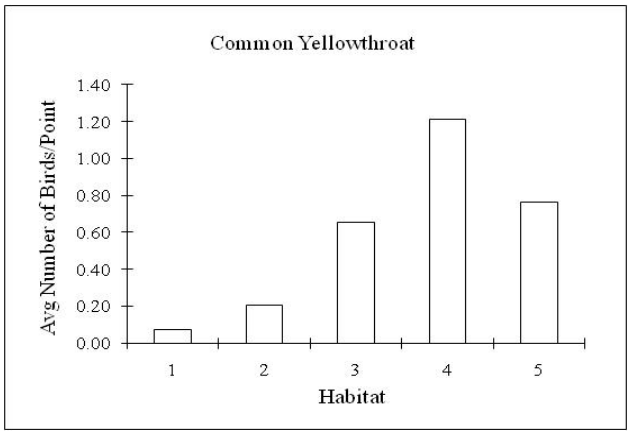
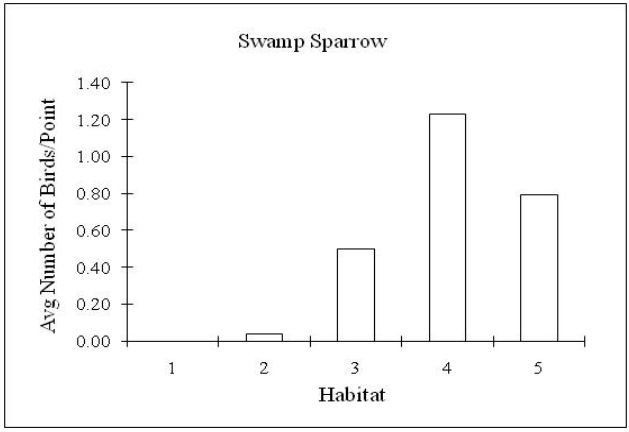


Figure 3: Species distribution within each habitat type.
1 = Forest, 2 = Woodland, 3 = Ecotone, 4 = Shrub, 5 = Field





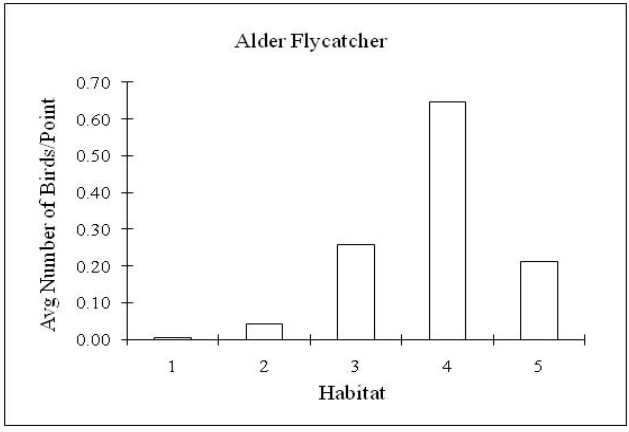
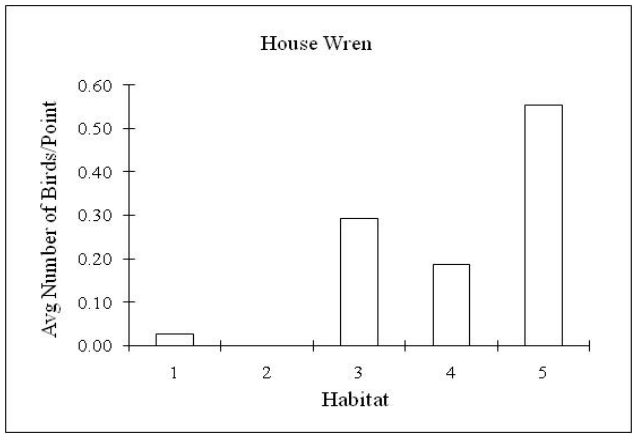
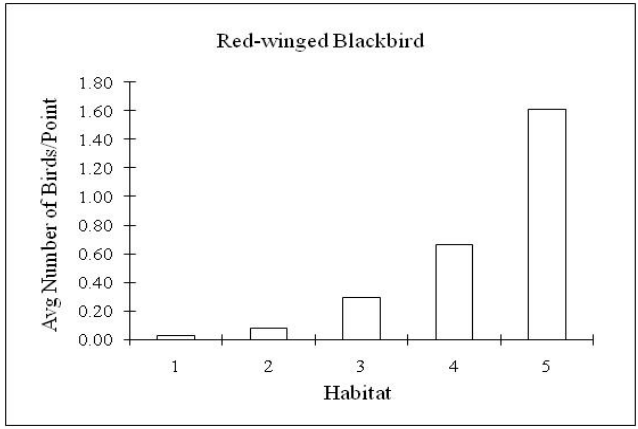


Figure 4: Species distribution within each habitat type.
1 = Forest, 2 = Woodland, 3 = Ecotone, 4 = Shrub, 5 = Field





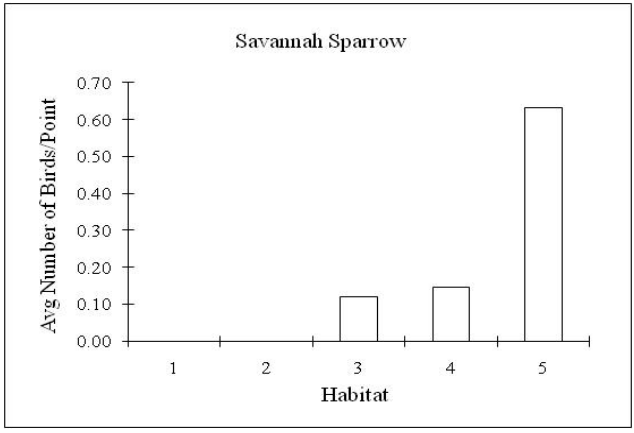


Figure 5: Species distribution within each habitat type.
1 = Forest, 2 = Woodland, 3 = Ecotone, 4 = Shrub, 5 = Field

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Appendix A

Habitat	Number of Points	Percentage of Total	Sample Size (ha)
Forest	**78**	**48.1**	**244.92**
Hardwood	60	37.0	188.40
Mixed Hardwood/Coniferous	13	8.0	40.82
Coniferous	5	3.1	15.70
Woodland	**12**	**7.4**	**37.68**
Hardwood	7	4.3	21.98
Mixed Hardwood/Coniferous	5	3.1	15.7
Ecotone	**29**	**17.9**	**91.06**
Field/Forest Ecotone	11	6.7	34.54
Forest/Field Ecotone	6	3.7	18.84
Forest/Shrub Ecotone	4	2.5	12.56
Shrub/Forest Ecotone	4	2.5	12.56
Field/Shrub Ecotone	4	2.5	12.56
Shrub	**24**	**14.8**	**75.36**
Shrub	16	9.9	50.24
Woody Shrub	8	4.9	25.12
Field (herbaceous)	**19**	**11.7**	**59.66**
Shrubby Herbaceous	15	9.2	47.10
Herbaceous	3	1.8	9.42
Herbaceous/Open Water	1	0.7	3.14

Appendix B

Distribution of species by structural habitat type. Values are the average of the combined two-year totals.

