

SUMMER BIRDS
of the
PARKER'S CREEK WATERSHED

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PREFACE TO THE 2009 WEB EXCERPT

Summer Birds of the Parker's Creek Watershed

This project was begun in 1999 to complete work toward the Certificate in Environmental Studies from what was then the Johns Hopkins University Continuing Education program. I had no science background and little idea of what to do, but embarked upon a study of which bird species could be found in the Parker's Creek watershed in what may be loosely defined as summer. Field work was not conducted with scientific rigor, but I amassed a large amount of data, which I ultimately arranged into tables with varying purposes. I postponed completion of the project for several years and undertook another summer of fieldwork in 2004. I was less experienced than I am now, but if errors were made I am confident they were in not finding all the birds which were present rather than misidentifying those that were observed.

96 species were recorded during those two summers, and I added 9 additional species to my hypothetical list of summer birds. American Woodcock engages in annual courtship displays in the watershed but was not recorded during the study. The eight other species (Pied-billed Grebe, Mute Swan, Cooper's Hawk, American Kestrel, Rock Dove/Pigeon, Common Nighthawk, Chuck-will's-widow, and Brown Creeper) were added because they had been observed in other summers or because they were recorded as either possibly breeding in the watershed or possibly or confirmed to be breeding not very far away according to the first Maryland-DC Breeding Bird Atlas. *Robbins, Chandler S., senior editor and Erik A. T. Bloom, project coordinator. Atlas of the Breeding Birds of Maryland and the District of Columbia. Pittsburgh, PA: University of Pittsburgh Press. 479pp.* American Woodcock is counted among Open Area birds in the study based on my experience of seeing them displaying in fields. They should be considered to be Forest Breeding species.

Excerpts from the original, which is 145 pages, include the following:

Abstract	p. 3
Introduction	p. 4
Results: bird species found on most field trips	p. 5
Tables: field trip records, woods	p. 8
field trip records, open areas	p. 10
field trip records, creek	p. 12
Discussion: bird species of concern identified	p. 14
Tables: bird species of concern, woods	p. 17
bird species of concern, open areas	p. 18
bird species of concern, water	p. 19
Appendix: nesting needs of species of concern	p. 20
Photo credits	p. 27
References	p. 28

ABSTRACT

The primary goal of this project was to obtain information on the occurrence and relative abundance of bird species found during summer in the Parker's Creek watershed in central Calvert County, Maryland. This was done through a series of field observations made in summers 1999 and 2004, with particular attention paid to the various habitats of the watershed and the bird species found therein. There are three main habitat types in the watershed:

Over 75% of the watershed is healthy woodlands. Many species of forest birds are present in high numbers, such as Wood Thrush and several types of wood warblers. The watershed was designated an Audubon Maryland-DC Important Bird Area in June 2006.

About 13% of the watershed is relatively undeveloped open areas, mostly agricultural fields and shrub-scrub habitat, some of it maintained by the Baltimore Gas and Electric Company for its powerlines. Species such as Prairie Warbler, Yellow-breasted Chat, and Field Sparrow can be found in the shrub-scrub areas.

Much of Parker's Creek itself is in a natural state and surrounded by protected property. Its marshes host Wood Ducks and Marsh Wrens in addition to common wetland species. A Bald Eagle nest adjacent to its swamp has been monitored for many years.

The secondary goal of this project was to provide information on these bird species in a form that would be of use to other birders. Data on fieldwork observations in the form of Tables is included for biologists. Textual analysis of findings in regard to bird species and habitats may be of interest to amateurs.

A possible tertiary use of this project is to influence land management policies by providing land managers with information on breeding bird species on their properties, especially those identified as species of concern by various conservation organizations. These organizations' programs are described in the Discussion section and relevant species are identified in Tables organized according to habitat.



Fig. 1, looking south from the mouth of Parker's Creek

INTRODUCTION

The Parker's Creek watershed, located in east central Calvert County, Maryland, is the largest and most diverse undisturbed ecosystem remaining on the western shore of the Chesapeake Bay. Of the watershed's approximately 7321 acres, 5594 are forested, with 80% of the forested area qualifying as Forest Interior Dwelling (FID) habitat. There is little development outside of the town of Prince Frederick. Private and government preservation efforts have protected more than one-third of the watershed, including large woodlands surrounding Parker's Creek. Most of these woodlands are being managed for habitat protection. There are also approximately 200 acres, the powerline right-of-way (ROW) owned by BGE, permanently preserved as shrub-scrub habitat due to the company's management goal of maintaining their utility wires and supports. Parker's Creek and its marshes are surrounded by preserved land and are thus protected to a large degree, though they are susceptible to management practices further upstream.

Concerns have been raised lately about the plight of neotropical migratory landbirds, many of which are losing habitat in their southern wintering grounds, their migration stopovers, and their North American summer breeding grounds due to agricultural practices and development. FID birds, many of which are neotropicals, need large tracts of healthy forests to breed successfully. Other neotropical migrants require shrub-scrub habitat, another type of land subject to change for human use. The Parker's Creek watershed's protected forests and BGE's property provide diverse habitats for two different groups of landbirds. The creek itself, its associated marshes, beach, and the adjacent Chesapeake Bay are host to many species of waterbird.

In 1997 I collaborated with other area birders to create a bird checklist for the American Chestnut Land Trust, owners and/or managers of much of the above-mentioned protected woodlands. The product of the 1997 effort and its subsequent 2002 revision was a checklist of bird sightings on or near the property, based on personal observations. Those who bird frequently in the area have a good sense of what species are present, but there had been no systematic and documented watershed-wide inventory of birds, though seasonal bird counts and other tallies have been undertaken.

It was my intention to conduct an inventory of watershed birds which would provide information on species observed, relative abundance of these species, and in what habitat(s) the observation took place. Initially I had hoped to gather data for an entire year, but reality necessitated a time limit of one summer. Since summer is nesting time, this information may be of interest to biologists and others involved in breeding bird surveys, such as the Second Maryland / DC Breeding Bird Atlas Project undertaken in 2002 through 2006 by the Maryland Ornithological Society. Summer is the time most people engage in outdoor recreation, so the species accounts included as an appendix are intended for anyone who might enjoy learning about birds they are likely to see and or hear. Summer is also when much outdoors work takes place, so land managers might find this information useful when planning maintenance and other potentially disruptive activities.

RESULTS – “COMMON” BIRD SPECIES

Bird Species of Forested Areas

bird species observed on most forest field trips – who is likely to be found in the woods

Fifteen field trips, of the transect (walk-through) type, took place mostly in forests during the two study summers. Listing of species and individuals took place from the beginning of each walk, so some open area birds were tallied on these field trips, but most records are from the woods. Some bird species were recorded throughout the forest, and some only in the forest interior. Most of these woods walks took place on public-access property owned and/or managed by ACLT. A few were on limited-access or private property.

Table 1 lists observations from the 15 forest field trips plus the number and percentage of trips on which a given species was recorded.

Eight bird species were observed on every one of the 15 forest field trips: Red-bellied Woodpecker, Acadian Flycatcher, Red-eyed Vireo, Carolina Wren, Wood Thrush, Northern Parula, Hooded Warbler, and Scarlet Tanager. Four more species were observed on all but one forest field trip: Eastern Wood-pewee, Tufted Titmouse, Ovenbird, and Northern Cardinal.



