### **2004 Spring Migration Counts in North Carolina**

### Marilyn Westphal

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Sixteen North Carolina count areas submitted data for the 2004 spring migration count: five from the mountains, ten from the piedmont, and one from the coastal plain. There were a total of 334 participants and 958.50 party-hours. Stone Mountain and Mount Jefferson had the smallest number of participants with just three each (8.25 and 12.00 party-hours respectively), and Jordan Lake had the largest number of participants with 47 (141.25 party-hours). The counts included 69,690 individuals and 221 species and an average of 66.46 birds per party-hour. Note that the count from Southern Pines is not included in this calculation because no party-hour data were available. The count area with the highest number of individuals per partyhour was Onslow County, the only count from the coastal plain, with 99.89 birds per party-hour. Highest number per party-hour in the piedmont was Kerr Lake at 96.04 birds per party-hour, and in the mountains it was Buncombe County with 81.80 birds per party-hour. Note that with only one count from the coastal plain, analysis of results by section of the state is not as balanced as it could be. Hopefully more sectors in the coastal plain will participate next year.

Twenty-two species were found in every count area, and the species with the highest count totals were Northern Cardinal, Common Grackle, European Starling, and Mourning Dove. Forty-seven species were "exclusives" found only in one count area (Table 1). Of these, 33 were from Onslow County where the only coastal count was conducted.

Table 1. Number of species exclusive to a count

Mountains	Piedmont	<b>Coastal Plain</b>
Transylvania County – 1	Forsyth County – 2	Onslow County – 33
Buncombe County – 2	Jordan Lake – 1	
Henderson County – 2	Wake County – 3	
Mount Jefferson − 1	Kerr Lake – 1	

There were 14 species exclusive to the mountains, 14 exclusive to the piedmont, and 33 exclusive to the coastal plain (Table 2).

Table 2. Species exclusive to a region.

Mount	ains	Piedm	ont
Ruffed Grouse Wilson's Snipe Black-billed Cuckoo Least Flycatcher Warbling Vireo Red-breasted Nuthatch Brown Creeper Winter Wren	Golden-crowned Kinglet "Lawrence's" Warbler Bay-breasted Warbler Dark-eyed Junco Pine Siskin	Black-crowned Night- Heron Yellow-crowned Night-Heron Bald Eagle King Rail American Woodcock Loggerhead Shrike	Bank Swallow Cliff Swallow American Pipit Blue-winged Warbler Henslow's Sparrow Rusty Blackbird
Marsh Wren		Philadelphia Vireo	Purple Finch

#### Coastal Plain

Bufflehead	Clapper Rail	Whimbrel	Forster's Tern
Red-throated Loon	Sora	Ruddy Turnstone	Least Tern
Northern Gannet	Black-bellied Plover	Red Knot	Black Skimmer
Brown Pelican	Wilson's Plover	Dunlin	Nelson's Sharp-
American Bittern	Piping Plover	Short-billed	tailed Sparrow
Least Bittern	American	Dowitcher	Seaside Sparrow
Little Blue Heron	Oystercatcher	Great Black-backed	Painted Bunting
Tricolored Heron	Black-necked Stilt	Gull	Boat-tailed
Cattle Egret	Willet	Royal Tern	Grackle
White Ibis		Common Tern	

Most species on the exclusives lists are no surprise to most birders in the Carolinas. Birders familiar with the state expect to find more shorebirds and wading birds on the coast, expect to find various songbirds in the forested inland areas, and expect certain colder-climate birds in the high-elevation mountains. But there are also many interesting trends for species that are thought of as statewide or nearly statewide residents. Table 3 lists examples of some of the regional trends in species count per party-hour of birding. Distribution of these birds is largely by climate and habitat preference, and it reflects these differences in each section of the state.

"Individuals per party-hour" is the number of individual birds of each species divided by the total time in the field for each group of birders in the count. For example, if a count circle is divided into 10 groups of birders (it doesn't matter how many people are in each group or "party") and each group ("party") birds for 8 hours, the total party-hours are 80. Since some areas are much more heavily populated and there are many more birders and more "parties" doing a count, this is a much more balanced method of determining relative bird numbers than comparing total bird numbers. It better reflects the probability of finding a particular species in each area.

Table 3. Regional trends in birds per party-hour

Table 3. Regional tr	rends in birds	per party-hour	•
Species	Mountains	Piedmont	Coastal Plain
Flycatchers Eastern Phoebe Great Crested Flycatcher Eastern Kingbird	0.68	0.21	0.00
	0.12	0.41	1.81
	0.19	0.41	0.81
Vireos White-eyed Vireo Yellow-throated Vireo Blue-headed Vireo Red-eyed Vireo	0.14	0.26	0.45
	0.05	0.12	0.24
	0.70	0.06	0.00
	1.48	1.50	0.56
Swallows Tree Swallow Northern Rough-winged Swallow Cliff Swallow Barn Swallow	0.76	0.11	0.07
	0.69	0.45	0.29
	0.00	0.72	0.00
	1.19	0.99	3.18
Nuthatches and Wrens White-breasted Nuthatch Brown-headed Nuthatch Carolina Wren House Wren	0.24 0.03 1.28 0.29	0.18 0.32 1.90 0.16	0.04 0.35 0.88 0.00
Warblers Northern Parula Black-throated Blue Warbler Yellow-throated Warbler Pine Warbler Prairie Warbler Black-and-white Warbler Ovenbird Common Yellowthroat Hooded Warbler	0.25	0.50	0.67
	0.47	0.27	0.00
	0.09	0.22	0.53
	0.01	0.81	0.54
	0.00	0.29	0.88
	0.54	0.19	0.11
	1.08	0.59	0.22
	0.47	0.78	1.02
	0.74	0.19	0.22
Yellow-breasted Chat  Tanagers Summer Tanager Scarlet Tanager	0.07	0.26	0.50
	0.00	0.47	0.52
	0.42	0.24	0.00
Sparrows Eastern Towhee Chipping Sparrow Field Sparrow Song Sparrow	2.00	1.29	0.93
	0.53	0.79	0.61
	0.38	0.22	0.00
	3.30	0.42	0.00

The complete list of species, numbers, and effort follows in Table 4 after the count area details.