Species	Total	Forest	Woodland	Ecotone	Shrub	Field
Red-eyed Vireo	108.0	77.0	7.0	19.5	3.0	1.5
Black-throated Green Warbler	98.5	88.5	3.5	6.0	0.5	-
Common Yellowthroat	71.0	6.0	2.5	19.0	29.0	14.5
Swamp Sparrow	59.5	-	0.5	14.5	29.5	15.0
Red-winged Blackbird	58.5	2.5	1.0	8.5	16.0	30.5
Song Sparrow	56.5	3.5	1.5	19.5	10.5	21.5
Blue-headed Vireo	38.5	28.5	4.5	3.0	2.5	-
Magnolia Warbler	37.5	25.0	5.0	6.0	0.5	1.0
Hermit Thrush	37.0	23.5	3.5	7.0	2.0	1.0
Ovenbird	35.5	29.0	3.0	3.0	-	0.5
Dark-eyed Junco	34.5	19.5	6.0	7.0	1.5	0.5
Indigo Bunting	28.5	3.0	4.5	12.5	5.0	3.5
Alder Flycatcher	28.0	0.5	0.5	7.5	15.5	4.0
House Wren	25.5	2.0	-	8.5	4.5	10.5
Black-capped Chickadee	23.0	11.5	1.5	4.5	5.0	0.5
American Robin	23.0	4.5	3.0	6.0	6.0	3.5
Savannah Sparrow	19.0	-	-	3.5	3.5	12.0
Field Sparrow	18.0	0.5	2.0	6.0	3.0	6.5
Eastern Towhee	17.5	2.5	2.0	5.0	3.5	4.5
Blue Jay	17.0	5.5	-	6.0	3.5	2.0
Black-throated Blue Warbler	14.5	12.0	2.5	-	-	-
Cedar Waxwing	14.5	0.5	-	6.5	1.5	6.0
Scarlet Tanager	14.0	10.5	1.0	0.5	0.5	1.5
Chestnut-sided Warbler	12.0	0.5	1.5	1.0	8.5	0.5
Winter Wren	10.0	9.5	-	0.5	-	-
American Crow	10.0	2.0	1.5	3.5	1.0	2.0
Hairy Woodpecker	8.0	5.5	1.0	1.0	-	0.5
Eastern Meadowlark	8.0	-	-	1.0	2.0	5.0
Brown Creeper	7.0	5.5	0.5	0.5	0.5	-
Red-breasted Nuthatch	7.0	5.5	0.5	-	-	1.0
Rose-breasted Grosbeak	7.0	4.5	0.5	-	2.0	-
Gray Catbird	7.0	0.5	-	2.0	3.5	1.0
White-breasted Nuthatch	6.5	3.0	1.0	2.0	0.5	-
Chipping Sparrow	6.5	1.0	-	3.5	1.0	1.0
Northern Flicker	6.0	1.5	-	1.5	1.0	2.0
Northern Waterthrush	5.5	3.5	-	-	1.5	0.5

Species	Total	Forest	Woodland	Ecotone	Shrub	Field
Great Crested Flycatcher	4.5	1.0	-	1.5	0.5	1.5
Yellow-bellied Sapsucker	4.5	4.5	-	-	-	-
Canada Warbler	4.5	4.0	0.5	-	-	-
Tufted Titmouse	4.5	2.0	-	2.0	-	0.5
Golden-crowned Kinglet	4.0	3.0	0.5	-	0.5	-
Pileated Woodpecker	4.0	2.0	-	0.5	1.5	-
Purple Finch	3.5	2.5	-	-	1.0	-
Eastern Bluebird	3.5	-	-	1.0	1.0	1.5
Blackburnian Warbler	3.0	2.5	-	0.5	-	-
Yellow-rumped Warbler	3.0	0.5	0.5	1.5	0.5	-
European Starling	3.0	-	-	2.0	1.0	-
Tree Swallow	3.0	-	-	2.0	-	1.0
Veery	2.5	2.5	-	-	-	-
Eastern Phoebe	2.5	-	-	1.5	1.0	-
American Goldfinch	2.0	0.5	-	-	1.5	-
Brown Thrasher	2.0	-	-	1.0	0.5	0.5
Swainson's Thrush	1.5	1.5	-	-	-	-
Wood Thrush	1.5	1.0	-	0.5	-	-
Brown-headed Cowbird	1.5	0.5	-	-	1.0	-
Ruffed Grouse	1.5	-	-	-	1.5	-
Eastern Kingbird	1.5	-	-	-	0.5	1.0
Yellow Warbler	1.5	-	-	1.0	0.5	-
Sedge Wren	1.5	-	-	1.5	-	-
Vesper Sparrow	1.5	-	-	1.5	-	-
Wild Turkey	1.0	0.5	-	0.5	-	-
Hooded Warbler	1.0	-	-	0.5	0.5	-
Bobolink	1.0	-	-	-	-	1.0
Common Grackle	1.0	-	-	0.5	-	0.5
Broad-winged Hawk	0.5	0.5	-	-	-	-
Barred Owl	0.5	0.5	-	-	-	-
Blue-winged Warbler	0.5	-	-	-	0.5	-
Black-billed Cuckoo	0.5	-	-	-	-	0.5
Northern Harrier	0.5	-	-	0.5	-	-
Killdeer	0.5	-	-	0.5	-	-
Downy Woodpecker	0.5	-	-	0.5	-	-
Eastern Wood-Pewee	0.5	-	-	0.5	-	-
Willow Flycatcher	0.5	-	-	0.5	-	-
Golden-winged Warbler	0.5	-	-	0.5	-	-