Fig. 2, Carolina Wren

Nine species were recorded on 10 (66.6%) or more forest field trips. Of these, Downy Woodpecker, Yellow-throated Vireo, American Redstart, and Kentucky Warbler are forest-breeding species. Common Yellowthroat, primarily an open area breeder, was recorded in all habitat types; some records from these forest field trips were from bottomland and some from edge habitat. Other open area species recorded ten or more times on forest field trips include White-eyed Vireo and Indigo Bunting, often heard from the forest edge, Mourning Dove, and Crows of either species.

Bird Species of Open Areas

bird species observed on most open area field trips – who is likely to be found in the open

During the two study summers, 17 field trips took place predominantly in open areas. Six of these were point counts at stops along the road and eleven were transects. There is very little land in this habitat category in the Parker's Creek watershed open to the public. The few large farm fields are private property, as is the BGE right-of-way corridor. Someone wishing to access this habitat type is limited to intersections of public roads with agricultural fields and/or the BGE ROW and the few small fields and open areas on and alongside some ACLT land.

Table 2 lists observations from the 17 open areas field trips plus the number and percentage of trips on which a given species was recorded.

Despite the great diversity of bird species in open areas, there was only one kind of bird that was recorded on every field trip in this habitat type, and that was one or other of the Crow species. American Crow was observed on 11 field trips, Fish Crow on 3, and indeterminate Crow species on 7.

Fourteen bird species were recorded on more than 75% of open area field trips. Species in this category which also breed in open areas are Indigo Bunting (present on 16 of 17 trips), Eastern Towhee and American Goldfinch (15 trips), Mourning Dove, Chipping Sparrow, and Field Sparrow (14 trips), and White-eyed Vireo, Carolina Wren, and Common Yellowthroat (13 trips). Red-eyed Vireo, a forest breeder, was recorded on 16 of 17 trips. Other forest breeding birds recorded often in open areas are Blue Jay, which also uses open and suburban habitat for nesting (15 trips), Tufted Titmouse and Northern Parula (14 trips), and Eastern Wood-pewee (13 trips). The number of forest breeding birds recorded in open areas is probably more a factor of the small size of those areas, their proximity to forests, and the species' distinctive voices rather than the birds' presence in the open.



Fig.3, Indigo Bunting

Bird Species of Parker's Creek and Vicinity

bird species observed on most creek field trips – who is likely to be found on the creek

Nine field trips were made on the creek during the study summers, in all cases transects made by paddling in and out of the creek by kayak. Five of these trips were in daytime. Observations from one other daytime creek visit (not intended as a field trip) were noted when two uncommon species were seen, Least Bittern and Snowy Egret, but those records are not included in the following paragraphs as one of the 5 daytime trips.

Table 3 presents data from creek / marsh field trips according to whether they took place in daytime or at night and including the number and percentage of trips on which a given species was recorded.

Four creek field trips started at sunset and lasted until well after dark. One additional nighttime creek field trip was made in summer 1999 for the sole purpose of recording rails. This trip is not included as one of the four night creek field trips but is mentioned in the context of rails.

Nine bird species were observed on all 5 of the daytime creek field trips. Six of these species were over or in the water or marsh: Great Blue Heron, Wood Duck, Osprey, Belted Kingfisher, Common Yellowthroat, and Red-winged Blackbird. Three species were heard calling from the wooded shore or were observed in non-marsh vegetation: Carolina Wren, Wood Thrush, and Indigo Bunting.

Ten species were recorded on 4 out of 5 (80%) daytime creek field trips. Half were over or in the water or marsh and half



Fig.4, Red-winged Blackbird

were heard calling from the wooded shore. The water-specific birds recorded on 4 trips were Green Heron, Bald Eagle, Purple Martin (present as a forager over the creek), Northern Rough-winged Swallow, and Marsh Wren. Terrestrial bird species heard from the shore on 80% of the trips were Eastern Wood-pewee, Acadian Flycatcher, White-eyed Vireo, Red-eyed Vireo, and Tufted Titmouse.

Eight bird species were recorded on 3 of the 4 (75%) regular nighttime field trips on Parker's Creek. These birds were all observed around or not long after sunset; none were observed after it was completely dark. Seven of these species were present because of the water: Great Blue Heron, Chimney Swift, Belted Kingfisher, Purple Martin, Northern Rough-winged Swallow, Barn Swallow, and Marsh Wren. The eighth of these species, Eastern Wood-pewee, heard calling from shore, is the only one observed this frequently on nighttime creek field trips whose presence is probably not directly due to the creek.

In summer 1999, Whip-poor-wills were heard on both nighttime creek field trips. They were calling from the woods on the south side of the creek near the old bridge pilings and were recorded as a forest observation, though access was from the water. On the two night creek field trips in 2004, Whip-poor-wills were not heard.

Only a few species were observed in total darkness. In both study summers, one Barred Owl was heard calling in the vicinity of the creek long after sunset. Black, Clapper, and Virginia Rails were heard in summer 1999 from late dusk, when visibility was still barely possible, to absolute darkness. In summer 2004 only a single Virginia Rail was heard, well after dark.



Fig. 5, Open Area Habitat



Fig. 6, Parker's Creek



Fig. 7, Woods

Table 1. Field Trips in Woods

species	species	#3	#4	#7	#9	#11	#13	#14	#16	#18	#1	#3	#5	#9	#12	#16	#	trips	%
																			rounded
1	Pied-billed Grebe																		
2	Least Bittern																		
3	Great Blue Heron			4					1	1							3	20%	
4	Great Egret																		
5	Snowy Egret																		
6	Green Heron																		
7	Black Vulture																		
8	Turkey Vulture								2	1	3				1	2	5	33%	
9	Canada Goose			3													1	13%	
10	Mute Swan																		
11	Wood Duck			1	1												2	20%	
12	Mallard																		
13	Osprey								1			1				1	3	20%	
14	Bald Eagle								1				1			1	3	20%	
15	Cooper's Hawk																		
16	Red-shouldered Hawk	2															1	7%	
17	Red-tailed Hawk									2							1	7%	
18	American Kestrel																		
19	Wild Turkey			3	1	2											3	20%	
20	Northern Bobwhite																		
21	Black Rail																		
22	Clapper Rail																		
23	Virginia Rail																		
24	Killdeer																		
25	Spotted Sandpiper																		
26	American Woodcock																		
27	Rock Dove																		
28	Mourning Dove		2	2		2		2	1	4	4	2	1	9			10	67%	
29	Yellow-billed Cuckoo							1		2		2	2	1	1	1	7	47%	
30	Eastern Screech-Owl																		
31	Great Horned Owl				1												1	7%	
32	Barred Owl																		
33	Common Nighthawk																		
34	Chuck-will's-widow																		
35	Whip-poor-will																		
36	Chimney Swift								1								1	7%	
37	Ruby-throated Hummingbird								3	1	1	1			1		5	33%	
38	Belted Kingfisher													1			1	7%	
39	Red-bellied Woodpecker	2	1	8	2	2	2	2	1	1	3	2	2	2	2	2	15	100%	
40	Downy Woodpecker	1	1	4	2			2		1	1	1	1	1		3	11	73%	
41	Hairy Woodpecker		1	1			2									2	4	27%	
42	Northern Flicker																		
43	Pileated Woodpecker	1		2	1			1		1		1		1		1	8	53%	
44	Eastern Wood-pewee	5	2	6	1	1		4	1	5	4	2	4	1	1	4	14	93%	
45	Acadian Flycatcher	5	4	14	5	5	4	5	2	7	8	4	4	6	6	7	15	100%	
46	Willow Flycatcher																		
47	Eastern Phoebe														1		1	7%	
48	Great Crested Flycatcher		1	3					1		1						4	27%	
49	Eastern Kingbird					2				4				1			3	20%	
50	White-eyed Vireo	1	1	7	1	1	1	3	4	7	2	3		2		2	13	87%	
51	Yellow-throated Vireo	2		4	1	2		2		3	1		1	1	1		10	67%	
52	Red-eyed Vireo	7	5	31	5	6	8	9	6	16	12	10	5	9	14	12	15	100%	
53	Blue Jay	7		5					2	1		1	1			3	7	47%	
54	American Crow			3	1		2	1	6	1	4	3	2	5		3	11	73%	
55	Fish Crow														3		1	7%	
	Crow Species															1	1	7%	