#### **Count Area Details**

#### Mountains

### Transylvania County – count date 8 May, 111 species, 2956 individuals, 27 participants, 75.00 party-hours. Compiler: Norma Siebenheller

Participants: Kathy Bartt, Dick Blee, Pat Bohan, Don and Ruth Duncan, Elizabeth Galloway, Jeanne Grimmenga, Jean and Bill Hough, Jack Hudson, Betty Jones, John Kaup, Ludwig Kempe, Ruth Klock, Mary Maxwell, Lucy McGuirt, Betty McIlwain, Bill and Suzanne Moore, Mary Sauerteig, Bill and Norma Siebenheller, Shirl Thomas, Dick Thorsell, Connie Updike, Barbara Williams, David Willoughby.

Exclusives: "Lawrence's" Warbler

# Buncombe County – count date 9 May, 119 species, 5317 individuals, 20 participants, 65.00 party-hours. Compiler: Marilyn Westphal (mjwestphal@unca.edu)

Participants: Kimberly Childs, Bill Fisk, Peggy Franklin, Charlotte Goedsche, Jenny Konwinski, Tim Lewis, John Lindfors, Greg Massey, Jonathan Mays, Janie Owens, Len Pardue, Kitti and Lee Reynolds (and student), Ben and Carol Ringer, Ray Sharpton, Tom Tribble, Lou Weber, Marilyn Westphal.

Exclusives: Bay-breasted Warbler, Pine Siskin

Notes: What a gorgeous day it was for a spring migration count! The wonderful weather, combined with the early count date, and, of course, a group of 20 enthusiastic participants in seven groups, produced a record number of species (119) and a record number of birds (5317) for the Buncombe County (Asheville area) count. Vireos and warblers were plentiful, with a total of five species of vireos and 26 species of warblers.

Other birds more specific to the mountains included four Ruffed Grouse, eight Winter Wrens, eight Golden-crowned Kinglets, 12 Veeries, 31 Rose-breasted Grosbeaks, 54 Dark-eyed Juncos, and a Common Raven. Other interesting birds included a Black-billed Cuckoo in the Warren-Wilson College section, probably a migrant, and two singing Hermit Thrushes at high elevation. One of the Hermit Thrushes was at Balsam Gap on the Buncombe/Yancy County line, and the other was at Craggy Gardens near Craggy Pinnacle. These may be breeding birds. Hermit Thrush was found breeding in the Balsam Gap area last year.

Marilyn Westphal

## Henderson County – count date 8 May, 115 species, 3142 individuals, 15 participants, 41.80 party-hours. Count coordinators: Jim and Barbara Neal (ilbjneal@bellsouth.net)

Participants: James Craig, Judy Deutsch, Bill Fisk, Peggy Franklin, Charlotte Goedsche, Andrea Hessey, Nora Murdock, Barbara Neal, Harvey Neal, James Neal, Frances Ogasawara, Bob Olthoff, Janie Owens, Ron Selvey, Marilyn Westphal

Exclusives: Wilson's Snipe, Marsh Wren

Notes: The relatively early date of the count meant that more late-departing over-wintering birds were found. Many more winter sparrows than usual were counted including 22 Savannah Sparrows, six White-throated Sparrows, 10 White-crowned Sparrows, a Swamp Sparrow, and a pair of Lincoln's Sparrows. Other lingering migrants included 11 Palm Warblers, a Wilson's Snipe, and three Marsh Wrens.

Three Swainson's Warblers were once again found in the Green River area, and Western Sandpiper, Black-billed Cuckoo, Gray-cheeked Thrush, and Warbling Vireo were found for the first time on this count. Although the total bird count was not a record, the total species count (115) was a record for this count.

Marilyn Westphal

Stone Mountain – count date 8 May, 44 species, 252 individuals, three participants, 8.25 party-hours. Compiler: John MacConnell

Participants: Norman and Petie Bass, Jim Keighton

Mount Jefferson – count date 8 May, 73 species, 603 individuals, three participants, 12.00 party-hours. Compiler: Peter Zwadyk (pzwadyk@fastransit.net)

Participants: Glen Eller, Peter and Sally Zwadyk

Exclusives: Least Flycatcher

#### Piedmont

Catawba County – count date 8 May, 110 species, 1573 individuals, six participants, 48.50 party-hours. Compiler: Dwayne Martin (redxbill@netzero.com)

Participants: Gerry Fedde, Dwayne Martin, Lori Martin, Monroe Pannell, Blair Rayfield Jr., John Sutton

Forsyth County – count date 1 May, 112 species, 5006 individuals, 45 participants, 106.00 party hours. Compiler: Phil Dickinson (pdickins@triad.rr.com)

Participants: Jim Martin, Susan Rupp, Sven Halling, Ann Newsome, Royce Huff, John Carter, Lee Carter, Tom Mobray, Phil Dickinson, Bill Hammond, Susan Hammond, John Hammond, Cynthia Donaldson, Bill Jackson, Cindy Thompson, Ga Baliga, Andrew Pruette, Gina Pruette, Jim May, David Shuford, Michael Baker, Lloyd Ramsey, David Disher, Susan Disher, Hop Hopkins, Paul Powers, Ramona Snavely, Ann Robertson, Chester Robertson, Hattie Hauser, Margaret Cochrane, Barbara Kendrick, Gray Tuttle, Bill Sugg, Ray Kandt, Doug DeNeve, Ellen Kirkman, Janice Ovelman, Jeff Turner, Gardner Gidley, Bill Gifford, Bert Hollifield, Margaret Gidley, Fran Shelton, Myrna Harris

Exclusives: Yellow-crowned Night-Heron, Philadelphia Vireo

Notes: Weather conditions: clouds and rain, low 70s. The weather probably accounts for low warbler numbers; no singing. Phil Dickinson

### Greensboro – count date 1 May, 114 species, 6563 species, 22 participants, 85.50 party-hours.

Compiler: Donald Allen (Texallennc@aol.com)

Participants: Carolyn Allen, Donald Allen, Louise Brown, Sue Cole, Scott DePue, Larry Gasper, Herbert Hendrickson, Nancy Hunt, Phillip Kellam, Jane Lewis, Elizabeth Link, Henry Link, Jean McCoy, Gregg Morris, Lynn Moseley, Jean Murdick, Deirdre Poe, Audrey Sheldon, Tom Shepherd, Lauren Spence, Emily Tyler, Ann Walters-Fromson