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912 Churchill Circle
Charleston, WV 25314

Twenty-Sixth Report of the West Virginia Bird Records Committee, 2021

Ross Brittain

Another year of Covid-19 kept many folks participating in birding as an enjoyable, stress-relieving activity. Alert observers submitted nine rare bird reports in 2021 of which seven were accepted by the committee. The other report was likely correct but the committee needed more observers or photographic evidence for inclusion in the record. Two birds were added to the official State List. The first was a European Goldfinch observed in Preston County at the home of Scott Cavallaro in Bruceton Mills on January 28, 2021, but it was added as an Exotic List species. The second, reported by Elliot Kirschbaum, was a Limpkin recorded in Steamboat Run in Jefferson County by several people on August 16, 2021.

The committee's work to review records continues to be made easier with an increase in photographic evidence since most reports to the committee now include excellent pictures of the birds in question. Also, with social media bird alerts being shared almost in real time, far more observers are able see these rare birds to provide additional documentation.

This year's meeting was again held virtually thanks to Katie and Jesse Fallon's Zoom account. The committee congratulated and thanked LeJay Graffious for his five years of service and two years as chairperson. Also, kudos to Joette Borzik for her tenure on the Records Committee. Fortunately for Joette, she moved to seek greener pastures outside of West Virginia, but that meant that she had to retire from the Committee so the alternate, Gary Rankin, stepped in to take her place. We welcome Rich Bailey to the records committee for a five-year term joining Ross Brittain, David Daniels, Jesse Fallon, Matt Orsie, Gary Rankin, Mike Slaven, and Wade Snyder (alternate) as the West Virginia Bird Records Committee. Ross Brittain was elected as the Chair of the committee and Dave Daniels was elected as Vice-chair.

Following is a summary of species reports received and considered.

WVBRC 2021-1 European Goldfinch (*Carduelis carduelis*) - On January 28, Scott Cavallaro noticed this bird on feeders in his Bruceton Mills yard and took some excellent photos that left no doubt about the identity of the species. Since this species has no established populations in the U.S. the committee voted to add this one to the Exotics List, but maybe that will change in the future. Thanks, Scott!

WVBRC 2021-2 Eurasian Collared-Dove (*Streptopelia decaocto*) – Jack O'Connell observed this non-native bird at the DMV parking lot on April 12th. This is the second record for the state outside of Monroe County. Thanks for the great photos to make this identification easier, Jack.

WVBRC 2021-3 Eurasian Collared-Dove (*Streptopelia decaocto*) – Casey Rucker spotted this bird in Dryfork, Randolph County, on April 6th, providing photos to help confirm the species. This report represents the third record for the state outside of Monroe County. Thanks for your continued help with the birds of West Virginia, Casey!

WVBRC 2021-4 Eurasian Collared-Dove (*Streptopelia decaocto*) – Jack O'Connell found yet another Eurasian Collared-Dove in Greenbrier County on April 19th. This one was

located at the intersection of Rte 21 and 30, several miles away from the one he spotted on the 12th. This dove represents the fourth state record outside of Monroe County, two of which have been found by Jack. Nice work, Jack!

WVBRC 2021-5 White-faced Ibis (*Plegadis chihi*) – Some say you have to get lucky to find a rare bird, but others like to make their own luck by spending a lot of time looking for birds in the right habitat, such as Mike Griffith. Mike and Janet Keating spotted this White-faced Ibis on April 17th about four miles south of Gallipolis Ferry in Mason County, which represents the third record for this species in the state. As usual the excellent photos made the identification easy. Thanks for your effort, Mike and Janet!

WVBRC 2021-6 Limpkin (*Aramus guarauna*) - On August 16, Elliot and Nancy Kirschbaum, joined by Todd Fagan, found this Limpkin along the Potomac River and Steamboat Run outside Shepherdstown. They took the time to take some key photos through thick vegetation and get GPS coordinates to verify that the bird was in WV and not Maryland. Their efforts paid off with the first record of Limpkin in West Virginia. Great collaborative effort!

WVBRC 2021-8 Eurasian Collared-Dove (*Streptopelia decaocto*) – On December 19, 2021 Debra and Kenneth Floyd spotted this Eurasian Collared-Dove in Ronceverte during a Christmas Bird Count. Thankfully they were able to get a good photo that allowed the committee to positively identify this bird because this is the fifth Eurasian-Collared Dove found outside of Monroe County. With this observation, Eurasian Collared-Dove are removed from the Review List for West Virginia and no longer need to be reported to the Committee. Not many get to say that they removed a species from the Review List during a Christmas Bird Count. Nicely done, Debra and Kenneth!

Unfortunately, one report was not sufficient to provide adequate documentation in the minds of a majority of the committee members:

WVBRC 2020-7 Bewick's Wren (*Thryomanes bewickii*) - Randolph County. This bird may have indeed been a Bewick's Wren, but the majority of the committee felt that there just wasn't enough information provided to be certain for this species that has not been seen in the state for about 30 years. Hopefully they can spot this bird again and get some good photos to confirm its presence in West Virginia.

The Records Committee actions can be seen on our website at http://www.brooksbirdclub.org/west-virginia-bird-records-committee.html. The Committee thanks the Brooks Bird Club and L. E. Helgerman for continued partnership in this endeavor. The Committee also wishes to thank Wil Hershberger for continuing to serve as non-voting Secretary. We appreciate his patience and dedication to his duties because we truly cannot do this work without his service, as we found out when he lost internet service on the day of our scheduled annual meeting.

The Bird Records Committee is dependent on the birders in West Virginia to submit observations. I have only been in West Virginia since 2012, but have noticed an increase in the number of birders, and timelier sharing of bird sightings via the Internet which helps build an accurate list of birds seen in our mountain state. I would like to thank all those who take the time and effort to submit records to the committee for evaluation.

Keep those rare bird reports coming in! And please do not hesitate to contact any of the members of the committee if you have any questions, concerns, or suggestions for improvement. Keep alert and your camera handy for rare bird observations to add to our state list. Happy birding!