Table 1. Field Trips in Woods

species	species	#3	#4	#7	#9	#11	#13	#14	#16	#18	#1	#3	#5	#9	#12	#16	# trips	%
																		rounded
56	Purple Martin																	
57	Northern Rough-winged Swallow								1								1	7%
58	Barn Swallow								1								1	7%
59	Carolina Chickadee			1	1			3	2		4		1			1	7	47%
60	Tufted Titmouse	3	2	15	3	2	3	3	4	7	9	4	3		4	5	14	93%
61	White-breasted Nuthatch							1	1								2	13%
62	Brown Creeper																	
63	Carolina Wren	1	1	4	1	1	2	3	8	7	3	4	2	4	2	4	15	100%
64	House Wren		1														1	7%
65	Marsh Wren																	
66	Blue-gray Gnatcatcher	3	2	3		3		4	1		6	3				4	9	69%
67	Eastern Bluebird			1				2	1								3	20%
68	Wood Thrush	5	4	36	9	8	3	4	8	14	8	6	7	7	6	7	15	100%
69	American Robin								8							3	2	13%
70	Gray Catbird																	
71	Northern Mockingbird								1			1					2	13%
72	Brown Thrasher		1		1			2	4	1	1	1					7	47%
73	European Starling																	
74	Cedar Waxwing											8					1	7%
75	Northern Parula	9	2	10	3	6	3	3	7	7	8	6	4	9	4	4	15	100%
76	Yellow Warbler						1										1	7%
77	Yellow-throated Warbler		1	2				2		1	3						5	33%
78	Pine Warbler		1	2	1	1		2	1	2				1			8	53%
79	Prairie Warbler									2							1	7%
80	Black-and-white Warbler			1													1	7%
81	American Redstart			5	1	2	1	2	1		2	3	1	3	1	3	12	80%
82	Prothonotary Warbler																	
83	Worm-eating Warbler		2	2		1	2			2	1			3			7	47%
84	Ovenbird	6	6	19	3	6	2	4	2	6	8	4	3	6		4	14	93%
85	Louisiana Waterthrush	3	2	2		1							2				5	33%
86	Kentucky Warbler	1		2	3	3	1		2	1	3	2	2	2	3	3	13	87%
87	Common Yellowthroat	1		6	2	2		1	2	9	2	2		1		3	11	73%
88	Hooded Warbler	2	2	10	7	5	2	2	3	6	6	3	2	6	4	5	15	100%
89	Yellow-breasted Chat				1			1	4	9				1			5	33%
90	Summer Tanager		1	1		1		2		4							5	33%
91	Scarlet Tanager	5	1	8	1	5	3	5	1	5	2	5	2	2	1	3	15	100%
92	Eastern Towhee					1		1	1	5				2			5	33%
93	Chipping Sparrow							1	6				1		1	3	5	33%
94	Field Sparrow									13	1			1			3	20%
95	Song Sparrow																	
96	Northern Cardinal		2	7	9	1	4	2	14	3	5	4	3	3	2	6	14	93%
97	Blue Grosbeak					1			1	3	1	1					5	33%
98	Indigo Bunting		3	6	7	1		3	19	13	3	7	3	3	5	6	13	87%
99	Red-winged Blackbird			10		2			5	5		1		4		4	7	47%
100	Common Grackle			3		2		1	13		1	6		1			7	47%
101	Brown-headed Cowbird			1		3			9		2	2	2			2	7	47%
102	Orchard Oriole									2				2			2	13%
103	House Finch		1		1				10		1				2		5	33%
104	American Goldfinch		1	6	4			2	2	6		1			1		8	53%
105	House Sparrow																	
	# of species	21	28	42	30	32	18	35	45	41	34	34	26	32	23	33		
	# of individuals	72	54	264	80	82	46	88	175	191	124	107	62	101	67	115		

Table 2. Field Trips in Open Areas

sp	species	#12	#16	#17	#18	#19	#22	#24	#6	#8	#10	#13	#14	#15	#18	#19	#21	#22	# trips	%
																				rounded
1	Pied-billed Grebe																			
2	Least Bittern																			
3	Great Blue Heron		1		1											1			3	18%
4	Great Egret																			
5	Snowy Egret																			
6	Green Heron																			
7	Black Vulture												3				1	1	3	18%
8	Turkey Vulture		2		1	2	1		1	1	1	3	1		1		3	2	12	71%
9	Canada Goose														4				1	6%
10	Mute Swan																			
11	Wood Duck																			
12	Mallard																			
13	Osprey		1														1	1	3	18%
14	Bald Eagle		1														1	3	3	18%
15	Cooper's Hawk																			
16	Red-shouldered Hawk										1				1				2	12%
17	Red-tailed Hawk	1		1	2	1		2				1			1		1	1	9	53%
18	American Kestrel																			
19	Wild Turkey																			
20	Northern Bobwhite					1													1	6%
21	Black Rail																			
22	Clapper Rail																			
23	Virginia Rail																			
24	Killdeer	1																	1	6%
25	Spotted Sandpiper																			
26	American Woodcock																			
27	Rock Dove																			
28	Mourning Dove	5	1	1	4	8	2	8		1		4	1		5	4	2	2	14	82%
29	Yellow-billed Cuckoo	1			2	1	1		1			1			2	1	1	2	10	59%
30	Eastern Screech-Owl																			
31	Great Horned Owl																			
32	Barred Owl																			
33	Common Nighthawk																			
34	Chuck-will's-widow																			
35	Whip-poor-will																			
36	Chimney Swift	5	1			1	8						5		3			7	7	41%
37	Ruby-throated Humbird	1	3		1	1	2	2				1				2	2	2	10	59%
38	Belted Kingfisher					1													1	6%
39	Red-bellied Woodpecker	1	1		1	2	1	1				2	1		2			1	10	59%
40	Downy Woodpecker	2			1	3	1	3				4			3		1	1	9	53%
41	Hairy Woodpecker					1													1	6%
42	Northern Flicker						1	1											2	12%
43	Pileated Woodpecker	2			1		1					1					1	1	6	35%
44	Eastern Wood-pewee	2	1	3	5	6	2	2		1		3			2	1	5	8	13	76%
45	Acadian Flycatcher	1	2		7	8	1			1		3			8	2	2	2	11	65%
46	Willow Flycatcher															1			1	6%
47	Eastern Phoebe	1				1	1	2			1	2		1		1			8	47%
48	Great Crested Flycatcher		1	1		3									1				4	24%
49	Eastern Kingbird	4		1	4	8		5				7				1	1		8	47%
50	White-eyed Vireo	2	4		7	10		1	1	1	1	5			5	12	3	3	13	76%
51	Yellow-throated Vireo				3	1				1					1			1	5	29%
52	Red-eyed Vireo	1	6		16	7	3	2	1	1	2	6	5	1	11	2	3	6	16	94%
53	Blue Jay	1	2	1	1	2	3	1		1	3	3	1		6	2	1	1	15	88%
54	American Crow	2	6		1	1	1		2	1		1		1			1	1	11	65%
55	Fish Crow			3			1	5											3	18%
	Crow Species					1			1		10	2	1		3	11			7	41%