## Southern Pines – count date 25 April, 120 species, 5984 individuals, 29 participants. Compiler: Susan Campbell

Participants: Susan Campbell, J. H. Carter III, Dick Dole, Lois Dole, Ruth Forester, Charlotte Gantz, Scott Hartley, Carol Hay, Chris Helms, Erich Hoffman, Pat Hoffman, Wayne Irvin, Marion Jones, David McCloy, Michael McCloy, Robert McLeod, Bob Perkins, Dan Peironi, Kerry Sadler, Jesse Schillachi, Jennifer Smith, Bruce Sorrie, Mary Stephenson, Lowell Strine, Susan Strine, Vaud Travis, Libba Watson, Rex Badgett, Jeff Irwin

## Chapel Hill – count date 9 May, 121 species, 9529 individuals, 37 participants, 123.95 party-hours. Compiler: Will Cook (cwcook@duke.edu)

Participants: Sam Baron, Brian Bockhahn, Norm Budnitz, Chris Canfield, Bob Chase, Will Cook, Anson Cooke, Dwayne Cooke, Denny Dobbins, Beth Duncan, Kent Fiala, Kate Finlayson, John Frederick, Marie Graves, Maurice Graves, Steven Graves, Perry Haaland, Alan Johnston, Betty King, Ken Lundstrom, Yasushi Masuda, Lisa Merschel, David Murdock, Shantanu Phukan, Steve Quinley, Barbara Roth, Harriet Sato, Lois Schultz, Mike Schultz, Doug Shadwick, Mike Skakuj, Hal Snyder, Kirsten Snyder, Judy Teague, Pam Timmons, Amalie Tuffin, Bob Winstead

Notes: The 2004 Chapel Hill spring count on May 9 was a fairly average count, bringing us back to ground after a great one last year. We found 121 species (near the 10-year average of 122) and 9529 birds (slightly below the average of 10,067). The number of birds per party-hour, however, was a very high 76.8, well above the average 67. This is the second highest in recent history, behind last year's 82.6. The reason this year's count was only average was the relatively low level of participation, the lowest since 1996. This year's 37 counters in 17 parties is well below the average 49 counters in 23 parties, and we had only 124 party-hours (average 156).

As usual, we did have a few goodies. The best bird was the beautiful breeding-plumaged male Ruddy Duck at Clark Lake in Chapel Hill, found by the team of Betty King, Barbara Roth, and Judy Teague. He was still present the next day when I went to look, but disappeared later in the week. This is only our second Ruddy on a spring count, our first since 1958! Another great find was a group of 4 Hooded Mergansers seen by Doug Shadwick at Jordan Lake – only our third, as well as a record high. Kent Fiala also had an outstanding day, hearing a Greater Yellowlegs at the

former sewage plant off Sandy Creek Road in Durham (our first since 1988) and flushing an American Woodcock near Hollow Rock, New Hope Creek (our first since 1990). Another party reported 3 Anhingas in flight, but the details were not convincing enough to include in the final report.

Record highs were very few. In fact, the only one we set, apart from the Hooded Mergansers mentioned above, was for Carolina Wren. The astounding total of 495 smashes the previous record of 447 in 2002. This is even more astounding considering this year's low number of party-hours. That works out to 4.0 Carolina Wrens per party hour; the next nearest total is just 2.4. Why were there so many Carolina Wrens this spring? Also high, but not record counts, were Least Sandpiper (18, average 5) and Acadian Flycatcher (78, average 49).

We did set a record low, thought not an unexpected one. Continuing a long decline, this year's paltry showing of 12 Field Sparrows (average 38) beats the low of 15 we had in 1960. I couldn't find even one at Mason Farm. We also counted just 12 Eastern Meadowlarks (average 31), matching the record low set last year. We also had remarkably low numbers for Redshouldered Hawk (19, average 29), Red-tailed Hawk (11, average 32), and European Starling (227, average 406).

Honors this year for highest species count goes once again to Doug Shadwick with 80, who covers the excellent Old Hope Valley Farm Road area nestled between the New Hope Creek and Morgan Creek arms of Jordan Lake. Top individual count goes to Bob Chase with 781 birds, barely nudging out three other parties who were within 10 birds.

Weather in brief: low 63, high 85; no precipitation; wind SW 5–15 mph; cloudy in morning, sunny in the afternoon.

Charles W. "Will" Cook

## Jordan Lake – count date 2 May, 122 species, 7698 individuals, 47 participants, 141.25 party-hours. Compiler: Norm Budnitz (Norman.budnitz@duke.edu)

Participants: Stephen Chandler, Bobbie Collins-Perry, Todd Bishop, Mike Giles, Kyle Mills, Mickey Mills, Phil Manning, Rick Payne, Ginger Travis, Doug Pawlak, Bob Chase, Ron and Lydia Hodgson, Carl and Loren Hintz, Margaret Vimmerstedt, Mary Bratton, Willard Hartman, Chip Konrad, Melinda Meade, Peg Schultz, Will Cook, Roger Rittmaster, Yasushi Masuda, Barbara and Terry Logue, Fran Hommersand, Jennifer Maher, Russell Herman, Jennifer Shoemaker, Phillip Warren, Harold Carter, Magnus Persmark, Carol Williamson, Norm Budnitz, Betty King, Barbara Roth, Judy Teague, Jeremy Wrenn, Perry Haaland, Pam Timmons, Sandra and Harry Shoffner, Anson Cooke, Dwayne Cooke, Bob Winstead, Rouse Wilson

Exclusives: Bank Swallow

Notes: May 2, 2004, was a mostly overcast day with temperatures ranging from 68°F in the morning to 75°F in the afternoon. We had one downpour of heavy rain from about 0830 to 0930 that confined folks to their

cars and soaked some of us who were hiking too far from any real cover. Winds were calm to 5 mph. Forty-seven observers in 22 parties counted 7698 individuals (below our 10-year average: 8610) of 122 species (same as last year and below our 10-year average: 126), during 141 hours in the field (10-year average: 150).