18 Woodbrook Lane
Bridgeport, WV 26330

eBird Report
September 1–November 30, 2021

Michael Slaven

September through November 2021 was in some ways a rather typical fall season, but with a few notable exceptions. The season started out with September feeling very summery and warm. There were plenty of reports coming in to eBird, and it appears that the COVID era has gotten more people interested in birding than ever. It was particularly rewarding that there was a high level of interest from young birders, who represent the future of birding. The reporting predictably slowed a little as the weather became wetter and cooler, but there was a still a steady flow of eBird reporting throughout the fall. That is good news for the scientists, who will have an expanded data set to work with in tracking bird populations. Although the number of reports has risen substantially over the yearts, though, one thing that I noticed was that even with many reports in fall 2021, there was not a corresponding surge in the number of species reported. In fact, it was not a year of plentiful birds, at least in the reports I reviewed.

Some species were more notable in their absence than presence, which raises concerns for me. Ducks were reported less frequently and in lower numbers than usual, which could be attributed to several factors, including climate change, food supply, and other human-caused factors such as habitat degradation, light pollution, drought, and spiking temperatures. On one hand, some avian species were very hard to find in the fall, such as the Black-billed Cuckoo, with only nine reports in the entire season. On the other hand, somes species, particularly thrushes seemed to be common during fall 2021, with multiple reports of Gray-cheeked thrushes (*Catharus minimus*), usually a pretty tough bird to find, being especially prevalent. Much of the success of birders in finding these shy birds appears to have been the use West Virginia birders are making of the Noctural Flight Call (NFC) protocol on eBird, which is becoming more regular every year, When used in conjunction with advanced smartphone microphone apps and bird call identification tools, the results are impressively accurate and useful to the scientists as data for advancing knowledge about migration, flight patterns .

Perhaps the most unusual sighting of the season was the Scissor-tailed flycatcher (*Tyrannus forficatus)* that appeared in the area around the J.Q. Dickinson Salt works in Kanawha County in early November. Scissor-tailed Flycatchers are beautiful and interesting birds, with an enormously long tail for their size and striking orange/red wash on their bellies. They are only a little larger than a robin, but the spectacular tail leaves the

impression that they are much larger. During breeding season they are highly protective of their territory, and will fearlessly attack hawks and other larger birds. The specimen that appeared in West Virginia was reported to eBird on November 4, and before its final sighting on November 7 had been listed in sixteen different eBird reports. This presented a chance was the chance to see a very rare species—at least for West Virginia—and was a powerful and ultimately irresistible temptation that I couldn't resist. I drove there to try to find it, but I "dipped" and only went home with a pound of salt from the nearby salt mill. There are always choices to make when birding, and the "to chase or not to chase" question has become more complicated when one considers the environmental impacts of an individual driving for hours and using so much fuel to see one bird. In this case, it would have been a life bird, and I do not regret that I tried, but I did consider the impact of my on my long drive home and wished that I had the foresight to invite someone to go with me.

Once in a while, I think it is useful to dive a little deeper into the story of an individual rare bird to try to get some clarity on why it ever strayed here—and in the case of the Scissor-tailed Flycatcher, hundreds of miles from its breeding grounds and migratory path. And the truth is, no one really has a handle on this kind of vagrancy.

There have only been four confirmed sightings of the species reported on eBird. The earliest is a historical record from 1970 in Charleston. Three of the four sightings have been in Kanawha County, with the last two being made in essentially the same location over a seven-year period. The location seems to be the key to understanding why this particular Scissor-tailed flycatcher lingered there for a few days.

The species likes open grassland with some trees to provide cover as it swoops down to catch its prey, sometimes beating its victim against a fence post or tree to kill it. It feeds primarily on beetles and grasshoppers, and the location near the Salt Works satisfies all of those requirements. Scissor -tailed Flycatchers are as fairly common birds in their normal range, but that range usually includes the Middle Southwest of the US, plus portions of Mexico and Central America. It is a short-range migrant, migrant, but like some of its relatives in the Tyrant Kingbird family the Eastern Kingbird (*Tyrannus tyrannus*) and Couch's Kingbird (*Tyrannus couchi*i) come to mind) , has a reputation of occasionally straying far from its breeding grounds.[1] The sightings of this bird occurred after breeding season was well over, and were no reported sightings of the species that November in surrounding states, or even Texas, the heart of its summer range. This was a rare and special sighting for our state. I was surprised to learn when I researched further into this species that Scissor-tailed Flycatchers, for all their showy appeal, are actually still poorly understood, and there exist large gaps in the understanding of this bird's behavior, especially in its southern wintering grounds. Part of the appeal of birding is in its mystery and wonder, and there is a certain charm in the unknowns of avian behavior, but it will be fascinating to see how our understanding of the Scissor-tailed Flycatcher and other birds evolves over time.

[1]Regosin, J. V. (2020). Scissor-tailed Flycatcher (Tyrannus forficatus), version 1.0. In Birds of the World (A. F. Poole, Editor). Cornell Lab of Ornithology, Ithaca, NY, USA. https://doi.org/10.2173/bow.sctfly.01

632 West Virginia Avenue
Morgantown, WV 26591
mslavenwv@gmail.com

Field Notes
Fall Season
September 1 – November 30, 2021

Casey Rucker

September was slightly warmer and much wetter than average, while October was the third warmest on record, according to the Northeast Regional Climate Center at Cornell University, and was slightly wetter than average. November was much cooler than average and the seventh driest on record.

The following notes were gathered from the West Virginia Birds Listserv, sponsored by the National Audubon Society, and from field notes submitted to the author by email at autoblock@frontiernet.net, and by regular mail. The full content of the reports submitted by the contributors of the WV Listserv may be viewed by visiting the archives at the following web site: http://list.audubon.org/archives/wv-bird.html. Observations were down from the previous year, with reports from only 32 of West Virginia's 55 counties during the fall season.

Michael Griffith, Janet Keating, and Josh Holland spotted a **Marbled Godwit** at Robert C. Byrd Locks and Dam, Mason County, on September 5. On November 4, Richard Gregg discovered a **Scissor-tailed Flycatcher** between Rand and Malden, Kanawha County, where the bird remained at least through November 7. Diversity was down this year as well, with 198 species reported in the state during the fall months.