Table 2. Field Trips in Open Areas

sp	species	#12	#16	#17	#18	#19	#22	#24	#6	#8	#10	#13	#14	#15	#18	#19	#21	#22	# trips	%
56	Purple Martin						2								6			1	3	18%
57	No. Rough-winged Swallow	1													1				2	12%
58	Barn Swallow		1	1			1					2	4		6	2			7	41%
59	Carolina Chickadee		2				1				2					1		1	5	29%
60	Tufted Titmouse		4		7	9	2	1	1	1	2	4	1		5	3	2	4	14	82%
61	White-breasted Nuthatch																	2	1	6%
62	Brown Creeper																			
63	Carolina Wren		8	1	7	12	2	1	1		1	6			6	1	4	1	13	76%
64	House Wren					1													1	6%
65	Marsh Wren																			
66	Blue-gray Gnatcatcher		1			3	1			1		2			1	2	5	3	9	53%
67	Eastern Bluebird	3	1	3		8										4			5	29%
68	Wood Thrush	2	8		14	9	2	1		1		1			4	3		1	11	65%
69	American Robin	3	8			8	6	1			3		7		3	3			9	53%
70	Gray Catbird					1						1				4	1	1	5	29%
71	Northern Mockingbird	2	1	1		5	4	6			3	5	7		1	2	1		12	71%
72	Brown Thrasher	2	4	1	1					2		2				2		2	8	47%
73	European Starling	11					4	25				4	1		1				6	35%
74	Cedar Waxwing	3											3		1			2	4	24%
75	Northern Parula	1	7		7	4	1		1	1	2	3	1	1	3	2		1	14	82%
76	Yellow Warbler					1													1	6%
77	Yellow-throated Warbler				1				1						1				3	18%
78	Pine Warbler		1		2							1				1			4	24%
79	Prairie Warbler	3			2	1						8			3	3	3	2	8	47%
80	Black-and-white Warbler																			
81	American Redstart		1			1													2	12%
82	Prothonotary Warbler																			
83	Worm-eating Warbler				2	1										1	2		4	24%
84	Ovenbird		2		6	2							1		1				5	29%
85	Louisiana Waterthrush																			
86	Kentucky Warbler		2		1	1						1						1	5	29%
87	Common Yellowthroat	1	2		9	18		4	1	2		12		1	6	6	6	3	13	76%
88	Hooded Warbler		3		6	2						2					1		5	29%
89	Yellow-breasted Chat	3	4	2	9	12		3			1	6			3	5			10	59%
90	Summer Tanager	2		1	4	3	1	2		1		2					1	1	10	59%
91	Scarlet Tanager	2	1		5	2	1			2	1				5	2			9	53%
92	Eastern Towhee	2	1	2	5	13	1	4		1	2	7		1	4	3	3	3	15	88%
93	Chipping Sparrow	4	6	3		6	5	3	3	1	4	6	2	1	10	2			14	82%
94	Field Sparrow	3		5	13	23	2	6		1	2	13	1		1	2	5	6	14	82%
95	Song Sparrow						1						3						2	12%
96	Northern Cardinal		14		3	6	2	2	1			7	8		7	3	2	4	12	71%
97	Blue Grosbeak	3	1		3	3		1		1	4			1	6	3	2	3	12	71%
98	Indigo Bunting	4	19	5	13	28	2	10	2	2		25	4	2	16	12	10	8	16	94%
99	Red-winged Blackbird		5		5	1		3								2	1		6	35%
100	Common Grackle	3	13			11	2	3	2		1								7	41%
101	Brown-headed Cowbird	3	9	1		9	2						3		20	1			8	47%
102	Orchard Oriole				2	4						5			2	1			5	29%
103	House Finch	3	10	1		8	7				3	2	8	2		8			10	59%
104	American Goldfinch	1	2	8	6	4	3	5	1	2		4		2	3	2	5	4	15	88%
105	House Sparrow						7						5		2				3	18%
	# of species	39	45	21	41	55	40	31	16	23	21	42	24	11	45	42	34	40		
	# of individuals	97	175	46	191	290	92	116	21	28	50	180	77	14	187	127	84	100		

Table 3. Field Trips in Creek - Day / Night

			daytime					# trips	%		night				# trips	%
species	species	#6	#8	#21	#7	#20				#10	#15	#4	#11			
1	Pied-billed Grebe															
2	Least Bittern		2					1	20%	2	2				2	50%
3	Great Blue Heron	5	2	1	2	2		5	100%	1		2	2		3	75%
4	Great Egret					2		1	20%							
5	Snowy Egret															
6	Green Heron	1	1	1		1		4	40%		1				1	25%
7	Black Vulture															
8	Turkey Vulture	3			2	5		3	60%							
9	Canada Goose	4	2		15			3	60%			33			1	25%
10	Mute Swan															
11	Wood Duck	1	9	9	6	1		5	100%							
12	Mallard		2					2	40%				2		1	25%
13	Osprey	1	2	1	1	2		5	100%	1		2			2	50%
14	Bald Eagle	3		3	2	3		4	80%			5	1		2	50%
15	Cooper's Hawk															
16	Red-shouldered Hawk															
17	Red-tailed Hawk					1		1	20%							
18	American Kestrel															
19	Wild Turkey															
20	Northern Bobwhite															
21	Black Rail									1	2				2	50%
22	Clapper Rail										1				1	25%
23	Virginia Rail										1		1		2	50%
24	Killdeer															
25	Spotted Sandpiper					2		1	20%							
26	American Woodcock															
27	Rock Dove															
28	Mourning Dove				2			1	20%							
29	Yellow-billed Cuckoo				1	1		2	40%							
30	Eastern Screech-Owl															
31	Great Horned Owl															
32	Barred Owl										1		1		2	50%
33	Common Nighthawk															
34	Chuck-will's-widow															
35	Whip-poor-will									3	3				2	50%
36	Chimney Swift		3	1	4			3	60%	2	5	2			3	75%
37	Ruby-throated Hummingbird	1				2		2	40%							
38	Belted Kingfisher	1	2	1	4	4		5	100%	1	1	1			3	75%
39	Red-bellied Woodpecker															
40	Downy Woodpecker					1		1	20%							
41	Hairy Woodpecker															
42	Northern Flicker															
43	Pileated Woodpecker															
44	Eastern Wood-pewee	3		1	2	2		4	80%		1	5	1		3	75%
45	Acadian Flycatcher	1		1	3	2		4	80%			1			1	25%
46	Willow Flycatcher		1					1	20%							
47	Eastern Phoebe															
48	Great Crested Flycatcher															
49	Eastern Kingbird															
50	White-eyed Vireo	2	4		2	2		4	80%	1	1				2	50%
51	Yellow-throated Vireo	1		1	3			3	60%							
52	Red-eyed Vireo	2		1	2	1		4	80%							
53	Blue Jay					2		1	20%							
54	American Crow															
55	Fish Crow															

