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The *Passenger* **PIGEON**



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Send all manuscripts and correspondence to the Editors. Information for "Seasonal Field Notes" should be sent to the Bird Reports Coordinator. Manuscripts that deal with Wisconsin birds, ornithological topics of interest to WSO members, and WSO activities are considered for publication. For detailed submission guidelines, see pages 3-5 of the Spring 2000 issue (Vol. 62, No. 1) or contact the Editors. As a general guide to style, use issues after Vol. 60, No. 1, 1998.

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Front Cover: "Quiet Moments" by Betsy Popp pays tribute to a nesting Mourning Dove.

Breeding Bird Atlas

As I thought about what I would discuss in this, my last President's Statement, my mind was so overloaded with potential topics that I had difficulty concentrating on the task at hand. I finally decided that since my life has been consumed off-and-on for more than a decade with the Wisconsin Breeding Bird Atlas project, this should be my focus.

When a few of us started to discuss the possibilities of doing an Atlas for Wisconsin, I can remember vividly the looks that I received when I declared that we were embarking on a journey that would last at least a decade—yes, 10 years! Well, it already has been more than 10 years since these first discussions, and we aren't finished, but the end is in sight. By the time you read this, the completed manuscript will be in the hands of the publisher, University of Wisconsin Press.

One of the fortunate aspects about the project is that because of the development of the world wide web, we've been able to develop a robust web site to present information about Atlas results before the book is published. I hope that all of you, even if you don't care about Atlas results or the data, have taken the opportunity to view the wonderful image library and listen to some of the recordings in the audio library. Please take a look and see for yourself what is available for you to enjoy <<http://www.uwgb.edu/birds/wbba/index.htm>>.

One of the first Atlas tasks that I performed was to develop a slide show about the Atlas. During a recent program I presented to the Schlitz Audubon Nature Center Bird Club, I repeated the 11 objectives of the Atlas that we had set forth and then reviewed how well we had done in meeting them. I thought I would do the same here.

1. Survey the state systematically—Done. When the coverage for 1,132 quads (1,041 priority blocks) is viewed, Wisconsin birders did a terrific job, helped immensely by the paid atlasers who tackled some of the state's toughest to reach bird locations.
2. Organize data into species distribution maps—Done. Just take a look at the web site for this information, which also will be featured in the book.
3. Classify breeding evidence—Done. Tables showing breeding status and the number of records with extreme/median dates for breeding behavior will appear in the book.
4. Learn about abundance and nesting phenology—Done. These data are discussed in the book's species accounts; phenology dates are in a table.

5. Provide information on Threatened & Endangered species—Done. Obviously, breeding information on our state's threatened and endangered bird species is especially critical to our knowledge base and to bird conservation.
6. Identify habitats supporting rare species—Done. Some of this information will be presented in species accounts; additional data can be gleaned from the actual records and comments.
7. Provide baseline data for future generations—Done. This objective is especially important in my opinion. One of the fascinating activities that readers of the Atlas book will be able to do is to compare the Atlas distribution maps with those in Sam Robbins' *Wisconsin Birdlife*.
8. Provide a scientific reference having many applications—Done. Based on the number of requests we already have received to use Atlas data, this objective clearly has been met.
9. Introduce birders to a new way of birding—Done. To me, this is one of the more overlooked successes of the project. Hundreds of birders for the first time really concentrated on looking to see what an individual bird was doing, and they were looking in the summer time. Just how many people cheered, even if silently, when that adult, instead of swallowing that caterpillar, flew off with it in the direction of habitat suitable for a nest? Confirmed!
10. Provide a cooperative partnering atmosphere—Done. Bring together the Atlas Steering Committee, Regional Coordinators, authors, and photographers; the more than 1,600 observers who submitted records; and the many individuals, governmental agencies, foundations, businesses, and non-profit organizations who contributed funds; and you have one HUGE family that successfully pulled off the largest ornithological project in state history.
11. Provide information to compare with historical data—Done. This was accomplished primarily by the authors who prepared the book's species accounts.

Well, by my accounting, the Atlas project receives a grade of 100%. However, I admit to being biased, so, please take a look at the Atlas web site and give the book a thorough review when it appears in your hands during 2005, and judge for yourselves. You are even allowed to start wondering and thinking about what the changes will be in Wisconsin's breeding bird community when the results of the 2nd Wisconsin Breeding Bird Atlas are known.



President

The 2003 Wisconsin Christmas Bird Counts

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The 2002 and the 2003 counts are perhaps as close a match for side-by-side year comparisons as has occurred in the Wisconsin Christmas Bird Counts (CBC). Both years report 100 count circles. These 100 circles cover nearly identical spots on the map. The exception is the new Cedar Grove Count along Lake Michigan. Not since the count years of 1992 through 1996 (when numbers varied from 83 to 85) has there been such consistency in circle numbers. Also, field party hours for 2002 and 2003 are nearly identical. The 2002 count had .0018% more field hours than 2003 (a variance of 8 hours). A tighter similarity on successive counts does not exist. Weather conditions for both 2002 and 2003 were similar. In both years, inland water was mainly frozen, causing a decrease in inland waterfowl. While the 2002 count had the least snow cover in the history of the CBCs, snow cover in 2003 was less than average. Although four far northern counts reported better than 10 inches of snow, other northern counts showed moderate to little snow. Numerous southern circles had no snow, while the remainder measured scant amounts.

There were 147 species reported on

count days for the 2003 count. An additional 4 species (Bonaparte's Gull, Gray Catbird, N. Mockingbird and Eastern Towhee) were reported for the count period. Three years have had more count day species than 2003. Those three are 1997 (153), 2001 (154) and 2002 (150). The 2003 count contributed no new species to the cumulative count day total of 226. Unusual species reported for 2003 include the following: Greater White-fronted Goose, Harlequin Duck, all three scoters (for the second consecutive year), Barrow's Goldeneye, Red-throated Loon, Horned Grebe, Am. White Pelican (on two counts), Black-crowned Night-Heron, Turkey Vulture (on two counts), Peregrine Falcon (now annual), Virginia Rail, Sandhill Crane, Iceland Gull, Lesser Black-backed Gull (on three counts), Eurasian Collared-Dove (on two counts, both with multiple individuals), Snowy Owl (two counts only), Black-backed Woodpecker, Boreal Chickadee (one count only), Carolina Wren, Varied Thrush, Brown Thrasher, American Pipit, Vesper Sparrow, Savannah Sparrow, Lincoln's Sparrow, meadowlark (two counts

only), Brewer's Blackbird and Hoary Redpoll.

The 2003 count had 30 bird species with record high totals. This compares to 18 in 2002 and 38 in 2001. What is important about the 2003 count is not so much the number of species with record highs as the smooth transition of the current numbers to those from past counts and, by which, long-term trends in bird populations might be indicated. The numbers for the species with record highs on this count do not stand in isolation. The highs from this count, in conjunction with totals from past counts, give a clue as to what is happening and is likely to happen with bird populations in the future. Record highs (or record birds per party hour, which is a better measure) this year are often continuations of record highs from past counts. Record high species this year, with seemingly long term trends of early winter population increases, include: Greater Scaup, the three scoters, Wild Turkey, Bald Eagle, Cooper's Hawk, numerous hitherto uncommon gulls, Eurasian Collared-Dove, Mourning Dove, Red-bellied Woodpecker, Tufted Titmouse, Eastern Bluebird, Northern Cardinal and House Finch. Some of these (such as the Greater Scaup, Wild Turkey, Mourning Dove, Tufted Titmouse, Northern Cardinal and House Finch) have exploded in population this year. Are this count's explosions an indicator of large increases to come? Stay tuned.

In a like manner, the totals from the 2003 count, when combined with numbers from past counts, give a long-term view of species with seemingly decreasing area populations. Species showing a smooth transmis-

sion of decreased numbers this count with past counts (and thus indicating a trend) include: American Black Duck, Long-tailed Duck, Gray Partridge, Red-headed Woodpecker, Gray Jay, meadowlarks, Purple Finch and Evening Grosbeak.

I wish to thank computer guru Brenda Bauer, who more than once has walked me through the software that sets up the various plates of this report. Thanks, Brenda.

LOCATION AND DETAILS OF THE COUNTS

The details of weather and participation for each count are reported in Table 1. One count from 2002, Prentice, was not conducted in 2003. In addition the La Farge Count had too few field party hours to be valid. On the plus side, after a one-year absence, Adams has returned though with a new count center. New for 2003 is Cedar Grove. This count, which includes Harrington Beach State Park, encompasses the last meaningful stretch of Lake Michigan shoreline not already included in the CBCs. As can be read from following accounts, this circle adds much to our understanding of early winter waterfowl numbers.

A total of 100 counts were accepted. This matches the record high set in 2002. The most popular date for conducting CBCs is the first available Saturday. This year the first available Saturday was the relatively late date of December 20th. Because of this, the average date for the 2003 CBCs is likely later than in any previous year. Despite the late dates, 38 counts found 50 or more species. This com-

Table 1. Details of the 2003 Wisconsin Christmas Bird Counts

Name of Count	Date	Sky	Snow Inches	Wind Dir.	Wind Mph.	Temp. °F		Observers		Parties	Party Hours	Owling Hours
						Low	High	Feeder	Field			
Adams (37)*	1/2	Cloudy-Rain	0.5	E	5-15	25	35	1	5	3	25.00	3.00
Appleton (64)	12/20	Partly Cloudy	1	NW-SW	5-15	6	28	12	29	19	113.00	3.50
Arpin (35)	12/20	Clear-Cloudy	4	?	0-5	10	29	0	10	4	28.50	0.00
Ashland (4)*	12/20	Clear	4-6	NE	5-20	21	27	1	9	3	23.00	0.00
Baraboo (94)	12/22	Partly Cloudy	3	W-NW	5-10	28	42	7	12	6	50.25	4.25
Bayfield (3)	12/16	Cloudy-Snowing	6	NW	18-25	26	32	5	7	4	26.00	0.00
Beloit (91)*	12/14	Partly Cloudy	0.5	calm	0	25	28	3	24	12	56.50	2.50
Black River Falls (29)	12/20	Partly Cloudy	3	?	10-15	13	31	7	5	2	12.25	0.50
Blanchardville (92)*	12/14	Cloudy	1	SW	0-10	22	29	0	9	5	38.00	6.50
Bridgeport (99)*	12/17	Clear	2-3	NW	5-10	12	28	0	12	8	45.00	3.00
Brussels (49)	12/27	Cloudy-PCL	0	SE	15-25	36	46	6	24	9	63.75	3.25
Burlington (76)	12/14	Cloudy	0.5	SW	5-10	25	30	0	7	4	34.00	3.50
Cable (7)*	12/14	Clear	6-14	?	0-5	6	12	11	11	7	28.00	0.00
Caroline (43)	12/21	Clear	5	SW	0-15	20	45	2	3	3	17.00	1.00
Cassville (100)	1/3	Clear	0	NW	8-24	22	27	2	10	4	34.00	2.25
Cedar Grove (56)	1/1	Clear-Cloudy	0	S-SE	0-20	20	31	4	13	6	46.50	4.25
Chippewa Falls (22)*	12/20	Partly Cloudy	?	S	5-15	12	28	0	7	4	29.50	0.00
Clam Lake (8)*	12/27	Cloudy-Lt. Rain	7-10	SSE	5-25	30	44	2	9	5	43.25	4.50
Clyde (96)	1/4	Cloudy-Snow	0-4	NE	10-20	15	23	2	11	5	22.00	0.00
Columbus (85)	12/21	Clear-PCL	0	W	8-20	20	38	5	12	7	42.75	4.00
Cookville (90)	1/1	Cloudy	0	SE	5-15	20	40	2	7	3	23.00	4.50
Durand (21)*	12/27	Cloudy-Lt. Rain	trace	SE	10-15	38	42	0	11	6	40.75	1.00
Ephraim (51)	12/27	Partly Cloudy	trace	NW	5-12	33	39	14	9	7	28.00	2.25
Fifield (9)*	12/14	Cloudy	8-10	SW	5-10	23	25	22	7	5	33.50	0.00
Florence (14)	1/3	Cloudy	0-6	WNW	12-30	27	34	1	15	7	58.00	2.50
Fond du Lac (66)	12/21	Clear-PCL	0.5	S-WSW	5-15	27	42	0	3	3	21.00	4.00
Fort Atkinson (89)	12/27	Cloudy-Clear	0	SE	15-25	36	48	16	12	5	35.00	5.00
Fremont (40)	12/15	Clear	3-5	SSE	5-15	26	33	1	9	6	48.00	2.00
Gilman (24)*	12/21	Cloudy	6	SW	5-10	22	43	3	17	7	58.00	3.00
Grantsburg (17)*	12/20	Clear	6	SSW	10	19	34	1	17	9	42.00	0.50
Green Bay (47)*	12/20	Clear-Cloudy	0-1	W	0-12	10	28	16	27	14	92.00	11.00
Green Lake (79)	1/3	Cloudy	0	W	10-20	22	36	0	7	4	28.00	3.00