Harold Carter found a beautiful male Canada Warbler behind the bathhouse at the Seaforth boat ramp, last seen on our count in 1992! And two parties found Northern Harriers (Carl Hintz, Loren Hintz, and Margaret Vimmerstedt at Parker's Creek, and Rouse Wilson near Haywood), only seen one other time in the past 10 years! Other good birds this year: Great Egret (Ginger Travis), Red-breasted Merganser (Bobbie Collins-Perry/Stephen Chandler and Norm Budnitz), American Kestrel (Rouse Wilson), Veery (Rouse Wilson), and Purple Finch (Todd Bishop, Mike Giles, Kyle and Micky Mills). As you can see, Rouse Wilson had a very nice day!

We recorded 4 species in new record high numbers: Red-breasted Merganser (9), Wild Turkey (5), Black-and-white Warbler (60), and Purple Finch (5).

Norm Budnitz

## Durham – count date 25 April, 124 species, 5989 individuals, 23 participants, 76.00 party-hours. Compiler: Mike Schultz (ross.gull@verizon.net)

Participants:

Notes: The best birds were two Sanderlings, a first for the Durham Count. The birds were first observed by Sandy Cash, who was unsure of the ID, so Lois Schultz, myself and Norm Budnitz checked them out, and found two winter-plumaged Sanderlings at the Redwood boat ramp of Falls Lake. They were in typical winter plumage, mostly white with a dark black crescent at the bend of the wing. Legs were dark, and overall body shape and size were consistent with Sanderling. Also, a Yellow-bellied Sapsucker came to Edith Tatum's suet feeder. She had many good looks for several days. The bird had a red throat. And finally a Lincoln's Sparrow was observed by Will Cook.

Mike Schultz

## Wake County – count date 8 May, 119 species, 3810 individuals, 27 participants, 54.50 party-hours.

Compiler: John Connors (John.Connors@ncmail.net)

Participants: Julie Angerman-Stewart, John Argentati, William Braezeale, Edward Brown, Joe Bearden, Karen Bearden, June Beyman, Halbert Carmichael, Jan Folmer, Lena Gallitano, Steve Halsted, Diane Hardy, Vernon Janke, Mark Johns, Will Kimler, Larry Marcus, Chris Moorman, Jim Mulholland, Bob O'Brien, Mike Pollard, Harriet Sato, Roger Shaw, Clyde Smith, Rick Van Horn, Mary Waler, Bob Winstead

Exclusives: King Rail, American Pipit, Henslow's Sparrow

### Falls Lake – count date 26 April, 99 species, 1897 individuals, seven participants, 26.00 party-hours.

Compiler: Brian Bockhahn (cbockhahn@earthlink.net)

Participants: Brian Bockhahn, Jonathan Steere, Will Cook, Brian Pendergraft, Harriet Sato, Bob Winstead, Clyde Smith

# Kerr Lake – count date 28 April, 120 species, 2209 individuals, four participants, 23.00 party-hours. Compiler: Brian Bockhahn (cbockhahn@earthlink.net)

Participants:

Exclusives: Black-crowned Night-Heron

Participants: Brian Bockhahn, Will Cook, Mike Boatwright, Bryce Fleming, Lori Fleming

#### Coastal Plain

# Onslow County – count date 8 May, 154 species, 7167 individuals, 20 participants, 71.75 party-hours. Compiler: Jim O'Donnell (odjljl@charter.net)

Participants: Rich and Susan Boyd, Jamie and Sue Cameron, John Fussell, Al Gamache, Buddy and Ann Garrett, Barbara Gould, Gilbert S. Grant, John S. Hammond, Gary Hauglet, Bob Holmes, Carmen Lombardo, Jim and Laura O'Donnell, Harry Sell, Mark Shields, Bruce Smithson, Lisa Stotesbury, Andy Webb

Exclusives: 33 species, see list in coastal plain section above.

Table 4. 2004 spring counts in North Carolina

Count name	Trans Co	Bunc	Hend	Stone Mt	Mt Jeff	Cataw ba Co	Frsyth Co	Grns- boro	So Pines	Chap Hill	Jord Lake	Durhm	Wake Co	Falls Lake	Kerr Lake	Onslw Co	Grand		birds rty-hou	
Date	8May	9May	8May	8May	8May	8May	1May	1May	25Apr	9May	2May	25Apr	8May	26Apr	28Apr	8May	Total	mts	-	coast
Count type	NAMC	circle	NAMC	NAMC	NAMC	NAMC	circle	circle	circle	circle	circle	circle	NAMC	circle	circle	NAMC				
Canada Goose	26	74	71		6	24	214	356	147	328	131	142	276	33	44	51	1923	0.88	2.26	0.71
Wood Duck	4	39	13			4	5	40	16	44	43	35	19	2	26	21	311	0.28	0.32	0.29
American Black Duck									10						2	31	43	0	0	0.43
Mallard	9	37	59		13	13	82	152	46	92	45	21	102	14	9	16	710	0.58	0.77	0.22
Scoter sp.																1	1	0	0	0.01
Bufflehead																1	1	0	0	0.01
Hooded Merganser								4		4						1	9	0	0.01	0.01
Red-breasted Merganser								1	3		9				1	8	22	0	0.02	0.11
Ruddy Duck										1	_					12	13	0	0	0.17
Duck sp.											3						3	0	0	0
Ruffed Grouse		4		1						_	_	40		_	_	40	5	0.02	0	0
Wild Turkey	2	6			1	2			10	3	5 2	13	4	3	5	10	48	0.04	0.04	
Northern Bobwhite Red-throated Loon			/			2			19	3	2	5	1			20	63	0.05	0.02	0.28 0.01
Common Loon			1												7	7	15	0	0.01	0.01
Pied-billed Grebe												1		1	1	5	8	0	0.01	0.10
Northern Gannet												'		'	'	20	20	0	0	0.07
Brown Pelican																82	82	0	0	1.14
Double-crested Cormorant						6	1	122	17	100	306	405	18	19	60	126		0	1.51	1.76