Table 3. Field Trips in Creek - Day / Night

		daytime					# trips	%	night				# trips	%
species	species	#6	#8	#21	#7	#20			#10	#15	#4	#11		
	Crow Species	1			1		2	40%						
56	Purple Martin		1	1	4	1	4	80%		2	7	12	3	75%
57	Northern Rough-winged Swallow	3	1	1	2		4	80%	3	2		10	3	75%
58	Barn Swallow			1			1	20%		6	6	26	3	75%
59	Carolina Chickadee													
60	Tufted Titmouse	1	1		2	2	4	80%						
61	White-breasted Nuthatch													
62	Brown Creeper													
63	Carolina Wren	1	2	2	3	1	5	100%	1				1	25%
64	House Wren													
65	Marsh Wren	3	2		19	4	4	80%	3		6	9	3	75%
66	Blue-gray Gnatcatcher			1	3		2	40%						
67	Eastern Bluebird													
68	Wood Thrush	2	1	1	5	1	5	100%			4	1	2	50%
69	American Robin													
70	Gray Catbird													
71	Northern Mockingbird													
72	Brown Thrasher		1				1	20%						
73	European Starling													
74	Cedar Waxwing													
75	Northern Parula	2			2		2	40%						
76	Yellow Warbler													
77	Yellow-throated Warbler			1			1	20%						
78	Pine Warbler													
79	Prairie Warbler													
80	Black-and-white Warbler													
81	American Redstart										1		1	25%
82	Prothonotary Warbler				1		1	20%						
83	Worm-eating Warbler													
84	Ovenbird	1		1	3		3	60%						
85	Louisiana Waterthrush			1			1	20%						
86	Kentucky Warbler			1			1	20%	1				1	25%
87	Common Yellowthroat	3	4	5	21	1	5	100%	3	3	10	7	4	100%
88	Hooded Warbler				1		1	20%						
89	Yellow-breasted Chat		1				1	20%						
90	Summer Tanager	1					1	20%						
91	Scarlet Tanager	2		1	1		3	60%			1		1	25%
92	Eastern Towhee								1				1	25%
93	Chipping Sparrow													
94	Field Sparrow													
95	Song Sparrow													
96	Northern Cardinal	3	2			1	3	60%	1				1	25%
97	Blue Grosbeak													
98	Indigo Bunting	5	1	1	5	2	5	100%		1	3		2	50%
99	Red-winged Blackbird	12	11	12	52	6	5	100%	6	12	15	16	4	100%
100	Common Grackle		2		3		2	40%		3			1	25%
101	Brown-headed Cowbird	1					1	20%						
102	Orchard Oriole	1					1	20%						
103	House Finch													
104	American Goldfinch	1				2	2	40%						
105	House Sparrow													
	# of species	31	24	25	32	28			16	18	17	13	4	
	# of individuals	72	60	51	179	57			31	48	104	89		

DISCUSSION – BIRD SPECIES OF CONCERN

Many of the bird species found in the Parker's Creek watershed are species of concern as identified by various bird conservation organizations. Bird species which were not recorded during the study but which either have been recorded in the watershed or may be present in the watershed are included in the following discussion. These species are as follows:

- Pied-billed Grebe, seen other summers and with young in 2005;
- American Woodcock, presumed present based on annual courtship displays;
- Brown Creeper, not uncommon in winter and possibly present in summer according to the first *Atlas of the Breeding Birds of Maryland and the District of Columbia*;
- Chuck-will's-widow, formerly common but no longer observed;
- Swainson's Warbler, one individual observed in May 2005 (within safe dates) considered to be migrant, but included here for the purpose of comparison.

A Guide to the Conservation of Forest Interior Dwelling Birds in the Chesapeake Bay Critical Area (Jones and co-authors, 2000) contains a list of 25 FIDS. Sixteen of these species are fairly common summer residents of the watershed and 3 more species have been observed in small numbers (Black-and-White Warbler, Prothonotary Warbler, and Whip-poor-will). The 2005 visiting Swainson's Warbler is also a FID, as is the study-unrecorded Brown Creeper. The list of FIDS additionally designates certain species as being "highly-area sensitive" and vulnerable to habitat degradation; 7 watershed species, plus Swainson's and Black-and-white Warblers and Brown Creeper, are in this category. http://www.dnr.state.md.us/education/envirothon/wildlife/criticalareareg_FIDS.pdf

National Audubon's Important Bird Areas (IBA) Program provides another perspective on bird species of the Parker's Creek Watershed. In its November 2005 criteria for site selection Category MD-DC 1: Sites important to bird species at risk, species are ranked according to three levels: Severely at risk, Highly at risk, and At risk. The Black Rail, recorded only in summer 1999, is in the "severely at risk" category, as is the Swainson's Warbler, not recorded in the study but represented by the one individual in late spring 2005. Pied-billed Grebe, not recorded in the study but observed in other summers, is in the "highly at risk" category. Fourteen possible watershed bird species are in the "at risk" category, 6 with no or few records during the study but 8 (Bald Eagle, Wood Thrush, and six woods warblers) with many. <http://www.audubon.org/bird/IBA/>

The IBA criteria for site selection Category MD-DC 2: Sites containing assemblages of species characteristic of a representative, rare, threatened, or unique habitat, lists "Characteristic bird species of major habitat types in Maryland and DC". Under the habitat category of "Piedmont and Coastal Plain Forests", 22 of the 27 "indicator" species have been or could be observed in the watershed, including the 2005 visiting Swainson's Warbler and Brown Creeper. In the category of "Shrubland and Early Successional Habitats", 8 of the 14 species listed were recorded during the study and a 9th, American Woodcock, is presumed to be present based on its annual late-winter courtship displays. Five of 19 species listed either under "Freshwater Marsh" or "Saltmarsh" were recorded

during the study and a 6th, Pied-billed Grebe, was present other summers, including an observation with young in 2005.