(continued)

Table 1. (continued)

Name of Count	Date	Sky	Snow Inches	Wind Dir.	Wind Mph.	Temp. °F		Observers		Parties	Party Hours	Owling Hours
						Low	High	Feeder	Field			
Gurney (5)	12/20	Cloudy-Clear	15	SW-S	10-15	20	33	5	6	4	17.50	0.00
Hales Corners (59)*	12/20	Partly Cloudy	trace	NW-SW	10-14	12	32	4	13	7	22.00	0.00
Hartford (72)*	12/26	Clear	trace	S	0-10	17	43	2	13	8	55.25	3.00
Hayward (6)*	12/14	Clear	6-14	?	0-5	6	12	4	7	4	18.00	0.00
Herbster (2)*	12/21	Clear-PCL	4	calm	calm	24	42	12	10	4	18.50	0.00
Holcombe (23)*	12/16	Cloudy-Lt.Snow	5-8	WNW	15-18	22	26	0	3	2	15.25	0.00
Horicon Marsh (83)	12/20	Clear	0.5	SW	15	5	25	1	10	6	36.50	5.50
Hudson (19)*	1/1	Cloudy	2	S	5-7	20	34	0	8	3	13.50	0.00
Hustisford (84)*	12/16	Lt.Rain-Flurries	0	W	20-25	28	38	0	11	7	49.50	1.00
Kenosha (61)	12/20	Clear-Cloudy	1	NW-SW	8-16	16	32	0	2	2	17.00	0.00
Kettle Moraine (71)	12/27	Cloudy	trace	SW	5-15	34	37	1	6	5	35.00	5.00
Kewaunee (52)*	12/28	Cloudy	1	S	8-20	39	49	1	19	8	58.00	2.50
Kickapoo Valley (98)	12/21	Clear	4	SW-S	8-20	26	35	0	4	2	13.00	0.50
La Crosse (31)*	12/20	Partly Cloudy	1-2	SE-SW	10-15	0	13	0	20	9	69.50	2.00
Lake Geneva (77)*	12/27	Cloudy	0	W	5-15	18	27	5	27	16	82.00	8.00
Lakewood (15)	12/14	Cloudy	7	SE	5-10	18	30	0	2	1	9.00	0.00
Madison (87)*	12/20	Partly Cloudy	0	?	?	?	?	8	78	29	227.75	9.00
Manitowish Waters(10)	12/20	PCL-Clear	12-16	N	0-5	12	18	5	9	4	32.00	0.00
Medford (25)*	1/3	Partly Cloudy	2	W	10-20	15	20	5	16	7	48.00	0.00
Merrill (32)	12/31	Clear	0.5	NNW	0-30	15	18	1	4	3	9.00	0.00
Milwaukee (58)*	12/20	Partly Cloudy	0	W-SW	8-12	14	28	25	44	16	98.50	1.00
Montello (80)	12/26	Clear-PLC	1-3	S	0-5	6	40	6	13	6	41.25	5.50
Mosinee (34)	12/27	Cloudy-PCL	2	SW	5-10	35	41	0	12	6	54.00	9.00
Mount Horeb (93)	12/28	Cloudy	0	?	5-20	40	52	18	61	24	105.25	1.00
Nelson (20)*	1/3	Partly Cloudy	trace	W	10-15	12	25	0	14	6	42.75	0.00
New Franken (48)*	12/14	Cloudy	2	calm	0	22	30	22	19	16	26.00	2.00
New Richmond (18)*	12/20	Cloudy	4	S	8-20	20	35	0	9	5	30.00	0.00
Norske (42)	12/28	Cloudy	?	?	light	34	38	2	4	8	29.00	0.00
Oconomowoc (73)	12/20	Clear	0.5	W	5-10	10	28	3	14	6	35.50	6.50
Oshkosh (65)	12/14	Clear	1-2	SW	0-4	24	28	13	22	10	66.50	0.50
Owen (26)*	12/14	Cloudy	2	S	6-7	19	24	3	13	8	54.50	3.50
Palmyra (75)	1/3	Cloudy	0	NW	9-17	28	37	0	26	12	100.75	9.50
Pardeeville (81)*	12/18	Cloudy	1-3	W	0-15	16	25	9	11	7	45.00	3.75
Pensaukee (46)	12/14	Cloudy-Flurries	2	SW	5-10	19	28	2	4	2	19.00	0.50
Peshigo (62)*	12/20	Partly Cloudy	2	SW	5-15	8	21	1	6	3	26.00	0.50

Phelps (11)	12/14	Cloudy	6	S	5	19	26	3	8	5	20.00	0.00
Plymouth (70)	12/20	Cloudy	trace	NW-SW	9-20	6	29	0	14	6	27.50	0.00
Poynette (86)*	1/3	Cloudy	0	NW	5-15	26	29	16	24	10	66.00	3.50
Racine (60)*	12/20	Cloudy	0	NNW	14-15	12	33	2	17	9	52.25	1.25
Randolph (82)	12/14	Cloudy	2	SW	0-10	25	28	2	8	5	33.00	4.50
Rhineland (13)	12/20	Cloudy	7	S	10	0	20	33	2	1	8.00	0.75
Richland Center (97)	12/20	Clear-PCL	1	S	0-8	10	29	7	41	19	89.00	4.00
Riveredge (57)	12/20	Clear-PCL	trace	NW	5-10	20	27	40	74	26	200.00	25.50
Rosendale (78)	12/27	Cloudy	1	S	10-25	37	52	0	13	6	44.50	1.00
Sauk City (95)	12/27	Cloudy	0	SW-S	12-22	30	45	2	30	14	101.00	3.00
Seymour (63)	12/30	Partly Cloudy	0	W-SW	5-15	24	30	0	3	2	14.50	0.50
Shawano (44)	12/20	Cloudy	5	S	0-15	5	30	10	11	5	36.00	3.00
Sheboygan (55)	12/20	Clear-PCL	0	SW	light	15	20	0	3	2	16.50	0.00
Shiocton (45)	12/19	Cloudy	1.5	NW	4-10	21	23	4	20	7	42.25	0.00
Solon Springs (1)	12/20	Partly Cloudy	4-6	?	?	?	?	1	7	4	27.00	2.00
Spencer (27)*	12/20	Partly Cloudy	4	SW	5-10	8	24	6	9	6	52.50	4.25
Spruce (16)*	12/21	Partly Cloudy	2	SW	1-10	15	38	0	4	2	16.75	0.75
Stevens Point (38)*	12/20	Partly Cloudy	5	SW	0-10	7	23	1	26	8	64.25	7.50
Stockbridge (67)*	12/14	Cloudy-Flurries	1	calm	0	25	32	0	8	5	31.00	0.50
Sturgeon Bay (50)	12/20	Cloudy	trace	SW	5-15	14	28	23	32	17	91.75	9.75
Three Lakes (12)	12/15	Cloudy	6	E	8-10	23	28	1	6	3	14.00	0.00
Trempealeau (30)	12/14	Cloudy	2	S	8	25	29	8	16	6	46.00	2.50
Waterloo (88)	12/15	Cloudy	trace	S	10-15	28	40	5	11	6	44.75	0.00
Waukesha (74)	12/20	Partly Cloudy	0	SW	8-13	12	27	2	22	8	47.00	4.00
Waupaca (41)	12/22	Clear	2-5	NW	5-10	26	40	3	5	3	26.00	0.00
Wausau (33)	12/20	Clear-PCL	4-6	SSW	0-6	8	26	3	11	7	29.00	0.00
Wautoma (39)*	12/31	Clear	0	NW	20-40	14	28	14	8	6	38.25	3.50
Willard (28)*	12/28	Cloudy	0-2	SE-SW	5-20	37	46	3	13	6	48.25	2.75
Wisconsin Rapids (36)*	1/3	Clear-PCL	0.5	NW	10-14	19	22	6	15	10	56.00	2.00
Woodland Dunes												
NE (53)	1/4	Cloudy	0	NE	10-20	20	27	4	8	5	35.75	1.00
NW (68)	1/3	Partly Cloudy	0	NW	10-20	26	30	0	10	5	17.00	0.50
SE (54)	12/21	PCL-Clear	trace	SW	10-15	29	46	1	9	7	32.50	1.00
SW (69)	12/20	Clear-PCL	1-1.5	SW-W	0-10	22	37	0	8	6	32.50	1.50
TOTAL								504	1,406	699	4,406.50	255.00

* Counts marked with an asterisk had their reports sent to both the WSO and the National Audubon Society.
Bold lettering within a count indicates the highest totals for the state.

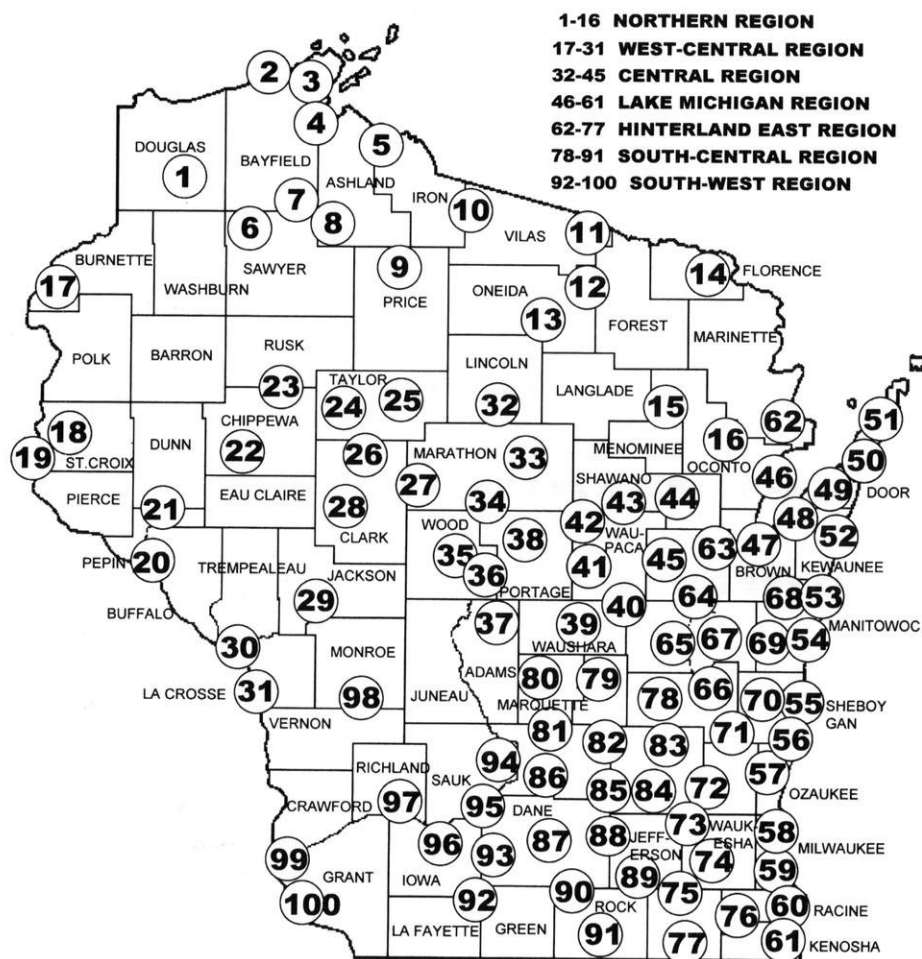


Figure 1. Locations of the 2003 Wisconsin Christmas Bird Counts.

compared to 29 such counts in 2002 and 39 in 2001. Two counts, Madison (87) and Milwaukee (78), had over 70 species, followed by Lake Geneva and Riveredge with 68. The number of party hours (4,406.5) is second only to the 4,414.5 in 2002 and is 21% above the 10-year average.