Count name	Co Trans	Co Bunc				Cataw of ba Co	Frsyth 1May	boro	Pines 25Apr	Chap May	Jord Lake	Durhm 254 pr	Co Wake	Falls Lake	Lake 28Apr	Co Onslw	Grand Total		birds rty-hou	
American Bittern	Olviay	Jiviay	Olviay	Olviay	Olviay	Olviay	Tiviay	Tiviay	ZJAPI	Jiviay	Ziviay	Ζυπρι	Olviay	Ζυπρι	ZoApi	Olviay	10(a)	0	0	
Least Bittern																1	1	0	0	0.01
Great Blue Heron			2		1	16	1	29	27	150	102	96	48	17	27	12	528	0.01	0.71	0.01
			2		'	10	'	29	21	150	3	90	40	17	21	55	60		0.71	0.17
Great Egret										'	3	'	4			55 16	17	0	0.01	0.77
Snowy Egret Little Blue Heron													'			8	8	0	0	0.22
Tricolored Heron																6	6	0	0	0.11
																32	32	0	0	0.06
Cattle Egret Green Heron		6	7				13	10	9	15	6	7	6			32 6	32 85	0.06	0.08	0.45
Black-crowned Night-Heron		U	′				13	10	9	15	O	′	O		1	O	00	0.00	0.08	0.08
Yellow-crowned Night-																	1	U	U	U
Heron							8										8	0	0.01	0
White Ibis							0									13	13	0	0.01	0.18
Black Vulture			11	6	1	7	8	63	5	30	32	14	1	54	23	13	256	0.09	0.34	0.10
Turkey Vulture	62	20		12		47	55	65	39	152	119	61	31	38	40	102	868	0.59	0.89	1.42
Osprey	02	20	17	12	1	5	3	4	39	10	35	15	1	14	8	39	135	0.59	0.09	0.54
Bald Eagle					'	J	3	_	5	11	11	1	2	4	O	33	34	0	0.14	0.54
Northern Harrier			1						5		2	3	_				6	0	0.01	0
Sharp-shinned Hawk		3		1	1	2			4		1	1			1	1	15	0.02	0.01	0.01
Cooper's Hawk	1	1		'	•	_	7	6	2	2	3	3	1		•	'	26	0.01	0.03	0.01
accipiter sp.	•	·					•	2	_	_	Ů.	1	•				3	0.01	0.00	Ô
Red-shouldered Hawk	2	1	2			6	3	9	8	19	15	17	25	4	3	9	123	-	0.15	0.13
Broad-winged Hawk	4	3		2		3	1	_	_	1	2			-	2	_	18		0.01	0
Red-tailed Hawk	9			_	2	9	10	11	9	11	20	20	8	8	10	10	145	0.09	0.16	0.14
Buteo sp.	_											1					1	0	0	0
American Kestrel		2	1				2	2	3	1	2	1	2				16	0.01	0.01	Ö
Clapper Rail		_					_	_		·	_	·	_			28	28	0	0	0.39
King Rail													1				1	0	0	0

Count name	Trans Co		Co			Cataw ba Co			So	Chap	Jord Lake	3	Wake Co			€	Grand	pai	birds ty-hou	ir
Date	8May	9Мау	8May	8May	8May	8May	1May	1May	25Apr	9May 2	2May	25Apr	8May	26Apr	28Apr	8May	Total		pied	
Sora																1	1	0	0	0.01
Common Moorhen									00						1	1	2	0	0	0.01
American Coot									29							2	31	0	0	0.03
Black-bellied Plover																66	66	0	0	0.92
Wilson's Plover							2									7	7	0	0	0.10 0.60
Semipalmated Plover Piping Plover							3									43 2	46 2	0	0	0.60
Killdeer	1	5	31		3	5	24	27	24	35	29	8	6	8	8		259	0.20	0.22	0.63
American Oystercatcher	'	5	31		3	J	24	21	24	33	29	0	U	0	0	61	61	0.20	0.22	0.85
Black-necked Stilt																1	1	0	0	0.03
Greater Yellowlegs			2					1		1						10	14	0.01	0	0.14
Lesser Yellowlegs			3				5	4		•			2		2		16	0.01	0.02	0.11
Solitary Sandpiper		3	10		1		51	8	9	13	4		10		_	15	124	0.07	0.13	0.21
Willet									_							87	87	0	0	1.21
Spotted Sandpiper	2	10	2		2	3	28	11	4	16	11	7	16	1	3	19	135	0.08	0.14	0.26
Whimbrel																9	9	0	0	0.13
Ruddy Turnstone																8	8	0	0	0.11
Red Knot																16	16	0	0	0.22
Sanderling												2				257	259	0	0	3.58
Semipalmated Sandpiper			1													16	17	0	0	0.22
Western Sandpiper			2													1	3	0.01	0	0.01
Least Sandpiper			8				19	29		18						25	99	0.04	0.10	0.35
Dunlin																15	15	0	0	0.21
peep sp.																40	40	0	0	0.56
Short-billed Dowitcher																54	54	0	0	0.75
Dowitcher sp.																10	10	0	0	0.14
Wilson's Snipe			1				2					4					1	0	0	0
American Woodcock							2			1		1					4	0	0.01	0