The North American Breeding Bird Survey, Results and Analysis 1966–2004 (Sauer and co-authors, 2005) offers a wealth of data on population trends of bird species by region or state over different time periods. According to their information, 25 of the watershed's bird species have experienced significant decline in Maryland in the period since 1966. Statistics from this study for more recent dates show that population losses are being reversed among some of these species, but the longer perspective gives a better idea of overall population changes. 13 of these 25 species appear in other lists of concern and are included in the following Tables. The 11 species that do not appear on other lists of concern but whose populations are in significant decline for that period are: Yellow-billed Cuckoo, Chimney Swift, Northern Flicker, Eastern Wood-pewee, Eastern Kingbird, Blue Jay, Barn Swallow, Northern Mockingbird, European Starling, Common Yellowthroat, Common Grackle, and House Sparrow. <http://www.pwrc.usgs.gov/BBS/>

The Natural Heritage Program of the Maryland Department of Natural Resources has prepared a Wildlife Diversity Conservation Plan which identifies "Species of Greatest Conservation Need". The list of species is based on the department's assessment as well as concerns of other entities such as the United States Fish and Wildlife Service and Partners in Flight. The plan uses 22 categories under which a species can be "listed". Thirty-nine of the watershed's possible summer bird species, including Swainson's Warbler, appear on the conservation plan list under up to 7 of the categories of concern. http://dnr.maryland.gov/wildlife/divplan_background.asp

The Maryland Department of Natural Resources also maintains lists of Rare, Threatened, and Endangered Species, based on global and state ranking systems which indicate a given species' status as to population strength and threats to its future success. Six of the watershed's possible summer bird species appear on this list along with the Swainson's Warbler. All are very uncommon sightings with the exception of the Bald Eagle. <http://dnr.maryland.gov/wildlife/espaa.asp>

The United States Fish and Wildlife Service's document, *Birds of Conservation Concern 2002 (BCC 2002)*, is intended to identify bird species "in greatest need of conservation action" as a means of achieving the service's goal of conserving avian diversity and attempting to prevent species' status from deteriorating to federal listing as threatened or endangered. Bird species of concern are listed under different categories, from small to larger regions and nationally. Of 32 species listed for Bird Conservation Region 30 (New England / Mid-Atlantic Coast), 7 were recorded in the study. The larger USFWS Region 5 (Northeast Region) lists 36 species of concern, 6 of which were recorded in the study along with Swainson's Warbler. The National list contains 131 species, including 9 recorded or possible watershed summer birds plus Swainson's Warbler. <http://www.fws.gov/migratorybirds/reports/BCC2002.pdf>

The United States Fish and Wildlife Service's Division of Bird Habitat Conservation published a list of 341 neotropical migratory bird species found in North America. Their website defines a Nearctic-neotropical migratory bird species as "a species of birds, all or part of whose populations breed north of the Tropic of Cancer and winter south of that

line”. Both *nearctic* and *neotropical* refer to the Western Hemisphere, the “new” world, with the nearctic the northern faunal region and neotropical the southern. The boundary between these regions is considered by the American Ornithologists’ Union to be the southern boundary of the continental United States, with Baja California and Bermuda included in the nearctic. Others extend it further south to the northern edge of Mexico’s rain forests. Since the definition includes bird species “all or part of whose populations”, individuals of some species may remain in North America for the winter and merely move south within the continent after nesting while others of the same species migrate further south to the tropics.

About 2/3 of summer watershed bird species are classified as neotropical migratory bird species: 65 of the 96 bird species recorded in the study and an additional 5 of the total 105 possible watershed summer species. Not all neotropical migratory bird species are considered to be threatened, but because many are at risk in their nesting and/or wintering grounds, this category is included in the following charts of birds of concern.

National Audubon’s *State of the Birds* report of 2002 includes a watchlist with bird species divided into three color-coded categories. Our spring 2005 visiting Swainson’s Warbler is in the red category, indicating a high level of concern, as is Black Rail, recorded twice in summer 1999. Seven watershed species are in the yellow category, indicating moderate concern. (updated 2009) <http://stateofthebirds.audubon.org/>

Tables on the following pages (p. 17 – 19) list all watershed species appearing in the above-mentioned categories of concern. Lists are organized according to breeding habitat, based on references mentioned above. The list for forest-breeding bird species includes columns representing FID status and additional status as a FID species especially sensitive to disturbance. All lists have columns for Audubon’s IBA program’s risk status (S = severely, H = high, A = at risk), IBA indicator species, BBS (Breeding Bird Survey) species in significant decline in Maryland in the period 1966 – 2004, Maryland DNR’s Species of Greatest Conservation Need, Maryland DNR’s list of Rare, Threatened, and Endangered Species, the USFWS BCC (Birds of Conservation Concern) lists for three regional levels (BCR 30, region 5, and national), neotropical migrant status, and Audubon’s *State of the Birds* WatchList 2002.

There is some redundancy in these categories. For example the Maryland Wildlife Diversity Plan list of species of greatest conservation need is based in part on findings by USFWS’s Birds of Conservation Concern reports. Also, these lists are far from exhaustive; many more conservation entities exist with similar designations.

Also included in the lists are adjusted total individuals of each species observed in the two study summers and the maximum number of individuals recorded in any one day in each summer.



Fig. 8, Least Bittern

	species	FID	FID esp.sens	IBA at risk	IBA rep. sp.	BBS ↓↓↓	DNR div. pl	DNR R,T,E	FWSBCC BCR 30	FWSBCC region 5	FWSBCC nat'l	NTMB	watch list	adj 99	adj 04	99 max day	04 max day
1	Red-shouldered Hawk	X	X		X		X							2	2	2	1
2	Barred Owl	X	X		X		X							1	1	1	1
3	Chuck-will's-widow			A			X				X	X		*	*	*	*
4	Whip-poor-will	X		A	X	X	X	X	X	X	X	X		3	0	3	0
5	Hairy Woodpecker	X			X		X							5	2	2	2
6	Pileated Woodpecker	X			X		X							10	5	2	1
7	Acadian Flycatcher	X			X		X					X		55	49	14	8
8	Yellow-throated Vireo	X			X		X					X		16	9	4	3
9	Red-eyed Vireo	X			X	X	X					X		96	89	31	14
10	Brown Creeper	X	X		X		X							*	*	*	*
11	Wood Thrush	X		A	X	X	X		X	X	X	X	yellow	103	48	36	8
12	Northern Parula	X			X		X					X		55	43	10	8
13	Black-and-white Warbler	X	X		X	X	X					X		1	0	1	0
14	American Redstart	X	X		X		X					X		13	13	5	3
15	Prothonotary Warbler	X		A	X		X				X	X	yellow	0	1	0	1
16	Worm-eating Warbler	X	X	A	X		X		X	X	X	X	yellow	10	7	2	3
17	Swainson's Warbler	X	X	S	X		X	X		X	X	X	red	*	*	*	*
18	Ovenbird	X			X		X					X		51	23	19	8
19	Louisiana Waterthrush	X	X	A	X		X				X	X		9	6	3	2
20	Kentucky Warbler	X	X	A	X	X	X		X	X	X	X	yellow	14	13	3	3
21	Hooded Warbler	X	X		X		X					X		37	27	10	6
22	Summer Tanager				X	X	X					X		15	3	4	2
23	Scarlet Tanager	X			X		X					X		38	18	8	5
	totals	21*	10*	8	22*	6	23*	2*	4	5*	8*	18*	5*				
	* includes Chuck-will's-widow, not recorded in study, historically present																
	Swainson's Warbler, not recorded in study, present May '05																

Table 4. Parker's Creek Watershed
Forest Bird Species
of Interest and/or Concern

A = at risk, S = severely at risk

species	IBA	IBA	BBS	DNR	DNR	FWS BCC	FWS BCC	FWS	NTMB	WATCH	adj total	adj total	max day	max day
	at risk	repr. sp.	↓↓↓	Div. plan	R,T,E	BCR 30	region 5	nat'l.			1999	2004	1999	2004
1 Northern Bobwhite	A	X	X	X							1	0	1	0
2 American Woodcock	A	X		X						yellow	*	*	*	*
3 Common Nighthawk	A			X	X				X		*	*	*	*
4 Willow Flycatcher	A	X		X					X	yellow	1	1	1	1
5 White-eyed Vireo		X							X		41	36	10	12
6 Brown Thrasher		X	X	X							11	8	4	2
7 Prairie Warbler	A	X	X	X		X	X	X	X	yellow	6	17	3	8
8 Yellow-breasted Chat		X	X						X		31	18	12	6
9 Eastern Towhee		X	X	X							27	25	13	7
10 Field Sparrow		X	X	X							44	25	23	13
totals	5*	9*	6	8*	1	1	1	2	6	3*				
* includes American Woodcock (not recorded in study - present at courtship display)														
and/or Common Nighthawk (possible summer resident)														