The location of each count circle is shown in Figure 1. Count names can

be matched with count numbers by looking at the alphabetical listing of counts in the first column of Table 1. Data from counts that include areas in other states note only species and participation for the Wisconsin portion of the count. For details on count compilers and count centers, consult the Appendix.

SUMMARY OF SPECIES

Results from the 2003 counts are reported in Tables 2–9. Tables 2–8 show the more common species, while Table 9 shows the less common species (species seen on 14 or fewer counts). The common species have their counts divided into seven regions, each region having its own table. Table 8 includes the total number of individuals for each common species and compares that total with the average total (adjusted for party hours) over the past 10 years.

Geese and Swans—Unlike 2002, when 5 species of geese were reported, this year found 3 species, with the Canada and the Snow both below their 10-year averages. The Greater White-fronted Goose (Madison) marks its third count year record, the other two counts being 1998 and 2002. Both the Mute and the Trumpeter swan continue to show numbers well above 10-year averages.

Ducks—Inland ducks were below 10-year averages. Among the more common species, the Mallard was 35% below average, while the Am. Black Duck continued its steady decline with numbers 29% below average. The Wood Duck (11 over 7 counts) made its poorest showing since 1970; the Am. Wigeon (2 over 2 counts) made its poorest showing since 1985 and its second poorest since 1972. Diving ducks off Lake Michigan fared better. These duck numbers have been enhanced with the addition of the Cedar Grove Count. Cedar Grove reported 11,910 Greater Scaup. Other than for 14,044 on the 2000 count, the total from Cedar Grove alone is greater

than any previous statewide count of Greater Scaup. The 2003 statewide total of 19,826 Greater Scaup is 41% greater than the previous high from 2000 and 147% greater than the 10-year average. Starting with 2000, no count has totaled less than 10,000 Greater Scaup. In the previous 60 years of CBCs, only 1969 presented better than 10,000 such scaup. Harrington Beach, which is within the Cedar Grove Count, is known for its wintering scoters. In this, its first year as a CBC, Cedar Grove reported 10 Surf Scoters, 1 White-winged Scoter and 8 Black Scoters. Cedar Grove thus becomes the first single circle to report all three scoter species on one count. Its total of 10 Surf Scoters surpasses the previous statewide high of 4 set in 1993 (Milwaukee); its total of 8 Black Scoters surpasses the previous statewide high of 5 set in 1981 (Racine) and 1994 (Ephraim). A Black Scoter was reported for the third consecutive year from inland Madison. A Harlequin Duck and a Barrow's Goldeneye were noted from Milwaukee.

Partridge through Quail—Ring-necked Pheasants (645) had their second best showing since 1980. The Wild Turkey (12,316 over 83 counts) set records for both number of counts and number of individuals. The turkey was an impressive 96% above its 10-year average. Gilman was the only count to report Sharp-tailed Grouse.

Loons through Vultures—The Red-throated Loon documented from Woodland Dunes NE places this loon on the count for the 5th time in seven years. For the years 1964 through 1996, there were but 2 reports of the

Table 2. Number of each species in northern Wisconsin found on 15 or more counts

Species	Solon Springs 1	Herbster 2	Bayfield 3	Ashland 4	Gurney 5	Hayward 6	Cable 7	Clam Lake 8	Fifield 9	Manitowish Waters 10	Phelps 11	Three Lakes 12	Rhine-lander 13	Florence 14	Lake-wood 15	Spruce 16	Totals
Canada Goose	9	0	0	0	0	6	0	3	0	0	0	0	1	0	0	0	19
Mute Swan	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
American Black Duck	0	0	0	44	0	0	0	0	0	0	0	0	3	0	0	0	47
Mallard	0	0	19	217	0	0	0	3	0	0	0	0	338	0	0	3	580
Bufflehead	0	0	4	0	0	0	0	0	0	0	0	0	0	0	0	0	4
Common Goldeneye	0	0	40	0	15	0	0	0	0	0	0	0	0	0	0	0	55
Hooded Merganser	0	0	CW	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Common Merganser	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	2
Ring-necked Pheasant	0	0	0	0	8	0	0	0	0	0	0	0	CW	CW	0	3	11
Ruffed Grouse	CW	24	2	6	6	0	7	8	49	9	2	5	6	18	4	1	147
Wild Turkey	0	0	0	0	0	0	0	0	CW	0	0	0	48	155	5	26	234
Great Blue Heron	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Bald Eagle	9	15	17	7	9	3	10	4	8	12	7	1	10	7	0	0	119
Northern Harrier	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Sharp-shinned Hawk	0	1	0	0	0	0	0	0	CW	CW	0	1	0	0	0	0	2
Cooper's Hawk	0	0	0	1	0	0	0	0	0	0	0	0	0	CW	0	2	3
N. Goshawk	0	0	1	0	0	0	0	0	0	0	0	0	0	1	0	0	2
Red-shouldered Hawk	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Red-tailed Hawk	0	0	0	0	0	0	0	0	0	0	0	0	0	4	1	25	30
Rough-legged Hawk	2	3	1	11	3	0	CW	6	5	1	4	1	1	9	0	11	58
American Kestrel	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	8	8
American Coot	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ring-billed Gull	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	2
Herring Gull	0	244	254	4	0	0	0	0	0	0	0	0	0	2	0	1	505
Rock Pigeon	1	52	0	116	4	6	0	0	40	1	7	0	11	161	0	325	724
Mourning Dove	0	5	19	42	37	0	23	2	38	31	11	15	379	72	1	230	905
Eastern Screech-Owl	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Great Horned Owl	0	0	0	0	0	0	0	0	2	0	0	0	0	1	0	5	8
Barred Owl	1	0	0	0	0	0	0	1	0	0	0	0	1	0	0	0	3
Belted Kingfisher	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Red-headed Woodpecker	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1
Red-bel. Woodpecker	CW	0	0	0	0	0	0	0	0	1	0	1	0	2	0	4	8
Yellow-b. Sapsucker	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Downy Woodpecker	2	12	7	9	8	6	28	10	28	10	16	16	45	31	5	26	259
Hairy Woodpecker	9	11	5	7	7	5	23	13	34	14	17	6	52	20	0	15	238
Northern Flicker	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Pileated Woodpecker	0	4	CW	2	3	1	3	3	3	2	3	4	13	9	1	5	56
Northern Shrike	2	6	3	8	0	0	4	3	0	1	2	0	2	1	1	2	35
Blue Jay	87	65	65	51	44	26	35	12	51	45	28	13	67	25	5	67	686
American Crow	55	208	499	241	131	81	88	136	296	72	106	46	48	133	26	307	2473
Common Raven	31	24	77	4	90	2	4	146	46	43	24	5	4	120	9	19	648
Horned Lark	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Black-cap. Chickadee	151	297	193	357	179	229	216	469	600	382	263	136	450	831	18	146	4917
Tufted Titmouse	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Red-breasted Nuthatch	11	24	29	17	4	4	31	47	71	33	50	27	58	34	0	4	444
White-br. Nuthatch	14	10	38	21	13	25	29	16	69	39	18	9	90	62	2	15	470
Brown Creeper	0	1	0	0	1	1	5	3	5	CW	4	3	2	6	0	0	31
Golden-cr. Kinglet	0	2	0	0	0	0	0	0	8	0	2	0	0	11	0	2	25
Eastern Bluebird	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
American Robin	0	0	0	8	0	0	0	0	0	0	0	0	0	0	0	0	8
European Starling	0	54	54	203	113	0	0	0	158	0	3	16	18	100	8	678	1405
Cedar Waxwing	CW	0	0	0	7	0	0	0	CW	0	0	0	7	0	0	29	43
American Tree Sparrow	0	0	0	0	0	0	0	0	7	0	0	6	3	0	5	104	125
Song Sparrow	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Swamp Sparrow	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
White-thr. Sparrow	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Dark-eyed Junco	5	0	7	0	3	0	0	0	13	0	3	2	23	CW	6	79	141
Lapland Longspur	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Snow Bunting	23	38	0	0	CW	19	0	0	140	0	0	4	0	294	0	90	608
Northern Cardinal	1	1	6	6	0	0	11	0	2	0	1	0	26	1	0	13	68
Red-winged Blackbird	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	2
Common Grackle	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Br.-headed Cowbird	0	CW	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Pine Grosbeak	7	10	12	17	85	1	46	38	43	38	25	22	10	240	0	0	594
Purple Finch	0	0	0	0	0	0	0	0	23	0	0	0	0	0	2	25	25
House Finch	0	0	CW	9	0	0	0	0	2	0	0	19	0	6	42	78	78
Common Redpoll	46	53	28	13	88	0	8	6	40	130	77	0	3	171	0	76	739
Pine Siskin	65	13	16	2	0	0	0	0	5	8	0	0	0	0	7	116	116
American Goldfinch	0	42	335	73	10	7	1	18	94	229	19	9	144	84	12	159	1236
Evening Grosbeak	22	0	11	21	18	0	36	89	55	32	87	57	198	26	12	0	664
House Sparrow	0	59	37	118	100	20	0	0	12	0	54	7	68	51	0	210	736
Total Species	23	29	31	32	27	17	20	25	29	23	26	28	33	38	17	39	

CW = Found within 3 days of the count day but not on the day of the count. **Bold lettering** within the counts indicates counts having the highest totals for the state.