Geese, **Swans**, and **Ducks** – On November 19, Wilma Jarrell saw several **Snow Geese** fly over her home in Wileyville, Wetzel County, and two days later Richard Gregg found a **Snow Goose** in Dunber, Kanawha County. A **Ross's Goose** lingered at Ridenour Lake in Kanawha County from November 16, when Richard Gregg first spotted it, until November 23 (GR, ReT, RG). Michael Griffith found another **Ross's Goose** on Plymale Lane, Mason County, on November 29. **Canada Geese** were as usual widespread throughout the state. Derek Courtney found six **Tundra Swans** on a Mountaineer Audubon trip to Cheat Lake, Monongalia County, on November 20.

West Virginia birders reported only sixteen species of **ducks** this season. There were reports in at least six counties each of **Wood Ducks**, **Mallards**, **Ring-necked Ducks**, **Buffleheads**, and **Hooded** and **Common mergansers** this fall. Reports of the following species came from fewer than six counties, as noted: **Blue-winged Teal**: Summers County (JP, MW); **Gadwalls**: Hardy (DH), Mason (MG. JK, GR, DP), Monongalia (DCo, HC), and Monroe (JJP) Counties; **American Wigeons**: Greenbrier (JO) and Hardy (DH) Counties; **American Black Ducks**: Mercer (JP), Monongalia (DCo), and Monroe (JP) Counties; **Northern Pintail**: Monroe County (JJP); **Green-winged Teal**: Hardy (DH), Kanawha (RG), Mason (MG, JK), Monongalia (DCo, HC), and Monroe (JJP) Counties; **Canvasback**: Monongalia County (DCo); **Redheads**: Mason (GR, JK, MG, DP), Mercer (JP), and Monongalia (DCo) Counties; **Lesser Scaup**: Hardy (DH), Mercer (JP), Monongalia (DCo), Monroe (JJP), and Summers (JJP) Counties; and **Ruddy Ducks**: Mason **(**GR, MG, JK, DP) and Monongalia (DCo, HC) Counties.

Turkeys and **Grouse** – **Wild Turkeys** inspired reports from only Monongalia (DCo) and Wetzel (WJ) Counties this fall. Herb Myers heard a **Ruffed Grouse** drumming near

Harman, Randolph County, on October 12, and on November 3 Jack O'Connell found a **Ruffed Grouse** at Lake Sherwood, Greenbrier County.

Grebes – **Pied-billed Grebes** appeared widely throughout the state, while Wilma Jarrell made the only report of **Horned Grebes**, from Hannibal Dam, Wetzel County, on November 29.

Pigeons and **Doves** – **Rock Pigeons** and **Mourning Doves** continue to reside throughout the state.

Cuckoos – **Cuckoo** sightings were down this fall in West Virginia, with **Yellow-billed Cuckoos** reported in only seven counties.

Goatsuckers and **Swifts** – Reports of **Common Nighthawk** came only from Jefferson (WS), Kanawha (LC), and Summers (JJP, SOg) Counties. There were six counties with reports of **Chimney Swifts**, with the latest report coming from Sharon Kearns, who counted 62 flying over her home near Hillsboro, Pocahontas County, on October 8. Laura Ceperley counted 800 **Chimney Swifts** entering the chimney of the South Charleston Middle School in Kanawha County on September 26.

Hummingbirds – Birders in thirteen counties reported sightings of **Ruby-throated Hummingbirds**, through early October. The last report was on October 7, when James and Judy Phillips hosted a lingering **Ruby-throated Hummingbird** at their home in Pipestem, Summers County.

Rails and **Coots** – On November 4, Michael Griffith found a **Virginia Rail** and a **Sora** at Robert C. Byrd Locks and Dam, Mason County, where David Patick had observed a **Sora** on October 3. Jack O'Connell reported the only **American Coots** of the season, from Lake Sherwood, Greenbrier County, on October 24.

Plovers – There was a **Black-bellied Plover** and four **Semipalmated Plovers** at Robert C. Byrd Locks and Dam, Mason County, on September 5, as observed by Michael Griffith, Janet Keating, Josh Holland, and David Patick, and likely the same **Black-bellied Plover** was observed on September 26 at the same location (GR, MG, JK, DP). Reports of **Killdeer** came from seven counties.

Sandpipers – **Sandpiper** reports were down but diversity was up compared to last fall, as West Virginia birders submitted reports of fifteen species. The **Marbled Godwit** found in Mason County on September 5 by Michael Griffith, Janet Keating, and Josh Holland, is described near the beginning of these notes. Reports of the following **shorebirds** came from the counties listed: **Stilt Sandpiper**: Mason (MG, JK, JsH) and Wood (TB); **Sanderling**: Jackson (RG) and Mason (MG, JK, JsH); **Dunlin**: Mason (MG, JK); **Baird's Sandpiper**: Mason (MG, JK); **Least Sandpiper**: Jackson (RG), Mason (MG, JK, JsH), and Raleigh (SWi); **Pectoral** and **Semipalmated sandpipers**: Mason (MG, JK, JsH); **Short-billed Dowitcher**: Wood (TB); **American Woodcock**: Berkeley (AT); **Wilson's Snipe**: Mason (GR, MG, JK, DP); **Spotted Sandpiper**: Mason (GR, MG, JK, DP); **Solitary Sandpiper**: Jackson and Putnam (RG); **Lesser Yellowlegs**: Kanawha (HG) and Mason (MG, JK, JsH, GR, DP); and **Greater Yellowlegs**: Mason (MG, JK, JsH, GR, DP).

Gulls and **Terns** – The fall was slow for inland seabirds, in keeping with recent years. Gary Rankin reported the only **Bonaparte's Gulls** of the season, which he spotted on the Ohio River at Huntington, Cabell County, on November 6. Reports of **Herring Gulls** came from Mason (JK, MG) and Monongalia (DCo, HC) Counties.

On September 6, Richard Gregg spotted a **Caspian Tern** at Belle, Kanawha County. Janet Keating and Michael Griffith spotted three **Forster's Terns** and one **Black Tern**

at Robert C. Byrd Locks and Dam, Mason County, and Janet Keating, Michael Griffith, and Josh Holland found ten **Black Terns** on September 1 and eight **Common Terns** on September 5 at the same location. Two days later, James Phillips saw a **Forster's Tern** on the Bluestone River, Summers County.