Count name	Trans Co	Bunc	Hend Co	Stone Mt	_	Cataw ba Co	Frsyth Co	Grns- boro	So Pines	Chap Hill	Jord Lake	Durhm	Wake Co	Falls Lake	Kerr Lake		Grand		birds rty-hou	•
Date	8May	9May	8May	8May	8May	8May	1May	1May	25Apr	9May	2May 2	25Apr	8May	26Apr	28Apr	3May	Total	mts		coast
Laughing Gull								1							1	867	869	0		12.10
Bonaparte's Gull											1			9	4	2	16	0		0.03
Ring-billed Gull							40	138	18	3	56	8	6	175	58	296	798	0	0.71	4.13
Herring Gull														1		45	46	0	0	0.63
Great Black-backed Gull																3	3	0	0	0.04
Gull sp.										2							2	0	0	0
Caspian Tern								1				2		5	1	3	12	0	0.01	0.04
Royal Tern																21	21	0	0	0.29
Common Tern																22	22	0	0	0.31
Forster's Tern																38	38	0	0	0.53
Least Tern																103	103	0	0	1.44
Black Skimmer																18	18	0	0	0.25
Rock Pigeon	2	13	18			28	67	137	10	34	5	24	117	6	54	84	599	0.16	0.69	1.17
Eurasian Collared-Dove	1					1										3	5	0	0	0.04
Mourning Dove	73	145	74	9	16	65	117	164	286	317	225	135	117	38	50	285	2116	1.57	1.79	3.97
Black-billed Cuckoo	1	1	1														3	0.01	0	0
Yellow-billed Cuckoo	3	3	2			6	3	2	4	38	24	5	2	1	2	22	117	0.04	0.12	0.31
Eastern Screech-Owl	1	4				1	1		2			1			4	3	17	0.02	0.01	0.04
Great Horned Owl	1	2	3				1			4	3	3	2		2	1	22	0.03	0.02	0.01
Barred Owl	1						2	3	4	9	9	8	3		7	3	49	0	0.06	0.04
Common Nighthawk							2		11				1			3	17	0	0	0.04
Chuck-will's-widow						3	3		41		2		2	4	6	15	76	0	0.03	0.21
Whip-poor-will	9								20	6	1			1	16	11	64	0.04	0.04	0.15
Chimney Swift	31	78	44		5	68	460	453	63	133	100	49	87	24	13	52	1660	0.78	2.03	0.72
Ruby-throated Hummingbird		6		13	1	3	7	9	27	56	11	29	10	7	3	13	217	0.21	0.20	0.18
Belted Kingfisher	2	7	6			4	8	10	7	5	4	6	8	3	4	3	77	0.07	0.08	0.04
Red-headed Woodpecker						1		3	34	15	6	16	11	8	4	34	132	0	0.09	0.47
Red-bellied Woodpecker	17	25	16	3		8	65	61	93	177	115	71	66	24	21	38	800	0.30	0.89	0.53

Count name	Trans Co				Mt Jeff	Cataw ba Co	Frsyth Co	Grns- boro	U)	Chap	Jord Lake	Durhm	Wake Co	Falls Lake	Kerr Lake		Grand	pai	birds	ir ir
Date	8May	<u> </u>	8May	8May	8May	8May	1May	1Мау	25Apr	9May	2May 2	25Apr	8 <sub>IVI</sub> ay	26Apr	28Apr	8IVIay	Total	mts	pied	
Yellow-bellied Sapsucker	1			_		_						1		_	_		2	0	0	0
Downy Woodpecker	10	18		6		5	23	17	30	52	31	21	24	9	6	9	273	0.23	0.27	0.13
Hairy Woodpecker	4	6	1	2	1	1	5	4	6	12	5	7	3	5	1	1	64	0.07	0.06	0.01
Red-cockaded Woodpecker			_						24	٠.			_	_		3	27	0	0	0.04
Northern Flicker	8			_	_	4	25	12		24	26	14	5	6	/	10	195	0.17	0.18	0.14
Pileated Woodpecker	16	27	11	3		7	2	3		21	18	10	4	2	8	24	182	0.29	0.11	0.33
Eastern Wood-Pewee	5		5		4	7	3	3		49	19	3	6		1	45	195	0.18	0.13	0.63
Acadian Flycatcher	4	12			7	3		6	15	78	12	9	19	1	6	48	235	0.19	0.20	0.67
Willow Flycatcher	7		12												1		20	0.09	0	0
Least Flycatcher					4												4	0.02	0	0
Empidonax, sp.												1					1	0	0	0
Eastern Phoebe	49	33		3	18	3	14	21	15	25	31	23	14	4	6		293	0.68	0.21	0
Great Crested Flycatcher	4	10	11			8	9	29	152	67	57	26	54	17	14	130	588	0.12	0.41	1.81
Eastern Kingbird	7	16	4		11	19	20	22	107	41	82	16	38	11	30	58	482	0.18	0.41	0.81
Loggerhead Shrike						1			7				2				10	0	0	0
White-eyed Vireo	13	2	14			2	9	4	65	26	32	57	21	5	21	32	303	0.14	0.26	0.45
Yellow-throated Vireo		7			4	1		1	15	24	18	15	4	3	14	17	123	0.05	0.12	0.24
Blue-headed Vireo	36	86	12	1	6	3	2	2	7	9	1	4	3	6	10		188	0.70	0.06	0
Warbling Vireo		3	1														4	0.02	0	0
Philadelphia Vireo							2										2	0	0	0
Red-eyed Vireo	42	162		9		23	61	73		262	204	176	57	68	105	40	1442	1.48	1.50	0.56
Blue Jay	53	105	64	9	9	23	124	107	169	141	127	140	47	43	24	33	1218	1.19	1.13	0.46
American Crow	229	243	109	7	38	46	86	190	195	222	258	114	50	65	62	82	1996	3.10	1.60	1.14
Fish Crow							10	18	103	14	28	15	46	15	8	50	307	0	0.22	0.70
Common Raven	1	1			5		6										13	0.03	0.01	0
Horned Lark									9							1	10	0	0	0.01
Purple Martin	51	4	19			7	7	56	86	42	9	13	47		40	182	563	0.37	0.32	2.54
Tree Swallow	106	35	11		2	1			12	8	34	10	1	10	14	5	249	0.76	0.11	0.07