Table 3. Number of each species in west-central Wisconsin found on 15 or more counts

Species	Grants- burg 17	New Richmond 18	Hudson 19	Nelson 20	Durand 21	Chip- pewa Falls 22	Holcombe 23	Gilman 24	Medford 25	Owen 26	Spencer 27	Willard 28	Black River Falls 29	Trem- pealeau 30	La Crosse 31	Region Totals
Canada Goose	75	4304	3560	0	0	386	3	0	0	4	1	0	0	167	4	8504
Mute Swan	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
American Black Duck	0	2	1	0	0	0	0	0	0	0	0	0	0	1	0	4
Mallard	13	358	426	16	0	94	0	0	153	0	12	0	0	47	772	1891
Bufflehead	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Common Goldeneye	0	10	69	0	0	0	0	0	0	0	0	0	0	0	4	83
Hooded Merganser	0	0	3	0	0	0	1	0	0	0	0	0	0	0	0	4
Common Merganser	0	0	1631	74	0	0	0	0	0	0	0	0	0	0	0	1705
Ring-necked Pheasant	26	18	0	9	4	3	0	21	3	5	11	3	0	6	0	109
Ruffed Grouse	8	1	0	1	0	4	0	13	23	11	6	7	2	1	1	78
Wild Turkey	12	213	84	130	113	110	89	187	26	361	380	68	60	67	176	2076
Great Blue Heron	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1
Bald Eagle	13	7	33	148	18	5	0	13	9	3	8	8	7	33	73	378
Northern Harrier	2	0	0	0	0	1	0	0	2	CW	0	0	0	1	1	7
Sharp-shinned Hawk	0	0	0	1	2	0	0	0	0	0	1	3	0	4	2	13
Cooper's Hawk	0	1	0	3	0	2	0	0	0	1	1	1	0	3	1	13
N. Goshawk	0	1	0	0	0	0	0	1	1	0	0	0	0	1	0	4
Red-shouldered Hawk	0	CW	0	1	0	0	0	0	0	0	0	0	0	0	0	1
Red-tailed Hawk	7	8	16	52	22	16	4	20	5	25	44	28	5	29	37	318
Rough-legged Hawk	13	1	1	14	12	4	2	20	14	8	13	11	0	16	4	133
American Kestrel	1	0	0	6	3	2	0	0	2	7	11	7	2	2	6	49
American Coot	0	0	5	0	0	0	0	0	0	0	0	0	0	0	0	5
Ring-billed Gull	0	0	12	0	0	0	0	0	0	0	0	0	0	0	0	12
Herring Gull	0	0	1	7	0	0	0	0	0	0	0	0	0	0	0	8
Rock Pigeon	147	406	138	595	721	353	29	511	418	470	801	575	63	558	768	6553
Mourning Dove	32	21	1	10	7	68	18	151	107	238	247	36	45	306	244	1531
Eastern Screech-Owl	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Great Horned Owl	1	2	3	0	0	1	0	12	0	7	11	2	0	3	5	47
Barred Owl	0	1	0	0	0	0	0	1	0	1	2	0	1	4	2	12
Belted Kingfisher	0	1	1	0	0	0	0	1	1	0	0	2	0	5	0	11
Red-headed Woodpecker	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	2
Red-bel. Woodpecker	6	6	6	44	21	17	2	4	3	25	15	7	14	36	45	251
Yellow-b. Sapsucker	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Downy Woodpecker	21	12	13	63	34	40	11	39	36	79	43	16	33	75	50	565

Hairy Woodpecker	10	3	7	25	7	11	6	32	30	45	21	11	7	22	36	273
Northern Flicker	1	CW	0	0	3	0	0	1	0	0	1	0	CW	4	1	11
Pileated Woodpecker	4	2	2	13	4	2	2	3	5	4	2	2	8	5	6	64
Northern Shrike	3	2	2	1	2	1	1	7	6	15	6	6	0	2	0	54
Blue Jay	144	101	58	172	129	133	51	94	88	230	123	132	59	199	114	1827
American Crow	191	579	562	1422	688	651	360	657	867	705	445	658	87	281	348	8501
Common Raven	13	0	0	0	0	0	0	44	12	4	0	12	2	0	1	88
Horned Lark	0	3	0	0	0	11	0	0	0	4	16	0	0	54	9	97
Black-cap. Chickadee	149	106	81	394	202	330	164	841	857	685	528	282	116	216	415	5366
Tufted Titmouse	0	0	0	3	3	30	0	0	0	0	0	0	7	10	26	79
Red-breasted Nuthatch	2	2	1	0	3	7	0	25	15	39	11	6	9	5	5	130
White-br. Nuthatch	20	26	21	52	28	37	13	76	39	78	66	52	45	58	85	696
Brown Creeper	0	0	1	0	0	0	0	1	1	0	1	0	0	2	9	15
Golden-cr. Kinglet	0	0	0	0	0	0	0	11	2	1	0	0	0	0	8	22
Eastern Bluebird	0	0	0	0	0	0	0	0	0	0	0	0	0	13	17	30
American Robin	0	44	0	0	13	0	0	0	CW	CW	1	1	0	25	1	85
European Starling	211	696	442	626	556	400	101	421	436	402	816	1512	26	414	1816	8875
Cedar Waxwing	31	405	0	0	77	0	0	0	1	0	21	0	0	13	28	576
American Tree Sparrow	99	126	16	110	223	482	43	111	29	429	231	25	14	225	479	2642
Song Sparrow	0	0	0	0	0	0	0	0	0	0	0	0	0	3	2	5
Swamp Sparrow	0	0	0	0	0	0	0	0	0	0	0	0	0	6	0	6
White-thr. Sparrow	0	0	0	0	0	0	0	0	0	1	0	0	0	6	0	7
Dark-eyed Junco	12	102	95	355	418	160	2	7	15	98	93	17	108	389	324	2195
Lapland Longspur	0	0	0	0	0	2	0	0	0	CW	2	0	0	0	0	4
Snow Bunting	542	21	0	0	0	280	0	25	200	185	287	10	0	0	0	1550
Northern Cardinal	2	31	22	130	92	68	15	19	26	110	81	43	38	175	120	972
Red-winged Blackbird	0	0	0	0	6	0	0	0	0	0	0	0	0	0	0	6
Common Grackle	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1
Br.-headed Cowbird	0	0	0	50	0	0	0	0	0	0	0	0	0	1	0	51
Pine Grosbeak	0	0	0	0	0	0	0	34	43	0	0	0	0	0	0	77
Purple Finch	13	3	0	8	2	2	6	1	15	23	7	0	38	19	4	141
House Finch	30	2	2	66	13	30	11	0	11	27	65	15	CW	59	63	394
Common Redpoll	131	40	0	50	0	50	22	58	212	66	112	106	0	0	0	847
Pine Siskin	0	2	0	33	2	0	0	0	13	0	0	0	0	9	2	61
American Goldfinch	74	45	29	150	28	170	22	135	118	133	157	103	88	185	137	1574
Evening Grosbeak	0	0	0	0	0	0	0	36	19	0	0	0	0	0	0	55
House Sparrow	188	38	100	815	115	336	339	907	417	1891	1313	492	2	514	482	7949
Total Species	36	45	40	36	34	37	25	38	40	37	45	34	26	53	51	

CW = Found within 3 days of the count day but not on the day of the count. **Bold lettering** within the counts indicates counts having the highest totals for the state.

Table 4. Number of each species in central Wisconsin found on 15 or more counts

Species	Merrill	Wausau	Mosinee	Arpin	Wisc. Rapids	Adams	Stevens Point	Wautoma	Fremont	Waupaca	Norske	Caroline	Shawano	Shiocton	Region Totals
	32	33	34	35	36	37	38	39	40	41	42	43	44	45	
Canada Goose	0	1	14	0	81	26	14	345	267	108	2	0	132	0	990
Mute Swan	0	0	0	0	2	0	0	0	0	0	0	0	2	0	4
American Black Duck	0	0	4	0	0	0	4	0	13	2	0	0	7	0	30
Mallard	6	133	101	0	479	6	622	198	127	117	2	241	270	66	2368
Bufflehead	0	0	0	0	1	0	0	0	0	0	0	0	0	0	1
Common Goldeneye	0	25	68	0	128	0	132	0	0	0	0	0	4	0	357
Hooded Merganser	0	0	0	0	2	0	1	0	0	0	0	0	3	0	6
Common Merganser	0	0	14	0	5	0	2	1	7	0	0	0	13	0	42
Ring-necked Pheasant	0	1	CW	16	2	0	7	3	50	0	0	2	15	4	100
Ruffed Grouse	1	1	8	4	2	1	10	4	3	0	1	4	21	5	65
Wild Turkey	12	48	253	476	199	132	399	184	280	436	87	90	501	110	3207
Great Blue Heron	0	0	0	0	0	0	1	1	0	0	0	0	0	0	2
Bald Eagle	1	1	2	4	9	1	9	6	2	5	2	2	11	9	64
Northern Harrier	0	1	1	0	2	3	0	0	2	0	0	0	2	1	12
Sharp-shinned Hawk	0	0	0	0	3	0	0	CW	2	0	0	0	1	2	8
Cooper's Hawk	0	2	2	0	0	0	4	1	1	2	0	0	1	4	17
N. Goshawk	0	0	CW	0	0	2	0	0	0	0	0	0	CW	0	2
Red-shouldered Hawk	0	1	0	0	0	0	0	1	0	1	0	0	1	0	4
Red-tailed Hawk	0	6	22	30	22	5	23	14	42	9	16	5	17	48	259
Rough-legged Hawk	0	0	9	18	5	16	19	9	17	6	15	6	7	16	143
American Kestrel	0	1	5	5	0	1	2	2	16	4	1	1	8	16	62
American Coot	0	0	0	0	0	0	0	0	0	0	0	0	3	0	3
Ring-billed Gull	0	0	0	0	0	0	0	0	4	0	1	0	0	2	7
Herring Gull	0	0	0	0	0	1	0	0	12	0	0	0	26	0	39
Rock Pigeon	292	140	364	412	241	48	429	108	770	555	87	385	467	805	5103
Mourning Dove	9	75	191	100	139	25	494	71	670	117	72	145	371	324	2803
Eastern Screech-Owl	0	0	2	0	0	2	0	0	0	0	1	0	0	0	5
Great Horned Owl	0	0	5	1	4	15	8	CW	2	1	2	5	14	0	57
Barred Owl	0	0	6	2	0	1	6	CW	0	0	1	1	8	0	25
Belted Kingfisher	0	0	CW	0	2	1	2	1	0	1	1	5	3	0	16
Red-headed Woodpecker	0	0	0	0	0	1	1	0	0	0	0	0	3	0	5
Red-bel. Woodpecker	0	6	10	4	9	2	30	15	42	17	4	8	16	27	190
Yellow-b. Sapsucker	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1
Downy Woodpecker	5	26	15	16	14	8	55	41	82	31	19	19	56	78	465