Loons – Hannah Clipp and Derek Courtney spotted the first **Common Loons** of the season on October 23, finding three individuals at Cheat Lake, Monongalia County, and on November 2 Cindy Mullens saw approximately 30 **Common Loons** on Tygart Lake, Taylor County. Other reports of **Common Loons** came from Jefferson (LW, BH) and Summers (JP) Counties.

Cormorants – Reports of **Double-crested Cormorants** came from six counties.

Herons and **Egrets** – **Great Blue Herons** appeared throughout much of West Virginia this fall. **Great Egrets** were reported in four counties and **Green Herons** in only two. Steven Wilson saw at least one continuing juvenile **Black-crowned Night-Heron** in Beckley, Raleigh County, on September 7.

Vultures – Reports of **Black Vultures** came from five counties, while thirteen counties had reports of **Turkey Vultures**.

Hawks and **Eagles** – Raptors were reported in lower numbers in West Virginia this fall. **Osprey**, **Bald Eagles**, **Red-shouldered Hawks**, and **Red-tailed Hawks** were all well represented in reports throughout the state during the fall season. **Golden Eagles** appeared in reports from Mercer (JP) and Monroe (JJP) Counties. **Northern Harriers** were noted in Jefferson (JBz), Kanawha (HG), Mason (GR, MG, JK, DP), and Mercer (JP) Counties; **Sharp-shinned Hawks** were spotted in Jefferson (WS), Mason (DP), Mercer (JP), Summers (JP), and Tucker (CR) Counties; and **Cooper's Hawk** reports came from Kanawha (RG), Mercer (JP), Roane (DG), Summers (JP, MW), and Wetzel (WJ) Counties. Hullet Good spotted a **Northern Goshawk** near his home in Milliken, Kanawha County, on September 18. Reports of **Broad-winged Hawks** came from Mercer (JP), Putnam (CE), Summers (JP, MW), Wetzel (WJ), and Wood (TB) Counties.

Owls – Reports of **owls** were scarce this season. **Eastern Screech-Owls** were reported in Cabell (GR, MG, JK, DP), Kanawha (RG), and Summers (JJP) Counties, while **Great Horned Owls** were observed in Jefferson (WS), Ritchie (CB), Summers (JJP), and Wetzel (WJ) Counties; observers reported **Barred Owls** in Greenbrier (JO), Randolph (DG), Summers (JJP), Tucker (CR), Wayne (GR), and Wetzel (WJ) Counties.

Kingfishers – Reports of **Belted Kingfisher** were down this fall, with sightings in only eight counties.

Woodpeckers – **Red-headed Woodpeckers**, **Red-bellied Woodpeckers**, **Yellow-bellied Sapsuckers**, **Downy Woodpeckers**, **Hairy Woodpeckers**, **Northern Flickers**, and **Pileated Woodpeckers** were all widely reported.

Falcons – It was a slow fall for the rarer **falcons** in West Virginia, although **American Kestrels** continued to appear widely throughout the state. **Merlins** made appearances in Cabell County (GR, MG, JK, DP), Kanawha County (HG), Mercer County (JP), and Pocahontas County (JJP). There were reports of **Peregrine Falcons** from four counties: Cabell (GR), Kanawha (RG), Mason (GR, MG, JK, DP), and Wetzel (WJ).

Flycatchers – The **Scissor-tailed Flycatcher** first spotted by Richard Gregg in Kanawha County on November 4 is described near the beginning of these notes. On September 19, James Phillips saw an **Olive-sided Flycatcher** at the East River Mountain outlook in Mercer County, and four days later Wilma Jarrell spotted an **Olive-sided**

Flycatcher on Fairview Ridge, Wetzel County. On September 13, Terry Bronson discovered a **Yellow-bellied Flycatcher** at Johnson Janes Park in Wood County, and five days later Derek Courtney found another **Yellow-bellied Flycatcher** in Morgantown, Monongalia County. **Eastern Wood-Pewees** and **Eastern Phoebes** were widely seen in the state, with reports from seven counties each. The following **flycatchers** were reported in the following counties: **Acadian Flycatcher**: Monongalia (DCo) and Wood (JB); and **Least Flycatcher**: Wood (JB).

Vireos – **White-eyed**, **Yellow-throated**, **Blue-headed**, and **Red-eyed vireos** appeared in many counties during September and early October. **Philadelphia Vireos** were spotted in Cabell **(**DP, MG, JK), Mason (MG, JK), Monongalia **(**DCo, HC), and Wetzel (WJ) Counties. **Warbling Vireos** were only reported from Mason (MG, JK) and Wood (TB) Counties.

Crows, **Jays**, and **Ravens** – **Blue Jays**, **American Crows**, and **Common Ravens** prompted many reports throughout West Virginia. William Johnson observed the only reported **Fish Crow** of the season, in Morgantown, Monongalia County, on September 29.

Chickadees and **Titmice** – **Black-capped Chickadees**, **Carolina Chickadees**, and **Tufted Titmice** appeared widely in state reports.

Larks – N. Wade Snyder reported the only **Horned Larks** of the season, on October 15 in Bardane, Jefferson County.

Swallows – **Tree Swallows** appeared in seven counties, with the latest report on October 24, when Gary Rankin, Michael Griffith, Janet Keating, and David Patick saw twelve **Tree Swallows** along Route 817, Mason County. **Barn Swallows** inspired reports in Jackson (RG) and Mason (GR, MG, JK, DP) Counties.

Kinglets – Both **Golden-crowned** and **Ruby-crowned kinglets** inspired reports throughout the state this fall.

Waxwings – **Cedar Waxwing** reports were down this season, with sightings in only ten counties throughout the state.

Nuthatches – In the usual two-year pattern of irruptions, **Red-breasted Nuthatches** were seen sparsely, with reports from only five counties: Berkeley (MO), Cabell (MG), Marion (AW), Summers (JJP), and Tucker (HMy). **White-breasted Nuthatches** appeared widely.

Creepers – Reports of **Brown Creeper** came only from Jefferson (LW, BH) and Kanawha (HG) Counties.

Gnatcatchers – Birders in Kanawha (RG), Mercer (JP), and Monongalia (DCo) Counties reported **Blue-gray Gnatcatchers**, all during September.