Table 5. Parker's Creek Watershed
Open Area Bird Species
of Interest and/or Concern

A = at risk

species	IBA at risk	IBA repr. Sp	BBS ↓↓↓	DNR div. pl.	DNR R,T,E	FWSBCC BCR 30	FWSBCC region 5	FWSBCC nat'l	NTMB	watch list	adj total 1999	adj total 2004	max day 1999	max day 2004
1 Pied-billed Grebe	H	X		X	X				X		*	*	*	*
2 Least Bittern	A	X		X	X				X		2	1	2	1
3 Great Blue Heron				X					X		11	3	5	2
4 Great Egret				X					X		0	2	0	2
5 Snowy Egret				X					X		0	1	0	1
6 Bald Eagle	A			X	X						4	9	3	5
7 Black Rail	S	X		X	X	X	X	X	X	red	2	0	2	0
8 Clapper Rail		X									1	0	1	0
9 Virginia Rail		X							X		1	1	1	1
10 Marsh Wren		X		X		X			X		3	19	3	19
totals	4	6*		8*	4*	2	1	1	8*	1				
* includes Pied-billed Grebe (not recorded in study, present other summers, incl. '05)														

Table 6. Parker's Creek Watershed
Water Bird Species
of Interest and/or Concern

A = at risk, H = highly at risk, S = severely at risk

**Parker's Creek Watershed
Summer Bird Species of Interest / Concern
Nesting Needs**

The following pages provide nesting information for summer bird species of interest and/or concern in the Parker's Creek watershed. This information is intended to be of use to anyone planning land management activities during the bird breeding season.

Bird species from two habitat types are included, Forest and Open Areas. Nesting information for Water (creek and marsh) bird species is not provided. Many of the water-associated species of concern identified in the Discussion do not breed in the watershed, though they may be present in post-breeding dispersal. Of those that do, land management practices are unlikely to affect their reproductive success.

Information includes:

- 1) common name of the bird
- 2) taxonomic name of the bird (genus and species)
- 3) bird length in inches
- 4) habitat type preferred for breeding
- 5) location / position of nest
- 6) height of nest
- 7) description of nest
- 8) safe dates, between which bird is assumed breeding rather than migrating
- 9) photograph of the bird

Bird names are listed by alphabetical rather than checklist order.

All species identified in the Discussion for these habitat types are included in this appendix, with the disclaimer that some species are unlikely to nest in the watershed. Some, such as Brown Creeper, Common Nighthawk, and Willow Flycatcher, are seldom observed. Two species, Chuck-will's-widows and Whip-poor-wills, have become scarce; as ground-nesting species they are particularly vulnerable to predation but until recently were not uncommon. The Swainson's Warbler is included because one individual was present in the proper habitat in May 2005, but presumably it did not find a mate.

Information was researched in the *Atlas of the Breeding Birds of Maryland and the District of Columbia*, the *Birder's Handbook*, and *A Guide to Nests, Eggs, and Nestlings of North American Birds*, all cited in the References.

Parker's Creek Watershed
Nesting Needs: Forest Bird Species of Concern
bird names in alphabetical order

Acadian Flycatcher – *Empidonax virescens* (6’')

heavily wooded bottomlands, tall moist deciduous uplands
nest is suspended from fork at end of small branch
nest heights: 3’ – 30’, mean 10.2’
nest is shallow cup of twigs, grass, etc., with hanging strands
safe dates: 5/25 – 8/5



American Redstart – *Setophaga ruticilla* (5’)

deciduous forests with extensive understory
nest is in fork / crotch of small tree
nest height: 4’ – 40’, mean 18’
nest is compact cup of plant fibers, grass, etc.,
safe dates: 6/10 – 7/20



Barred Owl – *Strix varia* (20’)

deciduous and mixed mature forests, wooded swamps
nests in natural cavity of large tree, sometimes old nest
nest height: 8’ – 60’, average 20’ – 30’
no nest, unless using other species’ old nest
safe dates: 1/15 – 8/31



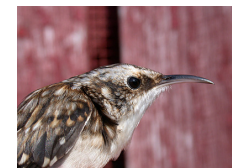
Black-and-white Warbler – *Mniotilta varia* (5’)

mature deciduous or mixed forests with tall trees, often hillside
nest is usually on ground; against tree, shrub, in roots, crevice
nest height: 0’ (ground)
nest is cup of leaves, coarse grass, etc.
safe dates: 5/15 – 7/25



Brown Creeper – *Certhia americana* (5’)

usually coniferous forest, dead trees with loose bark
nest is concealed under loose bark
nest height: 5’ – 23’, mean 10’
nest is loose cup of twigs, wood fibers, moss
safe dates: 5/15 – 8/31



Chuck-will's-widow – *Caprimulgus carolinensis* (12")

dry coniferous or mixed woods with little underbrush
 nests on ground
 nest height: 0' (ground)
 eggs on dry leaves
 safe dates: 5/1 – 8/10



Hairy Woodpecker – *Picoides villosus* (9")

extensive deep woods, mostly deciduous
 excavates cavity in dead deciduous trees or dead limbs
 nest height: 9½' – 85', most 12' – 20'
 nest cavity 10" – 15" deep, 4½" wide, entrance ca. 2½" wide
 safe dates: 3/15 – 8/31



Hooded Warbler – *Wilsonia citrine* (5¼")

dense underbrush in extensive mature deciduous woods
 nest is in small shrub, sapling, or tangle of vines
 nest height: 1' – 10', mean 3'
 nest is small cup of grasses on base of dead leaves
 safe dates: 5/25 – 7/25



Kentucky Warbler – *Oporornis formosus* (5¼")

dense damp undergrowth in moist deciduous forest
 nests on ground; at base of tree, under ferns, in tangle
 nest height: 0' (ground)
 nest is loose cup of grass, stems
 safe dates: 5/25 – 7/15



Louisiana Waterthrush – *Seiurus motacilla* (6")

near running streams in deciduous or mixed woods
 nest is usually tucked into stream bank under roots, ferns
 nest height: 0' (ground)
 nest is cup of moss, decayed leaves, grass, etc.
 safe dates: 5/1 – 7/10



Northern Parula – *Parula americana* (4½")

mature, extensive floodplain forests, moist uplands
 nest is usually in poison ivy vines (Spanish moss elsewhere)
 nest height: 1' – 50', mean 22'
 nest is long (pendant) cup of moss or twigs, grasses
 safe dates: 6/1 – 8/15



Ovenbird – *Seiurus aurocapillus* (6’')

open extensive forest, usually flat, needs leaf litter
 nests in open in depression on ground, constructs cover
 nest height: 0’ (ground)
 nest is domed cover of leaves, grasses, etc., with opening
 safe dates: 5/20 – 8/5