Hairy Woodpecker	2	12	12	5	7	3	32	29	20	6	18	19	35	12	212
Northern Flicker	0	0	0	0	1	1	0	CW	1	2	0	0	2	4	11
Pileated Woodpecker	CW	1	4	1	5	6	8	3	CW	6	4	3	13	2	56
Northern Shrike	0	0	2	CW	3	CW	10	2	5	1	3	1	8	7	42
Blue Jay	5	63	77	82	46	90	202	174	189	71	6	49	200	125	1379
American Crow	102	393	379	274	386	302	607	1128	346	550	69	409	877	423	6245
Common Raven	0	13	2	4	1	12	3	0	2	1	11	4	10	0	63
Horned Lark	0	45	0	0	0	0	5	0	11	3	1	12	9	38	124
Black-cap. Chickadee	28	147	204	96	103	133	611	237	332	186	184	191	398	314	3164
Tufted Titmouse	0	0	0	0	0	0	CW	1	0	0	0	0	1	2	4
Red-breasted Nuthatch	2	7	16	1	14	11	29	18	9	4	7	7	22	7	154
White-br. Nuthatch	7	16	26	4	36	26	86	27	61	37	19	29	50	48	472
Brown Creeper	0	0	CW	0	0	0	3	0	2	1	1	0	9	0	16
Golden-cr. Kinglet	0	0	4	0	0	0	2	0	0	0	17	4	9	0	36
Eastern Bluebird	0	0	0	0	0	0	0	3	3	0	0	0	0	0	6
American Robin	0	0	0	0	1	0	6	2	1	0	1	1	3	0	15
European Starling	180	260	212	361	CW	4	233	195	1139	410	286	512	1199	928	5919
Cedar Waxwing	0	0	0	0	35	0	45	15	67	8	3	30	118	26	347
American Tree Sparrow	0	7	177	37	17	59	166	16	730	65	64	17	91	96	1542
Song Sparrow	0	0	0	0	0	0	0	1	3	0	0	0	0	1	5
Swamp Sparrow	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1
White-thr. Sparrow	0	6	0	0	3	0	1	0	0	0	0	0	0	0	10
Dark-eyed Junco	0	52	34	27	90	57	415	222	948	333	143	170	338	345	3174
Lapland Longspur	0	0	0	0	0	0	0	0	0	0	1	0	12	0	13
Snow Bunting	0	82	CW	0	23	0	7	0	0	10	4	17	45	211	399
Northern Cardinal	2	39	19	27	28	5	128	50	135	40	30	41	104	95	743
Red-winged Blackbird	0	0	0	0	0	0	0	0	4	0	0	0	0	0	4
Common Grackle	0	0	0	0	0	0	0	0	1	0	0	0	2	0	3
Br.-headed Cowbird	0	0	0	0	0	0	0	0	15	0	0	0	0	0	15
Pine Grosbeak	0	0	CW	0	0	0	0	0	0	0	3	0	5	0	8
Purple Finch	0	13	0	0	1	30	4	41	0	1	0	11	31	2	134
House Finch	0	28	7	CW	45	0	454	83	202	72	6	85	155	192	1329
Common Redpoll	47	8	200	0	30	229	99	3	108	20	1	0	27	55	827
Pine Siskin	0	2	3	0	CW	0	8	1	0	1	1	35	21	20	92
American Goldfinch	6	58	117	32	39	19	253	117	285	151	79	93	385	274	1908
Evening Grosbeak	0	0	0	0	0	0	0	0	0	0	0	0	32	0	32
House Sparrow	25	145	403	273	113	26	354	46	1737	204	231	168	436	721	4882
Total Species	19	37	40	28	44	42	50	43	54	41	44	39	66	42	

CW = Found within 3 days of the count day but not on the day of the count. **Bold lettering** within the counts indicates counts having the highest totals for the state.

Table 5. Number of each species along Lake Michigan in Wisconsin found on 15 or more counts

Species	Pen-	Green	New	Sturgeon			Kewau-	Woodland Dunes		She-	Cedar	River-	Mil-	Hales	Racine	Kenosha	Region Totals
	saukee 46	Bay 47	Franken 48	Brussels 49	Bay 50	Ephraim 51	nee 52	NE 53	SE 54	boygan 55	Grove 56	edge 57	waukee 58	Corners 59	60	61	
Canada Goose	1452	12316	1063	2002	4945	854	5525	1217	3760	4200	1637	10005	5258	346	8043	5630	68253
Mute Swan	0	0	0	13	11	0	0	0	0	0	0	0	2	0	2	2	30
American Black Duck	5	260	CW	10	44	0	2	9	42	170	0	2	35	0	29	0	608
Mallard	2	4133	4	379	932	249	203	196	399	1200	5	381	1476	0	788	218	10565
Bufflehead	3	0	20	120	163	59	145	5	31	60	287	49	980	80	249	7	2258
Common Goldeneye	1969	19	CW	400	431	260	363	204	167	400	825	45	3475	54	342	19	8973
Hooded Merganser	4	2	0	5	1	0	0	0	2	0	0	4	14	CW	10	4	46
Common Merganser	101	608	CW	788	404	4	81	4	82	40	26	15	46	0	46	9	2254
Ring-necked Pheasant	13	0	26	9	2	0	11	7	0	0	10	15	0	0	0	9	102
Ruffed Grouse	4	0	1	4	5	1	2	0	0	0	0	1	0	0	0	0	18
Wild Turkey	6	10	96	493	203	73	74	139	19	0	53	439	3	0	1	0	1609
Great Blue Heron	0	1	0	2	0	0	3	1	0	0	1	7	9	2	CW	0	26
Bald Eagle	11	20	CW	6	6	5	0	4	1	0	0	1	0	0	0	0	54
Northern Harrier	3	12	CW	38	9	4	11	5	1	4	11	23	1	0	0	2	124
Sharp-shinned Hawk	CW	1	2	3	2	0	1	0	0	0	2	7	2	1	2	2	25
Cooper's Hawk	1	5	3	3	2	0	1	0	2	2	3	9	13	4	4	1	53
N. Goshawk	0	0	3	0	0	1	0	0	0	0	0	2	0	0	0	0	6
Red-shouldered Hawk	CW	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Red-tailed Hawk	27	93	21	21	27	2	16	11	6	5	43	127	49	6	12	9	475
Rough-legged Hawk	4	5	3	39	28	4	5	1	0	0	0	6	0	0	1	1	97
American Kestrel	2	22	7	13	2	0	11	13	8	4	43	30	5	5	14	11	190
American Coot	3	0	0	0	6	1	2	0	1	0	0	23	90	0	10	24	160
Ring-billed Gull	9	26	5	153	76	130	275	10	258	315	491	196	1291	131	432	711	4509
Herring Gull	75	39	21	314	158	166	519	979	369	500	218	52	4797	0	1576	165	9948
Rock Pigeon	315	840	203	226	172	2	555	74	217	290	1048	1306	983	40	124	468	6863
Mourning Dove	522	944	272	134	211	55	292	192	78	227	552	1219	645	113	498	66	6020
Eastern Screech-Owl	CW	5	1	1	1	0	1	0	0	0	9	16	7	0	10	1	52
Great Horned Owl	1	15	7	2	8	1	2	1	5	9	14	56	5	5	3	3	137
Barred Owl	CW	3	1	CW	5	0	0	0	0	0	2	14	0	0	0	0	25
Belted Kingfisher	1	1	0	1	1	0	1	2	1	0	0	10	1	1	0	0	20
Red-headed Woodpecker	1	1	4	0	0	0	0	0	1	0	0	0	0	0	0	0	7
Red-bel. Woodpecker	4	40	26	8	21	7	12	6	4	3	21	99	34	4	16	3	308
Yellow-b. Sapsucker	0	0	1	1	1	0	0	0	0	0	0	3	1	1	0	0	8

Downy Woodpecker	15	77	80	34	71	11	36	19	22	7	70	356	135	40	38	6	1017
Hairy Woodpecker	5	17	32	21	49	12	3	13	3	2	12	118	28	2	6	2	325
Northern Flicker	1	0	7	1	0	0	0	0	0	0	0	20	1	3	2	CW	35
Pileated Woodpecker	1	0	4	5	8	6	1	0	0	0	0	4	0	0	0	0	29
Northern Shrike	2	7	1	4	7	0	4	1	0	0	6	8	2	CW	0	1	43
Blue Jay	70	117	135	21	122	18	48	19	12	25	50	210	27	20	32	9	935
American Crow	205	360	188	826	493	287	694	279	94	257	312	1353	528	45	228	118	6267
Common Raven	7	0	2	11	26	13	2	0	0	0	0	0	0	0	0	0	61
Horned Lark	7	0	25	0	0	0	0	0	0	0	0	0	0	0	6	25	63
Black-cap. Chickadee	118	340	272	145	428	124	354	179	97	75	430	1269	539	135	153	68	4726
Tufted Titmouse	0	0	0	0	0	0	0	1	0	0	0	0	0	0	CW	0	1
Red-breasted Nuthatch	0	26	9	7	40	10	14	10	8	11	23	33	50	6	10	3	260
White-br. Nuthatch	17	70	68	26	51	11	26	26	32	8	52	264	115	41	25	2	834
Brown Creeper	2	3	0	1	2	1	1	1	2	1	1	6	3	1	0	0	25
Golden-cr. Kinglet	0	0	0	0	3	0	9	5	1	1	1	3	1	CW	0	0	24
Eastern Bluebird	0	12	0	0	0	0	0	0	0	0	0	0	15	CW	0	CW	27
American Robin	4	10	1	0	2	0	0	1	0	2	7	3	435	40	16	1	522
European Starling	305	4459	226	1441	900	165	868	289	191	310	1748	2624	865	168	459	245	15263
Cedar Waxwing	37	108	34	119	15	0	173	25	0	0	28	187	498	35	274	13	1546
American Tree Sparrow	109	541	18	33	109	0	17	28	33	8	181	741	212	8	82	37	2157
Song Sparrow	0	4	17	0	1	0	2	0	8	1	3	6	9	1	6	2	60
Swamp Sparrow	0	0	0	0	0	0	0	1	1	0	1	1	3	0	0	6	13
White-thr. Sparrow	1	5	1	0	0	0	0	2	0	0	0	24	27	1	0	19	80
Dark-eyed Junco	111	547	432	131	351	18	314	201	70	40	346	1235	730	73	469	65	5133
Lapland Longspur	0	0	0	0	0	0	0	0	0	0	150	0	0	0	0	0	150
Snow Bunting	354	200	68	102	8	15	0	89	100	0	0	0	0	0	6	313	1255
Northern Cardinal	59	132	161	48	86	16	79	62	37	15	130	496	368	63	77	15	1844
Red-winged Blackbird	6	4	1	0	0	0	0	0	0	0	0	0	0	4	0	CW	15
Common Grackle	2	6	5	0	0	0	0	0	0	0	0	0	3	0	0	CW	16
Br.-headed Cowbird	1	0	0	0	0	0	0	0	0	0	42	0	0	0	1	0	44
Pine Grosbeak	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	2
Purple Finch	47	0	32	16	11	22	32	0	2	2	1	35	8	0	CW	0	208
House Finch	88	452	104	56	163	0	45	97	87	27	126	513	904	30	107	6	2805
Common Redpoll	6	38	4	84	87	7	4	0	0	0	0	15	0	0	6	0	251
Pine Siskin	15	18	13	0	55	6	90	89	2	0	1	7	24	0	CW	4	324
American Goldfinch	188	345	303	279	673	37	314	255	63	70	266	847	312	80	346	55	4433
Evening Grosbeak	0	0	0	0	0	0	0	0	7	0	0	0	0	0	0	0	7
House Sparrow	340	1615	526	282	147	4	427	67	158	57	1257	1756	1221	159	519	68	8603
Total Species	57	59	52	57	62	41	55	52	52	46	61	68	78	40	60	52	

CW = Found within 3 days of the count day but not on the day of the count. **Bold lettering** within the counts indicates counts having the highest totals for the state.