Wrens – **House Wren** reports were scarce as usual, coming from Cabell (DP, MG, JK, GR), Jefferson (BH), Mason (DP), Monongalia (DCo, HC), and Summers (JP, MW) Counties. **Winter Wrens** inspired reports from Marion (AW), Randolph (HMy), and Summers (MW) Counties. Gary Rankin, Michael Griffith, Janet Keating, and David Patick found a **Marsh Wren** at Green Bottom Wildlife Management Area, Cabell County, on September 26; David Patick spotted a **Marsh Wren** at Muddlety Wetlands, Nicholas County, on November 6, and Mark Johnson discovered a **Marsh Wren** at Kimsey Run Lake, Hardy County, on November 27. **Carolina Wrens** were as usual reported throughout the state.

Catbirds, **Thrashers**, and **Mockingbirds** – There were reports of **Gray Catbirds**, **Brown Thrashers**, and **Northern Mockingbirds** throughout the state this fall.

Starlings – Reports from eight counties confirm that **European Starlings** continued to occupy widespread habitats throughout West Virginia.

Thrushes – It was a good fall for **thrushes** in West Virginia. **Eastern Bluebirds**, **Swainson's Thrushes**, and **American Robins** were all seen widely in reporting counties. James Phillips found two **Veeries** in Pipestem, Summers County, on September 20. **Gray-cheeked Thrushes** appeared in Barbour (RBr), Berkeley (MO), Cabell (DP), Summers (JP), and Wayne (GR) Counties, **Hermit Thrushes** were reported in Kanawha (RG), Marion (AW), and Summers (JP) Counties, and **Wood Thrush** reports came from Cabell (DP), Jefferson (JBz), Mercer (JP), and Wetzel (WJ) Counties.

Old World Sparrows – The **House Sparrow** prompted reports from six counties this fall.

Finches and **Allies** – **House Finches** and **American Goldfinches** inspired widespread reports throughout the state this fall. **Purple Finch** reports were scarce, coming only from Jefferson (BH), Kanawha (HG), Pocahontas (JJP), and Tucker (CR) Counties, **Red Crossbills** appeared in reports from Pocahontas (JO, JJP) and Tucker (HMy, RBo, SF) Counties, and the only report of **Pine Siskins** was a lone individual found by James Phillips in Pipestem, Summers County, on September 20.

Sparrows, **Juncos**, and **Towhees** – The most-frequent **emberizid** species in reports this fall were **Chipping** and **Field sparrows**, **Dark-eyed Juncos**, **White-throated** and **Song sparrows**, and **Eastern Towhees**. The following **sparrows** were reported only in the counties listed: **Clay-colored** in Mason County (GR, MG, JK, DP); **Fox** in Cabell (ReT, DP), Hampshire (DH), and Randolph (HMy) Counties; **White-crowned** in Mason County (DP, GR, MG, JK); **Savannah** in Jefferson (WS) and Mason (MG, JK, GR, DP) Counties; **Lincoln's** in Greenbrier (RG), Mason (DP, GR, MG, JK), Randolph (RBo), Ritchie (CB), and Wetzel (WJ) Counties; and **Swamp** in Kanawha (RG), Mason (MG, JK, GR, DP), and Nicholas (DP) Counties.

Chats – Bruni Haydl had an unusual visit from a **Yellow-breasted Chat** on September 8 at her home in Charles Town, Jefferson County.

Blackbirds – N. Wade Snyder spotted his first migrating **Bobolink** of the fall on September 27 in Bardane, Jefferson County. West Virginia birders reported sightings of **Eastern Meadowlarks** in Jefferson (WS), Kanawha (RG), Mason (GR, MG, JK, DP), and Tucker (HMy) Counties. **Baltimore Orioles** were observed during September in Jefferson (BH) and Summer (JP) Counties. **Red-winged Blackbirds** were reported in Kanawha (RG), Mason (RG, GR, DP), Ohio (PM), Summers (JP, MW), and Tucker (HMy) Counties, **Brown-headed Cowbird** reports came only from Mason County (GR, MG, JK, DP), while **Rusty Blackbirds** were seen in Cabell (GR), Kanawha (LC), and Mason (DP, GR) Counties. **Common Grackles** were reported in six counties.

Warblers – This fall birders in West Virginia found 31 **warbler** species; it was a good season for diversity. Derek Courtney and Hannah Clipp found the only reported **Connecticut Warblers** during the fall, on September 12, 17, and 19 at Little Indian Creek Wildlife Management Area, Monongalia County, and Derek Courtney saw the season's only reported **Orange-crowned Warblers**, in mid-September and mid-October in Monongalia County. David Patick spotted the only reported **Northern Waterthrush** of the season on October 2 at Ashton Wetlands, Mason County, and along with Michael Griffith and Janet Keating, the only **Cerulean Warbler**, at Ona, Cabell County, on September 18. Wilma Jarrell saw the only **Golden-winged Warbler** of the season, at Fairview Ridge, Wetzel

County, on September 23. Kevin Campbell found a **Swainson's Warbler** on September 7, and spotted a **Yellow Warbler** on September 12, both near his home in Dallison, Wood County. The following **warbler** species listed without contributors were reported in at least seven counties; species reported in six or fewer counties are listed below with the counties and contributors. **Warblers** reported this fall included **Ovenbird** – Cabell (GR, MG, JK, DP), Monongalia (DCo, HC), Wetzel (WJ), and Wood (TB) Counties; **Blue-winged** – Kanawha (HG), Mason (MG, JK), and Wood (JB) Counties; **Black-and-white** – Cabell (DP, MG, JK), Mason MG, JK), Monongalia (DCo), Pendleton (DH), Wetzel (WJ), and Wood (JB) Counties; **Tennessee**; **Nashville** – Cabell (MG), Kanawha (HG), Mason (MG, JK), and Monongalia (DCo) Counties; **Common Yellowthroat**; **Hooded** – Cabell (DP, MG, JK), Kanawha (HG), Mason (MG, JK, DP), Monongalia (DCo, HC), Summers (JP), and Wood (TB) Counties; **American Redstart**; **Cape May**; **Northern Parula** – Cabell (GR, MG,JK DP), Kanawha (LC), Mason (MG, JK), Monongalia (DCo), Summers (JP), and Wood (TB) Counties; **Magnolia**; **Bay-breasted**; **Blackburnian**; **Chestnut-sided** – Cabell (DP, GR, MG, JK), Mason (MG, JK), Monongalia (DCo, HC), DH), Pendleton (DH), Wetzel (WJ), and Wood (JB) Counties; **Blackpoll**; **Black-throated Blue** – Mason (MG, JK), Monongalia (DCo, HC), Preston (LeJ), Summers (JP), Tucker (CR), and Wetzel (WJ) Counties; **Palm**; **Pine**; **Yellow-rumped**; **Yellow-throated** – Cabell (DP, MG, JK), Wetzel (WJ), and Wood (TB) Counties; **Prairie** – Cabell (MG), Kanawha (LC), Marion (AW), Mason (MG, JK, MG), Monongalia (DCo, HC), and Summers (JP) Counties; **Black-throated Green**; **Canada** – Hardy (HMy) and Wood (JB) Counties; and **Wilson's** – Cabell County (GR, MG, JK, DP).