Count name	Trans Co	Bunc Co	Hend Co	Stone Mt	Mt Jeff	Cataw ba Co	Frsyth Co	Grns- boro	So Pines	Chap Hill	Jord Lake	Durhm	Wake Co	Falls Lake	Kerr Lake	Onslw Co	Grand		birds rty-hou	•
Date	8May	9May	8May	8May	8May	8May	1May	1May	25Apr	9May	2May 2	25Apr	8May	26Apr	28Apr	3May	Total	mts	pied	coast
N. Rough-winged Swallow	40	46	41		13	35	44	63	36	20	35	8	14	2	87	21	505	0.69	0.45	0.29
Bank Swallow											2						2	0	0	0
Cliff Swallow						80	60			7	214	28		45	56		490	0	0.72	0
Barn Swallow	77	83	62		18	41	53	125	62	63	171	46	134	18	26	228	1207	1.19	0.99	3.18
Carolina Chickadee	62	89	54	6		29	94	71	88	203	177	130	110	28	21	48	1218	1.08	1.26	0.67
Tufted Titmouse	60	99	70	14	13	29	92	88	165	291	237	149	80	53	50	42	1532	1.27	1.56	0.59
Red-breasted Nuthatch	5	5															10	0.05	0	0
White-breasted Nuthatch	10	16	9	11	2	6	9	15	29	47	16	14	12	2	3	3	204	0.24	0.18	0.04
Brown-headed Nuthatch		7				2	10	23	67	63	64	19	16	4	15	25	315	0.03	0.32	0.35
Brown Creeper	1	4		_													5	0.02	0	0
Carolina Wren	68	111	66	2		12	82	104	184	495	229	154	139	45	38	63	1803	1.28	1.90	0.88
House Wren	20	23	7	2	6	2	10	18	3	30	5	31	10	1			168	0.29	0.16	0
Winter Wren	5	8															13	0.06	0	0
Marsh Wren			3														3	0.01	0	0
Golden-crowned Kinglet	7	8															15	0.07	0	0
Ruby-crowned Kinglet			1				1	4	18	1	1	19	1	3	1		50	0	0.05	0
Blue-gray Gnatcatcher	17	41	55		13	27	49	61	174	315	226	342	103	76	107	122	1728	0.62	1.91	1.70
Eastern Bluebird	51	85	24	5	11	49	39	80	163	197	155	99	44	39	49	25	1115	0.87	1.10	0.35
Veery	2	12				9	2				1	1	2				29	0.07	0.02	0
Gray-cheeked Thrush			1				1										2	0	0	0
Swainson's Thrush		3				2	4	_		1			1		1		12	0.01	0.01	0
Hermit Thrush		2				3		5	4			4					18	0.01	0.02	0
Wood Thrush	19	56	36	_	4	5	51	51	139	101	74	64	15	19	45	10	689	0.57	0.62	0.14
American Robin	152	307	145	2		33	311	332	128	269	70	188	135	23	24	55	2201	3.13	2.02	0.77
Gray Catbird	39	56	33	4	10	10	48	71	69	59	64	71	26	3	11	39	613	0.70	0.53	0.51
Northern Mockingbird	23	117	48	_	1	50	60	92	165	218	109	87	52	23	32	104	1181	0.94	1.06	1.45
Brown Thrasher	24	28	29	2	-	14	31	28	64	65	34	23	19	10	16	33	423	0.43	0.35	0.46
European Starling	125	284	142		14	137	416	521	67	227	99	83	120	57	47	235	2574	2.80	2.49	3.28

Count name	Trans Co	Co		()		Cataw ba Co	Frsyth Co		So Pines	Chap	Jord Lake	Durhm	Wake Co		Kerr Lake	€	Grand	pai	birds rty-hou	ir
Date	8May	9Мау	8May	8May	8May	8May	1May	1May	25Apr	9May	2May	25Apr	8May	26Apr	28Apr	8May	Total	mts	_	coast
American Pipit								7					3				10	0	0.01	0
Cedar Waxwing	48	298	54			66	160	141	46	190	73	167	220			6	1469	1.98	1.49	0.08
Blue-winged Warbler									1			1					2	0	0	0
**Lawrence's Warbler	1																1	0	0	0
Northern Parula	22	11			3	13	25	25	24	79	78	74	27	18	6	48	467	0.25	0.50	0.67
Yellow Warbler	3		8		10	1	6	11	1		11	11	1		4		101	0.27	0.07	0
Chestnut-sided Warbler	50					1		5		1	1	1			1		110	0.49	0.01	0
Magnolia Warbler		2								2			1				5	0.01	0	0
Cape May Warbler		11	4			1							1				17	0.07	0	0
Black-throated Blue Warbler				4		9	34	27	5	41	38	8	17	5	6		284	0.47	0.27	0
Yellow-rumped Warbler	3	19	35	2	1	16	136	115	39	17	137	94	9	50	26		699	0.30	0.88	0
Black-throated Green																				
Warbler	13					6	1	1			1		1		1		127	0.57	0.02	0
Blackburnian Warbler	4	28				2											35	0.16	0	0
Yellow-throated Warbler	7	4	-		3		1		45	18	64	30	7	14	17		252	0.09	0.22	0.53
Pine Warbler		1	2			13	16		73	177	163	58	30	46	34	39	672	0.01	0.81	0.54
Prairie Warbler				1		3		6	41	34	90	39	4	5	18	63	304	0	0.29	0.88
Palm Warbler	1		11				3			1		4			1		21	0.06	0.01	0
Bay-breasted Warbler		1															1	0	0	0
Blackpoll Warbler	2	17				2				7	2	2	3		1	2	45	0.13	0.02	0.03
Cerulean Warbler	2	10				1											13	0.06	0	0
Black-and-white Warbler	15			4	-	5	9	11	49	18	60	14	8	3	5	8	299	0.54	0.19	0.11
American Redstart	5	29	19		2	2	10	16	12	54	36	16	13	2		1	217	0.27	0.22	0.01
Prothonotary Warbler		1				2			11	35	23	16	3		5	49	145	0	0.12	0.68
Worm-eating Warbler	1	17	7			3	1		2	3	1		1	1		9	46	0.12	0.01	0.13
Swainson's Warbler			3					1	1							6	11	0.01	0	0.08
Ovenbird	46			10	5	5	5	13	56	96	144	58	8	31	42	16	692	1.08	0.59	0.22
Northern Waterthrush	2	4	8				3	4	2	6	3	7	3	1			43	0.07	0.04	0