Table 6. Number of each species in hinterland east Wisconsin found on 15 or more counts

Species	Pesh- tigo 62	Sey- mour 63	Apple- ton 64	Osh- kosh 65	Fond du Lac 66	Stock- bridge 67	Woodland Dunes		Ply- mouth 70	Kettle Moraine 71	Hart- ford 72	Ocono- mowoc 73	Wau- kesha 74	Palmyra 75	Bur- lington 76	Lake Geneva 77	Region Totals
							NW 68	SW 69									
Canada Goose	153	10200	6677	2402	550	500	13	57	1152	127	1758	7622	4761	3818	2674	12380	54844
Mute Swan	1	0	0	0	0	0	0	0	0	0	7	2	2	34	0	0	46
American Black Duck	0	0	85	36	20	2	0	0	0	12	5	0	6	12	24	202	
Mallard	104	120	1525	2873	420	50	23	4	12	5	248	822	423	53	1049	1318	9049
Bufflehead	0	0	6	1	1	0	0	0	0	0	18	0	0	0	489	515	
Common Goldeneye	13	0	347	28	8	0	0	0	0	1	CW	0	40	0	1299	1736	
Hooded Merganser	2	0	4	2	0	0	0	0	0	0	1	0	2	0	54	65	
Common Merganser	9	0	462	50	500	0	0	0	0	0	0	0	0	0	1095	2116	
Ring-necked Pheasant	1	0	4	11	0	CW	0	1	10	3	6	3	3	1	4	7	54
Ruffed Grouse	6	0	0	0	2	0	2	6	0	0	0	0	0	0	0	0	16
Wild Turkey	102	2	0	55	25	28	64	80	208	216	269	110	64	14	18	58	1313
Great Blue Heron	1	0	1	1	0	0	0	1	0	1	6	1	1	3	3	2	21
Bald Eagle	11	0	19	20	0	0	0	1	0	0	0	1	2	0	0	4	58
Northern Harrier	0	2	6	9	2	4	4	3	6	7	0	2	4	6	1	2	58
Sharp-shinned Hawk	0	0	1	CW	0	0	0	0	2	0	1	0	2	0	2	0	10
Cooper's Hawk	0	1	11	16	2	0	0	0	1	5	6	3	4	6	8	4	67
N. Goshawk	1	0	0	0	0	CW	0	0	1	0	0	0	0	0	0	0	2
Red-shouldered Hawk	0	0	0	1	0	0	0	0	0	1	0	0	0	0	1	3	3
Red-tailed Hawk	21	5	97	72	15	27	9	14	41	47	58	37	34	43	30	48	598
Rough-legged Hawk	37	1	7	7	2	1	2	0	3	1	0	1	2	1	1	0	66
American Kestrel	0	25	40	39	13	14	3	8	11	17	12	4	2	9	9	12	218
American Coot	0	0	1	0	0	0	0	0	0	0	0	70	0	0	0	1733	1804
Ring-billed Gull	2	0	121	8	140	20	5	1	0	20	4	26	14	9	24	148	542
Herring Gull	5	0	178	320	455	244	364	28	0	3	21	0	4	2	16	161	1801
Rock Pigeon	352	466	825	1242	387	705	76	298	305	595	858	191	51	466	150	327	7294
Mourning Dove	333	201	819	1372	97	345	110	83	230	380	628	282	210	425	331	222	6068
Eastern Screech-Owl	0	0	1	2	2	0	1	0	0	4	3	13	1	13	6	8	54
Great Horned Owl	3	0	6	8	1	1	2	6	1	3	7	25	16	11	16	2	108
Barred Owl	0	0	0	1	2	0	1	3	0	2	0	2	0	2	0	0	13
Belted Kingfisher	0	0	0	0	0	0	1	0	1	1	1	1	5	CW	2	3	15
Red-headed Woodpecker	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	2	4
Red-bel. Woodpecker	4	5	41	26	6	13	4	3	13	18	40	20	15	39	21	39	307
Yellow-b. Sapsucker	0	0	2	0	0	0	0	0	0	0	0	0	1	CW	0	0	3
Downy Woodpecker	16	17	137	106	14	47	6	19	38	51	99	60	25	57	30	74	796

Hairy Woodpecker	13	6	32	21	4	10	6	5	10	10	15	12	14	17	2	20	197
Northern Flicker	0	0	1	0	3	0	1	0	0	2	5	1	4	3	3	9	32
Pileated Woodpecker	4	0	0	0	0	0	3	0	0	2	2	0	2	0	0	0	13
Northern Shrike	3	0	4	2	1	2	1	0	1	3	6	3	0	2	2	0	30
Blue Jay	76	19	84	134	42	36	2	19	46	59	112	96	81	141	81	77	1105
American Crow	270	138	779	239	253	72	100	189	412	667	633	325	397	400	187	569	5630
Common Raven	29	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	30
Horned Lark	3	0	65	40	3	29	107	12	0	0	67	0	0	7	42	15	390
Black-cap. Chickadee	384	74	322	158	64	84	89	33	90	257	593	219	186	308	122	322	3305
Tufted Titmouse	0	0	0	0	0	0	0	0	0	0	0	3	5	9	0	19	36
Red-breasted Nuthatch	8	3	14	9	4	2	5	4	13	65	42	8	12	26	5	17	237
White-br. Nuthatch	23	14	115	72	12	25	10	16	23	51	139	64	16	74	33	112	799
Brown Creeper	1	0	5	2	2	0	2	0	0	3	2	0	2	7	2	2	30
Golden-cr. Kinglet	0	0	1	3	1	0	2	0	0	6	2	0	1	16	3	0	35
Eastern Bluebird	0	0	0	0	0	0	0	0	0	0	0	0	1	0	6	0	7
American Robin	0	0	38	12	1	3	0	0	0	0	1	15	60	12	3	42	187
European Starling	2202	1145	3195	3897	630	800	255	149	314	1490	1339	256	259	614	248	3228	20021
Cedar Waxwing	1	0	122	24	0	30	0	0	0	132	132	56	45	127	176	103	948
American Tree Sparrow	379	7	172	322	70	52	26	59	116	79	332	131	285	322	109	432	2893
Song Sparrow	0	0	0	3	0	2	1	0	0	0	2	2	6	13	5	12	46
Swamp Sparrow	0	0	0	0	0	0	1	0	0	0	1	0	3	2	1	4	12
White-thr. Sparrow	1	0	27	2	0	0	2	0	0	0	0	1	0	1	0	7	41
Dark-eyed Junco	295	83	584	511	58	169	96	45	116	258	513	245	223	460	253	482	4391
Lapland Longspur	0	0	2	20	2	0	40	0	0	0	1	0	0	0	1	0	66
Snow Bunting	31	0	2428	128	0	181	0	0	0	0	0	0	0	0	0	0	2768
Northern Cardinal	25	32	231	188	28	92	15	25	66	100	234	161	138	171	89	184	1779
Red-winged Blackbird	0	0	0	7	0	0	0	0	0	0	0	0	5	10	45	8	75
Common Grackle	0	0	0	8	0	0	0	0	17	0	0	1	0	0	2	2	30
Br.-headed Cowbird	0	0	0	12	0	0	0	0	0	156	21	0	0	7	14	74	284
Pine Grosbeak	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Purple Finch	9	0	15	8	4	0	0	1	0	31	7	14	12	7	4	2	114
House Finch	9	70	429	385	38	120	18	21	43	51	482	90	67	110	96	219	2248
Common Redpoll	129	0	0	0	2	0	3	0	0	0	0	0	0	0	0	0	134
Pine Siskin	28	0	19	10	0	0	12	2	6	7	15	0	1	96	6	53	255
American Goldfinch	189	100	319	154	78	82	38	79	178	322	290	201	90	342	121	339	2922
Evening Grosbeak	2	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	3
House Sparrow	436	988	1939	2605	540	1335	30	204	304	1876	1184	318	53	620	351	701	13484
Total Species	48	26	61	55	46	34	44	35	33	47	49	52	53	64	54	68	

CW = Found within 3 days of the count day but not on the day of the count. **Bold lettering** within the counts indicates counts having the highest totals for the state.

Table 7. Number of each species in south-central Wisconsin found on 15 or more counts

Species	Rosen- dale 78	Green Lake 79	Montello 80	Pardee- ville 81	Randolph 82	Horicon Marsh 83	Hustis- ford 84	Columbus 85	Poynette 86	Madison 87	Water- loo 88	Fort Atkinson 89	Cooks- ville 90	Beloit 91	Region Totals
Canada Goose	6887	10774	801	334	3867	48000	806	198	3654	10313	1132	1057	1683	3303	92809
Mute Swan	0	2	4	0	0	0	0	0	0	30	0	0	0	0	36
American Black Duck	0	0	11	2	0	0	1	0	4	18	1	1	0	9	47
Mallard	7	168	347	12	60	30	171	335	121	2560	254	205	147	681	5098
Bufflehead	0	1	0	0	0	0	0	0	0	224	0	0	0	0	225
Common Goldeneye	0	274	0	7	0	0	0	0	60	355	7	0	0	391	1094
Hooded Merganser	0	0	0	0	0	0	0	0	0	57	1	0	0	4	62
Common Merganser	0	140	0	12	0	0	0	0	52	2338	0	0	0	13	2555
Ring-necked Pheasant	14	1	24	20	21	9	7	17	31	2	9	8	4	5	172
Ruffed Grouse	0	1	1	0	0	0	0	0	0	0	0	0	0	0	2
Wild Turkey	0	135	412	606	147	60	29	13	135	142	173	89	55	13	2009
Great Blue Heron	1	0	1	1	0	1	1	2	0	2	1	2	2	4	18
Bald Eagle	0	6	12	36	0	1	1	1	19	8	CW	2	0	1	87
Northern Harrier	13	4	1	3	1	29	10	7	11	3	9	1	1	3	96
Sharp-shinned Hawk	2	1	3	1	2	1	3	3	3	2	2	0	0	1	24
Cooper's Hawk	5	1	1	1	5	3	2	5	7	22	6	8	2	10	78
N. Goshawk	0	1	0	0	0	0	0	0	1	0	0	0	0	0	2
Red-shouldered Hawk	0	0	1	1	0	0	0	0	1	0	0	0	0	0	3
Red-tailed Hawk	60	41	56	44	50	56	75	67	56	112	49	34	20	54	774
Rough-legged Hawk	8	13	31	21	1	35	3	1	10	7	2	1	0	1	134
American Kestrel	52	9	3	7	12	16	24	29	8	11	14	7	10	16	218
American Coot	0	0	0	0	0	0	0	0	0	575	23	0	0	2	600
Ring-billed Gull	14	6	16	82	1	16	30	7	27	844	79	6	6	9	1143
Herring Gull	5	39	110	4	2	0	8	15	30	1568	20	13	1	11	1826
Rock Pigeon	436	199	368	480	1184	461	645	480	372	759	229	117	193	1054	6977
Mourning Dove	476	87	485	287	960	178	343	203	364	708	448	174	111	576	5400
Eastern Screech-owl	0	1	3	1	13	17	0	3	6	16	0	2	8	7	77
Great Horned Owl	1	2	20	9	8	20	3	3	3	29	2	3	16	19	138
Barred Owl	0	1	6	1	0	3	0	1	2	0	1	0	0	4	19
Belted Kingfisher	0	1	4	1	0	2	1	CW	3	6	1	2	2	3	26
Red-headed Woodpecker	1	0	5	5	0	0	0	0	1	0	0	1	0	4	17
Red-bel. Woodpecker	13	17	41	48	33	19	25	37	64	194	44	22	11	48	616
Yellow-b. Sapsucker	0	1	1	0	0	0	0	0	0	10	0	0	0	0	12
Downy Woodpecker	41	31	58	77	70	78	79	82	108	278	87	85	28	78	1180