Tanagers, **Cardinals**, **Grosbeaks**, and **Buntings** – **Summer Tanagers** appeared in reports from Cabell (DP), Hardy (HMy), and Wayne (GR) Counties. **Scarlet Tanagers**, **Northern Cardinals**, and **Rose-breasted Grosbeaks** prompted reports from birders in most parts of the state. **Blue Grosbeaks** were spotted in Wetzel (WJ) and Wood (JB) Counties, and **Indigo Buntings** inspired reports only in Monongalia (DCo), Wetzel (WJ), and Wood (JB) Counties.

Contributors to the fall field notes: Jon Benedetti (JB), Randy Bodkins (RBo), Joette Borzik (JBz), Ross Brittain (RBr), Terry Bronson (TB), Cynthia Burkhart (CB), Laura Ceperley (LC), Hannah Clipp (HC), Derek Courtney (DCo), Cynthia Ellis (CE), Sandra Farkas (SF), Donny Good (DG), Hullet Good (HG), LeJay Graffious (LeJ), Richard Gregg (RG), Michael Griffith (MG), Bruni Haydl (BH), Josh Holland (JsH), Diane Holsinger (DH), Wilma Jarrell (WJ), Janet Keating (JK), Paul McKay (PM), Cynthia Mullens (CMu), Herb Myers (HMy), Jack O'Connell (JO), Sharon Ogden (SOg), Matthew Orsie (MO), David Patick (DP), James Phillips (JP), James and Judy Phillips (JJP), Gary Rankin (GR), Casey Rucker (CR), N. Wade Snyder (WS), Rennie Talbert (ReT), Alex Tsiatsos (AT), Mindy Waldron (MW), Andy Weaks (AW), Steven Wilson (SWi), and Lynn Wiseman (LW).

P.O. Box 2
Seneca Rocks, WV 26884
autoblock@frontiernet.net

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REDSTART EDITORIAL POLICY

Original papers in the field of natural history are published in *The Redstart.* Papers are judged on the basis of their contributions to original data, ideas, or interpretations. Scientific accuracy and clarity are most important, and to this end, an advisory board, selected by the editorial staff, will review submitted papers as needed. Papers should be submitted in Word, by e-mail if possible, to autoblock@frontiernet.net or on a CD and sent to the editor; otherwise, papers should be typewritten, double-spaced on one side of the paper only, and sent to the editor at P.O. Box 2, Seneca Rocks, WV 26884.

BROOKS BIRD CLUB MEMBERSHIP

The Brooks Bird Club, Inc. is a nonprofit organization whose objective is to encourage the study and conservation of birds and other phases of natural history. Membership includes subscriptions to *The Redstart* and *Mail Bag* and entitles one to all the privileges offered by the Club. Classes of membership are Student, $20; Individual, $35; Family, $40; Sustaining, $60; Life, $550; Family Life, $700. Checks should be written payable to The Brooks Bird Club and mailed to P.O. Box 4077, Wheeling, WV 26003.

2022 Calendar of Events
The Brooks Bird Club, Inc.

Date	Activity	Place
January	BBC Membership Month	Wheeling, WV
January	Trip to Killdeer Plains (Contact Dick Esker)	
February	Write an article for The Redstart and Mail Bag	
Feb 24-25	Killbuck Marsh (overnight trip — contact Dick Esker)	
March 4-6	Early Spring Meeting (Contact Dick Esker)	North Bend State Park Harrisville, WV
March 12	Waterfowl Field Trip (day trip)	Seneca Lake, OH
April 23	BBC/Three Rivers Bird Club (day trip) (Contact Ryan Tomazin)	Raccoon Creek State Park, PA
May 5-8	Wildflower Pilgrimage	Blackwater Falls State Park, WV
May 14	International Migratory Bird Day	
June 3-11	Foray – Camp Galilee (contact Janice Emrick or Ryan Tomazin)	Terra Alta, WV
August–October	Bird Banding	Dolly Sods, WV
October 28-30	BBC Fall Reunion & Meeting,	Hawk's Nest State Park
	BBC 90th Anniversary (Contact Cindy Slater)	Ansted, WV
November 9-13	Eastern Shore (Contact Cindy Slater)	
Dec. 14–Jan. 5, 2023	Christmas Bird Count	Statewide

Due to the uncertainties of COVID-19 in 2022, please visit the BBC website calendar for updates throughout the year.

BBC FORAYS

2022 Camp Galilee, Terra Alta, Preston County
2023 Camp Horseshoe, Tucker County

SEASONAL FIELD NOTES DUE

Winter: March 15 Spring: June 15 Summer: September 15 Fall: December 15
MAIL TO: Casey Rucker, P.O. Box 2, Seneca Rocks, WV 26884, autoblock@frontiernet.net

ARTICLES FOR THE MAIL BAG DUE

February 15 May 15 August 15 November 15
MAIL TO: Ryan Tomazin, 348 Station St., Apt. 7, Bridgeville, PA 15017, wvwarblers@hotmail.com

http://brooksbirdclub.org

The dates for the 2022 BBC programs may be changed if necessary. Changes will be announced on the web page or in The Mail Bag.

CONTACT INFORMATION

Janice Emrick, emricksj@gmail.com
Larry Helgerman, bobolink1989@gmail.com
Ryan Tomazin, wvwarblers@hotmail.com
Dick Esker, eskerrb@frontier.com
Cindy Slater, mountaingirl127@gmail.com

The Brooks Bird Club
P.O. Box 4077
Wheeling, WV 26003