Count name	Trans Co	Bunc Co	Hend Co	Stone Mt	Mt Jeff	Cataw ba Co	Frsyth Co	Grns- boro	So Pines	Chap Hill	Jord Lake	Durhm	Wake Co	Falls Lake	Kerr Lake	Onslw Co	Grand	par	birds	ur
Date	8May	9May	8May	8May	8May	8May	1May	1May	25Apr	9May	2May	25Apr	8May	26Apr	28Apr	8May	Total	mts	pied	coast
Louisiana Waterthrush	3	1			2	1		1	7	19	12	4	10	2	4	2	68	0.03	0.08	0.03
Kentucky Warbler	1	12					3		3	3	1	4			2	6	35	0.06	0.02	0.08
Common Yellowthroat	26	7	52		9	10	17	36	68	163	94	140	40	15	19	73	769	0.47	0.78	1.02
Hooded Warbler	42	71	25	6	5	7		1	16	55	26	18	6	12	5	16	311	0.75	0.19	0.22
Wilson's Warbler	1							1									2	0	0	0
Canada Warbler	8	45	2	1							1						57	0.28	0	0
Yellow-breasted Chat	4	2	8			2	4	13	15	47	47	39	7	7	15	36	246	0.07	0.26	0.50
Summer Tanager						5		4	44	107	101	33	21	22	30	37	404	0	0.47	0.52
Scarlet Tanager	21	35	13	6	9	7	15	12	1	46	40	18	6	5	13		247	0.42	0.24	0
Eastern Towhee	127	135	118	8	17	14	108	86	200	255	153	149	75	26	17	67	1555	2.00	1.29	0.93
Bachman's Sparrow									7							7	14	0	0	0.10
Chipping Sparrow	21	37	30	7	13	14	17	38	150	167	173	68	22	25	40	44	866	0.53	0.82	0.61
Field Sparrow	9	14	44		10	10	12	28	17	12	29	28	3	5	21		242	0.38	0.22	0
Savannah Sparrow		1	22			4	6	3	2	4	15	10	1		3	2	73	0.11	0.07	0.03
Grasshopper Sparrow		2	4			14		10	4	6		17			2		59	0.03	0.07	0
Henslow's Sparrow													1				1	0	0	0
Nelson's Sharp-tailed																				
Sparrow																1	1	0	0	0.01
Seaside Sparrow																5	5	0	0	0.07
Song Sparrow	180	270	191	1	25	3	60	96	5	51	9	62	3	1	5		962	3.30	0.42	0
Lincoln's Sparrow			2									1					3	0.01	0	0
Swamp Sparrow	1		1					1		2	2	18	1	2	1		29	0.01	0.04	0
White-throated Sparrow	1	2	6	6			61	58	65	8	30	180	1	54	17	3	492	0.07	0.6	0.04
White-crowned Sparrow	1		10				10	5				1			1		28	0.05	0.02	0
Dark-eyed Junco	22	54		5	7				2								90	0.44	0	0
Northern Cardinal	93	188	123		10	48	318	288	338	628	340	334	197	100	94	136	3235	2.05	3.43	1.90
Rose-breasted Grosbeak	10	31	1	5	1	6	16	1	4	1	3	6	2		2		89	0.24	0.05	0
Blue Grosbeak			4			8	8	15	48	49	59	33	29	3	9	56	321	0.02	0.31	0.78

Count name	Trans Co	Bunc	Hend Co	Stone	Mt Jeff	Cataw ba Co	Frsyth Co	Grns- boro	So	Chap Hilli	Jord Lake	Durhm	Wake Co	Falls Lake	Kerr Lake		Grand	par	l birds rty-hou	ir
Date	8May	,								,							Total	mts		coast
Indigo Bunting	48	158	125	8	20	30	41	33	28	224	147	60	56	23	19	88	1108	1.78	0.92	1.23
Painted Bunting																23	23	0	0	0.32
Bobolink	22	6	72			20	22	29		75	49		14	1			310	0.49	0.31	0
Red-winged Blackbird	127	81	58		31	8	43	70	62	82	199	85	54	5	17	281	1203	1.47	0.82	3.92
Eastern Meadowlark	17	22	26		2	25	11	13	62	12	42	21	3	10	11	41	318	0.33	0.22	0.57
Rusty Blackbird						1									2		3	0	0	0
Common Grackle	70	124	75		9	27	362	663	231	330	331	142	197	52	52	207	2872	1.38	3.15	2.89
Boat-tailed Grackle																144	144	0	0	2.01
Brown-headed Cowbird	10	19	16	1	1	12	33	101	53	92	108	104	22	33	11	57	673	0.23	0.75	0.79
Orchard Oriole	1	17	2	2	3	3	8	7	27	15	33	9	10		9	60	206	0.12	0.14	0.84
Baltimore Oriole	1	17	3		9	1	7	6				1		1	2		48	0.15	0.03	0
blackbird sp.											2						2	0	0	0
Purple Finch						1					5	1		2			9	0	0.01	0
House Finch	40	93	43	2	6	16	56	57	67	177	27	54	49	21	2	34	744	0.91	0.67	0.47
Pine Siskin		4															4	0.02	0	0
American Goldfinch	63	172	98	38	25	39	139	216	171	414	194	207	107	36	69	8	1996	1.96	2.08	0.11
House Sparrow	16	30	40		4	7	23	10	33	56	23	68	21	11	7	73	422	0.45	0.33	1.02
total species	111	119	115	44	73	110	112	114	119	121	122	124	118	99	120	154	221			
total birds	2956	5317	3142	252	603	1573	5006	6563			7698	5989	3805	1897	2209		69690			
# participants	27	20	15	3	3	6	45	22	29	37	47	23	27	7	4	20	335			
total party hours	75	65	41.8	8.25	12	48.5	106	85.5		124	141	76	54.5	26	23	71.8	959			
total party miles	249	367	213	18			125	307		286	315	209	133	79.5		407	2706			
hours on foot	36	17.8	15.7	3.5			82.5	59.5		89	86.5	59.8	46			25.3	521			
hours by car	30	47.3	26.2	4.75			13.5	26		32	40	15.3	4.5			36	275			
hours by bicycle										3	2						5			
hours by canoe/kayak											12.8					10.5	23.3			
miles on foot	14	18	13.5	5		15	55	42.3		65.5	70	49	37.5			15	400			
miles by car	235	349	200	13		262	66	265		212	222	160	84			382	2450			

Count name	Trans Co	Bunc	Hend	Stone Mt	Mt Jeff	Cataw ba Co	Frsyth Co	Grns- boro	So Pines	Chap	Jord Lake	Durhm	Wake Co	Falls Lake	Kerr Lake	Onslw Co	Grand		birds tv-hou	
Date	8May	9May	8May	8May	8May	8May	1May	1May	25Apr	9May	2May	25Apr	8May	26Apr	28Apr	8May	Total	mts	pied	
miles by bicycle										8	15						23			
miles by canoe/kayak											7.5					10	17.5			
hours owling	3					0	4.5			2	1.75	2				4.75	18.5			
miles owling	0					0	2.5			1.5	10.5					29	43.5			
feeder hours	6						5			17.5							28.5			
total birds per party-hour	39.4	81.8	75.2	30.6	50.3	32.4	47.2	76.8		76.9	54.5	78.8	69.9	73	96	99.9	66.5	60.7	64.7	99.9