Hairy Woodpecker	8	8	27	16	10	11	13	15	30	105	24	22	4	18	311
Northern Flicker	1	1	16	2	0	2	0	1	10	12	6	0	0	7	58
Pileated Woodpecker	0	2	4	2	0	0	0	0	5	1	0	0	0	1	15
Northern Shrike	4	0	6	3	2	7	1	1	4	9	0	1	2	4	44
Blue Jay	66	19	316	398	204	71	74	105	395	432	175	61	81	114	2511
American Crow	530	311	565	425	327	130	306	401	1263	1973	436	175	214	747	7803
Common Raven	0	2	2	0	0	0	0	0	0	0	0	0	0	0	4
Horned Lark	25	0	CW	0	24	7	117	143	0	1	58	0	152	373	900
Black-cap. Chickadee	86	265	247	306	158	165	235	259	306	1367	367	240	107	209	4317
Tufted Titmouse	0	0	8	17	2	0	0	0	51	16	12	5	2	9	122
Red-breasted Nuthatch	9	2	19	5	3	7	3	3	30	39	7	14	5	3	149
White-br. Nuthatch	27	84	87	86	59	54	71	96	107	294	118	57	23	88	1251
Brown Creeper	1	0	3	2	0	4	1	3	1	28	0	3	CW	8	54
Golden-cr. Kinglet	0	0	0	0	0	0	0	1	0	7	3	0	0	0	11
Eastern Bluebird	0	10	10	2	0	0	0	0	4	0	CW	0	0	0	26
American Robin	1	44	28	23	0	0	1	0	86	117	5	2	0	17	324
European Starling	1072	457	418	368	1436	760	2388	2578	1430	5298	4969	649	1594	2873	26290
Cedar Waxwing	9	24	197	260	0	3	0	25	252	291	80	37	0	126	1304
American Tree Sparrow	126	154	65	685	1245	477	779	340	327	1193	907	44	331	456	7129
Song Sparrow	1	0	0	0	0	1	3	3	0	28	3	1	3	9	52
Swamp Sparrow	0	0	0	0	0	1	0	0	1	10	0	0	0	1	13
White-thr. Sparrow	0	0	0	1	0	0	0	1	0	37	1	4	0	8	52
Dark-eyed Junco	349	326	629	1539	1707	317	595	519	783	1889	1028	231	202	566	10680
Lapland Longspur	80	0	0	0	0	0	107	60	12	0	0	0	CW	CW	259
Snow Bunting	170	0	0	0	685	0	0	1	0	1	0	0	2	0	859
Northern Cardinal	41	65	84	106	95	82	148	69	141	716	154	142	92	212	2147
Red-winged Blackbird	4	115	6	0	5	1701	991	2	0	86	0	0	151	2	3063
Common Grackle	0	CW	0	0	2	0	5	1	CW	3	0	0	0	0	11
Br.-headed Cowbird	358	0	0	0	1	0	231	45	1	0	7	27	26	24	720
Pine Grosbeak	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Purple Finch	0	15	49	36	0	6	0	1	57	4	3	6	0	0	177
House Finch	140	124	134	280	235	41	120	86	208	970	291	125	55	226	3035
Common Redpoll	0	0	0	0	0	0	0	0	4	13	0	0	0	0	17
Pine Siskin	0	0	7	5	9	0	0	0	22	25	1	54	4	0	127
American Goldfinch	252	128	194	303	314	206	453	254	249	858	249	298	50	183	3991
Evening Grosbeak	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1
House Sparrow	871	293	274	409	3204	691	1331	2317	475	1567	2213	81	404	1269	15399
Total Species	45	55	57	52	41	45	46	49	66	87	51	46	42	57	

CW = Found within 3 days of the count day but not on the day of the count. **Bold lettering** within the counts indicates counts having the highest totals for the sta

Table 8. Number of each species in southwestern Wisconsin found on 15 or more counts

Species	Blanchard- ville 92	Mount Horeb 93	Baraboo 94	Sauk City 95	Clyde 96	Richland Center 97	Kickapoo Valley 98	Bridge- port 99	Cass- ville 100	Region Totals	Number of Counts	No. of Individuals	Percent Change
Canada Goose	110	122	1326	1161	1	0	0	57	0	2777	75	228,196	-34.6%
Mute Swan	0	0	0	0	0	0	0	0	0	0	16	117	+41.1%
American Black Duck	0	0	CW	4	0	0	0	8	0	12	40	950	-29.0%
Mallard	13	11	306	489	0	40	0	362	0	1221	78	30,772	-35.2%
Bufflehead	0	0	CW	0	0	0	0	0	0	0	24	3,003	+57.6%
Common Goldeneye	0	0	66	112	0	0	0	1	0	179	41	12,477	+26.7%
Hooded Merganser	0	0	0	0	0	0	0	0	0	0	23	183	-12.0%
Common Merganser	0	0	20	233	0	0	0	1	52	306	37	8,980	+14.4%
Ring-necked Pheasant	25	9	10	7	0	12	1	31	2	97	65	645	+51.0%
Ruffed Grouse	0	0	0	0	0	0	0	2	0	2	53	328	-10.7%
Wild Turkey	306	238	150	103	45	751	146	109	20	1868	83	12,316	+95.5%
Great Blue Heron	4	0	0	3	0	0	0	0	0	7	35	75	+80.3%
Bald Eagle	5	0	28	168	33	51	1	134	282	702	75	1,462	+59.1%
Northern Harrier	3	8	0	3	0	10	0	0	0	24	57	321	+93.5%
Sharp-shinned Hawk	2	1	2	2	1	2	CW	1	0	11	48	93	-9.0%
Cooper's Hawk	3	2	5	4	2	3	2	5	1	27	67	258	+40.3%
N. Goshawk	0	1	0	0	0	0	0	0	0	1	15	19	-21.5%
Red-shouldered Hawk	1	0	0	2	0	0	0	1	0	4	15	16	+95.1%
Red-tailed Hawk	66	127	75	80	14	116	41	53	34	606	86	3,060	+17.2%
Rough-legged Hawk	9	4	18	22	3	16	3	13	2	90	85	721	+24.4%
American Kestrel	19	31	8	35	7	28	5	9	13	155	77	900	+9.2%
American Coot	0	0	0	0	0	0	0	0	0	0	17	2,572	-57.4%
Ring-billed Gull	0	0	179	1045	0	0	0	0	1	1225	53	7,440	-41.5%
Herring Gull	0	8	267	1419	0	2	0	0	19	1715	56	15,842	-8.0%
Rock Pigeon	244	522	263	630	58	733	140	433	278	3301	95	36,815	+8.1%
Mourning Dove	117	520	153	606	0	220	40	258	20	1934	97	24,661	+35.6%
Eastern Screech Owl	6	1	2	0	0	1	0	8	3	21	41	209	-8.9%
Great Horned Owl	35	3	6	6	1	6	3	5	1	66	77	561	+34.7%
Barred Owl	6	1	3	7	0	6	2	8	4	37	45	134	+44.6%
Belted Kingfisher	6	0	7	7	4	4	3	4	0	35	50	123	+24.6%
Red-headed Woodpecker	11	12	1	5	2	2	2	2	15	52	26	88	-23.5%
Red-bel. Woodpecker	105	94	75	63	13	81	24	73	65	593	87	2,273	+41.6%
Yellow-b. Sapsucker	0	0	3	1	0	1	0	0	0	5	15	29	+111.7%
Downy Woodpecker	95	203	99	89	10	119	19	67	77	778	100	5,060	+6.2%

Hairy Woodpecker	32	45	25	37	9	38	7	16	15	224	99	1,780	-0.5%
Northern Flicker	6	3	6	14	3	2	0	2	9	45	47	192	+20.2%
Pileated Woodpecker	3	14	12	8	3	12	2	8	7	69	68	302	+16.0%
Northern Shrike	4	3	5	6	0	1	2	2	1	24	78	272	+15.8%
Blue Jay	294	477	344	289	74	511	69	153	82	2293	100	10,736	-5.8%
American Crow	295	1394	731	1457	89	1087	173	605	516	6347	100	43,266	+10.4%
Common Raven	0	0	0	0	0	0	0	0	0	0	44	894	+9.1%
Horned Lark	67	23	2	8	0	27	5	60	45	237	46	1,811	-43.3%
Black-cap. Chickadee	344	601	409	344	40	535	102	275	171	2821	100	28,616	+1.0%
Tufted Titmouse	17	111	38	21	8	53	8	74	39	369	32	611	+72.3%
Red-breasted Nuthatch	7	9	5	4	0	7	0	1	2	35	94	1,409	0.0%
White-br. Nuthatch	139	207	129	63	28	86	17	86	61	816	100	5,338	+4.9%
Brown Creeper	1	1	3	2	3	2	1	6	5	24	64	195	-37.5%
Golden-cr. Kinglet	0	0	0	1	0	0	0	1	0	2	36	155	-40.6%
Eastern Bluebird	1	5	5	41	1	28	0	7	13	101	20	197	+193.2%
American Robin	1	6	5	172	0	1	1	6	10	202	54	1,343	-53.4%
European Starling	457	563	1011	1554	466	2217	355	1249	449	8321	94	86,094	+7.6%
Cedar Waxwing	24	19	64	171	24	100	0	30	110	542	62	5,306	+40.7%
American Tree Sparrow	540	378	78	207	42	215	64	453	319	2296	87	18,784	-2.2%
Song Sparrow	25	6	1	2	0	11	0	1	7	53	42	221	-32.0%
Swamp Sparrow	9	0	2	4	0	1	0	0	4	20	23	65	-13.8%
White-thr. Sparrow	1	1	0	5	0	0	0	0	0	7	29	197	-1.2%
Dark-eyed Junco	770	802	434	769	119	847	121	762	410	5034	92	30,748	-6.6%
Lapland Longspur	2	31	0	0	0	0	0	0	0	33	17	525	-71.9%
Snow Bunting	0	2	0	0	0	0	0	0	0	2	43	7,441	-16.7%
Northern Cardinal	276	202	140	212	17	338	30	221	101	1537	94	9,090	+15.8%
Red-winged Blackbird	2	3	0	100	0	0	0	60	0	165	27	3,330	+144.2%
Common Grackle	0	0	0	0	0	12	0	0	0	12	17	73	-67.1%
Br.-headed Cowbird	4	3	0	0	0	0	1	0	0	8	24	1,122	+123.5%
Pine Grosbeak	0	0	0	0	0	0	0	0	0	0	19	681	+20.8%
Purple Finch	28	32	61	65	6	32	CW	43	35	302	64	1,101	-31.3%
House Finch	37	206	274	212	23	70	12	59	99	992	83	10,881	+31.7%
Common Redpoll	0	0	0	0	0	5	0	1	0	6	55	2,821	+0.8%
Pine Siskin	4	0	27	5	0	5	0	9	0	50	41	1,025	-51.1%
American Goldfinch	194	338	219	291	48	308	74	283	249	2004	99	18,068	+16.6%
Evening Grosbeak	0	0	0	0	0	9	0	0	0	9	21	771	-51.7%
House Sparrow	1266	929	423	454	98	1747	112	1890	496	7415	95	58,468	+12.5%
Total Species	59	50	55	62	33	54	35	60	46				

CW = Found within 3 days of the count day but not on the day of the count. **Bold lettering** within the counts indicates counts having the highest totals for the state.