Pileated Woodpecker – *Dryocopus pileatus* (18’')

mature forests, swamp forest, some woodland edges
 excavates cavity in dead wood
 nest height: 12’ – 60’, mean 36’
 cavity is 10’’ – 24’’ deep, 6’’ – 8’’ wide, entrance 3½’’ wide
 safe dates: 3/15 – 8/31



Prothonotary Warbler – *Prothonotaria citria* (5½’')

swampy lowland forest with standing water, floodplain forests
 nests in natural cavity, woodpecker or chickadee cavity, nest box
 nest height: 1’ – 20’, mean 4.7’
 cavity is about 2’’ by 1½’’, nest is cup of twigs, moss, leaves, etc.
 safe dates: 5/10 – 7/20



Red-eyed Vireo – *Vireo olivaceus* (6’')

extensive tall deciduous forests, smaller woods, wooded suburbs
 nest is suspended from horizontal fork of small branch
 nest height: 2’ – 50’, mean 12’
 nest is rounded cup of vine stems, grasses, spider webs
 safe dates: 6/1 – 7/31



Red-shouldered Hawk - *Buteo lineatus* (15’’ – 19’')

bottomland forests along streams
 nest is at crotch or fork of large branch in deciduous trees
 nest height: 20’ – 90’, average 52’
 nest is platform of sticks, twigs, lined w/ leaves, pine need
 safe dates: 5/10 – 8/20



Scarlet Tanager – *Piranga olivacea* (7’')

extensive tall deciduous forest, esp. oak, sometimes mixed
 nest is well out on horizontal branch
 nest height: 7’ – 70’, mean 25.7’
 nest is shallow loose cup of twigs, grass, stems, etc.
 safe dates: 5/25 – 8/10



Summer Tanager – *Piranga rubra* (7")

dry open pine woods, mixed dry uplands, pine-oak woods
 nest is well out on lower horizontal branch
 nest height: 7' – 60', mean 15'
 nest is flimsy-looking shallow cup of stems, leaves, grass, etc.
 safe dates: 6/5 – 8/10



* Swainson's Warbler – *Limnothlypis swainsonii* (5½")

thickets in moist forest with deep shade, no ground cover
 nest is in tangle of vines or lodged in debris
 nest height: 2' – 6'
 nest is bulky cup of dead leaves, stems, pine needles
 safe dates: 4/20 – 8/31



Whip-poor-will – *Caprimulgus vociferous* (9½")

dry deciduous woods with little or underbrush
 nests on ground in area with fragmented light
 nest height: 0' (ground)
 lays eggs on dry leaves
 safe dates: 5/10 – 7/15



Wood Thrush – *Hylocichla mustelina* (8")

floodplains, moist deciduous woods, also more open woodlots
 nest is in sapling or small tree, at fork or saddling small branch
 nest height: 2.5' – 42', usually 5' – 8'
 nest is bulky cup of dead leaves, mud, grass, often paper, cloth
 safe dates: 5/25 – 8/20



Worm-eating Warbler – *Helmitheros vermivorus* (5¼")

hillsides and ravines in extensive deciduous forests
 nests on ground in dead leaves, usually at base of tree or shrub
 nest height: 0' (ground)
 nest is cup of skeletonized, decayed leaves, lining hair moss stems
 safe dates: 5/20 – 7/20



Yellow-throated Vireo – *Vireo flavifrons* (5½")

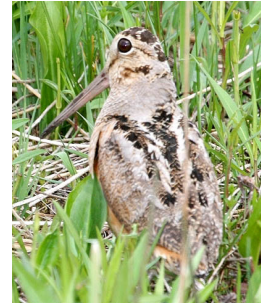
near clearing or water in moist deciduous or mixed forests
 nest is at end of high horizontal forked branch
 nest height: 10' – 50', mean 27.4'
 nest is cup suspended from fork, of plant fiber, lichen, webs
 safe dates: 5/25 – 8/15



Parker's Creek Watershed
Nesting Needs: Open Areas (fields, shrub-scrub, edges) Birds of Concern
bird names in alphabetical order

American Woodcock – *Scolopax minor* (11")

early forest succession, thickets near damp areas
(*may be considered a forest-breeding bird*)
nests on ground with little vegetation, bare ground near brush edge
nest height: 0' (ground)
nest is shallow depression lined with leaves
safe dates: 4/15 – 8/31



Brown Thrasher – *Toxostoma rufum* (11")

hedgerows, brush, shrubs, forest edge, suburbs
nest in vines, small trees, on ground
nest height: 0' (ground) – 25', mean 4'
nest is cup of twigs, leaves, bark, grass, etc.
safe dates: 5/15 – 8/31



Common Nighthawk – *Chordeiles minor* (9.5")

open country, grasslands, fields, towns
nests on sand, gravel, flat rooftops
nest height: 0' (ground or roof)
no nest
safe dates: 6/5 – 7/15



Eastern Towhee – *Pipilo erythrophthalmus* (8")

dense brushy cover, thickets, forest edge
nest mostly on ground, some in brush
nest height: 0' (ground) to 9', mean 1'
nest is cup of twigs, leaves, grass, etc
safe dates: 5/20 – 8/31



Field Sparrow – *Spizella pusilla* (5¾")

old / weedy fields, field edges
nest on ground or unattached in stems, branches, vines
nest height: 0' (ground) – 10', mean 1.3'
nest is cup of grass, forbs, lined with thin fibers
safe dates: 5/1 – 8/31



Northern Bobwhite – *Colinus virginianus* (9.75)

nests in brushy areas, overgrown fields, woodland edges
 prefers mix of exposed ground and brush
 nest height: 0'(ground)
 nest is shallow depression covered by vegetation
 safe dates: 4/15 – 9/30



Prairie Warbler – *Dendroica discolor* (4¾")

brushy, weedy areas, open stands of young pine, gum
 nest in fork or next to trunk, small trees and shrubs
 nest height: 1' – 10', mean 3.9'
 nest is cup of soft plant materials
 safe dates: 5/25 – 7/20



White-eyed Vireo – *Vireo griseus* (5")

thickets, hedgerows, damp thickets
 nest suspended in fork of branch in saplings, shrubs
 nest height: 1' – 6', mean 3'
 nest is deep cup of twigs, bark, leaves, grasses
 safe dates: 5/25 – 8/15



Willow Flycatcher – *Empidonax traillii* (5¾")

old fields, thickets, boggy areas, willows
 nest often in upright fork of bush, shrub, small tree
 nest height: 1½' – 9', mean 4.6'
 nest is small cup of grass, weeds, milkweed bark
 safe dates: 6/10 – 7/20



Yellow-breasted Chat – *Icteria virens* (7½")

thickets, old pastures, woodland edges, boggy areas
 nest in brambles, bushes, small trees
 nest height: 1½' – 7', mean 3.2'
 nest is cup of coarse grasses, weed stems, dead leaves
 safe dates: 5/25 – 8/5



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Northern Parula	"	
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Prothonotary Warbler	"	
Red-eyed Vireo	"	
Red-shouldered Hawk	"	
Scarlet Tanager	"	
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Swainson's Warbler	"	
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Brown Thrasher	"	
Common Nighthawk	"	
Eastern Towhee	"	
Field Sparrow	"	
page 26: Northern Bobwhite	Bill Hubick	
Prairie Warbler	"	
White-eyed Vireo	"	
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