Table 9. Species found on 14 or fewer counts

Species	Number of Counts	Number of Birds	Count and Number
Greater White-fronted Goose	1	1	Madison 1
Snow Goose	9	2	Fort Atkinson 2, Fremont 1, Green Lake 1, Horicon Marsh 5, (Kenosha), Kewaunee 6 , Palmyra 1, Racine 1, Sheboygan 3, Waukesha 1
Trumpeter Swan	4	173	Hudson 153 , Manitowish Waters 4, (New Richmond), Palmyra 1, Shawano 15
Tundra Swan	8	692	Bayfield 14, Brussels 50, Hustisford 40, La Crosse 1, Lake Geneva 2, Madison 371 , (New Franken), Pensaukee 198, Sauk City 16, (Trempealeau)
Wood Duck	7	11	Blanchardville 1, Burlington 4 , Green Bay 1, Madison 2, Merrill 1, (Montello), Poynette 1, Shiocton 1
Gadwall	12	444	Appleton 2, Cooksville 9, Hudson 8, Lake Geneva 16, Madison 313 , Milwaukee 65, New Richmond 13, Oconomowoc 4, Poynette 2, Racine 8, Sheboygan 2, Waukesha 2
American Wigeon	2	2	Fremont 1, Milwaukee 1
Northern Shoveler	2	237	Madison 235 , Shawano 2
Northern Pintail	4	7	Appleton 1, (Beloit), Poynette 1, Shawano 3 , Sheboygan 2
Green-winged Teal	2	2	Caroline 1, Madison 1
Canvasback	9	73	Appleton 4, Hustisford 2, (Kenosha), La Crosse 2, Lake Geneva 48 , Madison 5, Milwaukee 7, (Oshkosh), Palmyra 2, Racine 1, Waukesha 2
Redhead	9	438	Cedar Grove 58, Ephraim 325 , Green Lake 2, (Kenosha), Lake Geneva 10, Madison 3, Milwaukee 4, Racine 19, Riveredge 15, Shawano 2
Ring-necked Duck	9	41	Brussels 1, Lake Geneva 19 , Madison 2, Milwaukee 4, Palmyra 11, (Plymouth), Rhinelander 1, Riveredge 1, Waterloo 1, Wisconsin Rapids 1
Greater Scaup	13	19,826	Brussels 3, Cedar Grove 11,910 , Ephraim 26, Kenosha 60, Kewaunee 35, Madison 4, Milwaukee 6026, (New Franken), Racine 712, Riveredge 872, Sheboygan 15, Sturgeon Bay 138, Woodland Dunes NE 9, SE 16
Lesser Scaup	10	592	Appleton 2, Fond du Lac 18, Green Bay 3, Hartford 1, Lake Geneva 50, Madison 18, Milwaukee 448 , Riveredge 50, Sheboygan 1, Woodland Dunes SE 1
Harlequin Duck	1	1	Milwaukee 1
Surf Scoter	3	13	Cedar Grove 10 , Milwaukee 2, Sheboygan 1
White-wing. Scoter	2	9	Cedar Grove 1, Kenosha 8
Black Scoter	3	10	Cedar Grove 8 , Madison 1, Racine 1
Long-tailed Duck	7	544	Cedar Grove 372 , Hudson 1, (Kenosha), Milwaukee 11, Racine 14, Sheboygan 35, Sturgeon Bay 55, Woodland Dunes NE 56
Barrow's Goldeneye	1	1	Milwaukee 1
Red-breasted Merganser	14	760	Brussels 1, Cedar Grove 113, Hales Corners 17, Kenosha 8, Lake Geneva 1, Madison 10, Milwaukee 206 , (New Franken), (Oshkosh), Pensaukee 2, Racine 98, Riveredge 48, Sheboygan 80, Sturgeon Bay 132, Woodland Dunes NE 42, SE 2

Ruddy Duck	3	5	Kenosha 1, Lake Geneva 3 , Racine 1
Gray Partridge	3	21	Bridgeport 14 , Green Bay 3, (Kenosha), Oconomowoc 4
Sharp-tailed Grouse	1	3	Gilman 3
Greater Prairie-Chicken	3	80	Adams 25, Arpin 53 , Spencer 2
Northern Bobwhite	5	53	Adams 15, Blanchardville 16 , Kenosha 6, (Montello), Pardeeville 15, Richland Center 1
Red-throated Loon	1	1	Woodland Dunes NE 1
Common Loon	5	8	Cedar Grove 2, Green Lake 1, Lake Geneva 1, Milwaukee 1, (Sturgeon Bay), Woodland Dunes NE 3
Pied-billed Grebe	4	17	Lake Geneva 11 , Palmyra 1, Solon Springs 1, Sturgeon Bay 4
Horned Grebe	1	1	Milwaukee 1
American White Pelican	2	2	Green Bay 1, Oconomowoc 1
Double-crested Cormorant	9	54	Appleton 5, Fond du Lac 1, Green Bay 32 , Milwaukee 4, Racine 2, Riveredge 1, Sauk City 6, Sturgeon Bay 2, Woodland Dunes SE 1
Black-crowned Night-Heron	1	1	Burlington 1
Turkey Vulture	2	3	Baraboo 2 , Kettle Moraine 1
Golden Eagle	4	9	Bridgeport 1, Cassville 5 , (Hudson), Kickapoo Valley 2, Stevens Point 1
Merlin	8	8	Adams 1, Appleton 1, Fremont 1, Hudson 1, Kewaunee 1, Madison 1, Montello 1, Sturgeon Bay 1
Peregrine Falcon	7	10	Appleton 2, Green Bay 3 , Milwaukee 1, Racine 1, Riveredge 1, Sheboygan 1, Woodland Dunes SE 1
Virginia Rail	1	2	Poynette 2
Sandhill Crane	4	62	Burlington 58 , Madison 1, Palmyra 2, (Pardeeville), Riveredge 1
Killdeer	2	2	Kenosha 1, (Shiocton), Racine 1
Wilson's Snipe	12	24	Baraboo 6 , Beloit 1, Bridgeport 4, Cooksville 2, Hudson 1, Madison 4, Montello 1, New Richmond 1, Palmyra 1, Richland Center 1, Trempealeau 1, Wautoma 1 (Kenosha)
Bonaparte's Gull	0	0	Lake Geneva 1, Milwaukee 4 , Racine 3, Sheboygan 2
Thayer's Gull	4	10	Kewaunee 1, Madison 1, Milwaukee 1
Iceland Gull	3	3	Lake Geneva 2 , Madison 1, Racine 1
Lesser Black-backed Gull	3	4	(Cedar Grove), (Kenosha), Kewaunee 2, Madison 1, Milwaukee 1, Woodland Dunes NE 8 , NW 2, SE 4
Glaucous Gull	6	18	Ephraim 2, Kewaunee 1, Milwaukee 1, Riveredge 1, Sheboygan 2, Woodland Dunes NE 26 , SE 10
Great Black-backed Gull	7	43	Durand 3 , Poynette 2
Eurasian Collared Dove	2	5	La Crosse 1, Sturgeon Bay 1
Snowy Owl	2	2	Adams 1, Baraboo 3 , Bridgeport 1, Cedar Grove 1, Columbus 1, (Fond du Lac), Madison 1, Montello 1, Oshkosh 1, Palmyra 1, Peshtigo 1, Poynette 1, Riveredge 2, Spruce 1, Waukesha 1
Long-eared Owl	14	17	(Adams), Appleton 2, Bridgeport 1, Brussels 2, Cedar Grove 3 , (Chippewa Falls), Cookesville 1, La Crosse 1, (Oshkosh), Palmyra 1, Poynette 1, Rosendale 3
Short-eared Owl	9	15	Adams 1, Baraboo 3 , Blanchardville 2, Bridgeport 1, Cedar Grove 2, Fond du Lac 2, Green Lake 2, Montello 1, Norske 1, Palmyra 3 , Poynette 1, Wautoma 1
Northern Saw-whet Owl	12	20	Clam Lake 1, Phelps 1
Black-backed Woodpecker	2	2	Madison 1
Greater White-fronted Goose	1	1	

(continued)

Table 9. (continued)

Species	Number of Counts	Number of Birds	Count and Number
Gray Jay Lakes 4	7	26	Cable 2, Clam Lake 6, Fifield 6 , Gurney 1, Manitowish Waters 2, Rhinelander 5, (Solon Springs), Three Lakes 4
Boreal Chickadee	1	1	Shawano 1
Carolina Wren	5	9	Blanchardville 1, Cassville 1, Cedar Grove 1, Madison 5 , Milwaukee 1
Winter Wren	8	11	Appleton 1, Baraboo 1, Beloit 1, Blanchardville 1, Hales Corners 2 , Madison 1, Milwaukee 2, Shawano 2
Hermit Thrush Riveredge 1, Waterloo 1	9	24	Appleton 1, Cedar Grove 1, Hales Corners 2, La Crosse 1, Madison 2, Milwaukee 14 , Richland Center 1,
Varied Thrush	1	1	Waupaca 1
Gray Catbird	0	0	(Green Bay)
Northern Mockingbird	0	0	(Milwaukee)
Brown Thrasher	2	2	Green Bay 1, Madison 1
American Pipit	1	1	Racine 1
Bohemian Waxwing	7	168	Ashland 3, Bayfield 150 , Florence 5, Shawano 1, Spencer 1, Spruce 6, Three Lakes 2
Yellow-rumped Warbler	13	38	Burlington 1, Cassville 1, Green Bay 1, Hales Corners 8, Hartford 3, Kettle Moraine 3, Milwaukee 10 , (Montello), New Richmond 1, Palmyra 5, Poynette 2, Sauk City 1, (Trempealeau), Waterloo 1, Waukesha 1
Eastern Towhee	0	0	(Madison), (Poynette), (Stevens Point)
Chipping Sparrow	2	3	Florence 1, Trempealeau 2
Field Sparrow	1	1	Brussels 1
Vesper Sparrow	1	1	Randolph 1
Savannah Sparrow	2	4	Lake Geneva 1, Madison 3
Fox Sparrow	9	13	Bridgeport 4 , Cedar Grove 1, (Kickapoo Valley), Madison 2, Milwaukee 1, Palmyra 1, Poynette 1, Randolph 1, Richland Center 1, Spruce 1
Lincoln's Sparrow	1	1	Bridgeport 1
White-crowned Sparrow	8	24	Beloit 2, Burlington 1, (Hudson), Kenosha 9 , La Crosse 2, Milwaukee 3, Racine 3, Spencer 1, Woodland Dunes SE 3
meadowlark species	2	2	Mount Horeb 1, Blanchardville 1
Rusty Blackbird	10	57	Blanchardville 2, Cedar Grove 10, Green Lake 3, Horicon Marsh 2, La Crosse 1, New Richmond 1, Pensaukee 30 , Poynette 3, Rosendale 3, Sauk City 2
Brewer's Blackbird	3	84	Fremont 1, Hustisford 82 , Rosendale 1
Red Crossbill	2	8	Florence 6 , Solon Springs 2
White-winged Crossbill	7	89	(Bayfield), Clam Lake 15, Fifield 3, Florence 23, Fremont 1, Herbster 13, Sauk City 4, Three Lakes 30
Hoary Redpoll	3	4	Florence 2 , Fremont 1, Peshtigo 1

Parentheses indicate species was seen within 3 days of the count but not on the day of the count. **Bold lettering** indicates counts having the highest totals for the state.

Red-throated. For the first time, White Pelicans were documented from two counts (Green Bay and Oconomowoc). Pelicans have now been reported three consecutive years and for a total of 6 count years. The first report dates from 1992. The Double-crested Cormorant (54 over 9 counts) has been reported for 15 consecutive years and 22 of the last 24, starting with 1980. There are no reports of cormorants previous to 1980. Despite the fact that much inland water was frozen, Great Blue Herons (75 over 35 counts) were found in record numbers and on a record number of counts. The Black-crowned Night-Heron documented from Burlington marks the third time in four counts that this heron has been reported. Turkey Vultures reported from Baraboo and Kettle Moraine mark the 5th consecutive count for this species.

Hawks and Eagles—2003 was a great count for hawks and eagles, with many species setting record highs. Among the better of these are the Bald Eagle (1,462 over 75 counts B record numbers for both and 59% above average) and the Northern Harrier (321 over 57 counts B a record high that is 94% above the 10-year average). The Cooper's Hawk continued its long trend of growth with 258 found over 67 counts, record highs, and 40% over average. Only 1978 (with 18 birds over 16 counts) fared better for the Red-shouldered Hawk, which showed 16 over 15 counts. Both the Red-tailed and the Rough-legged hawk broke records. The Rough-legged was found on 85 of 100 counts. The closest match is 74 of 100 counts in 2002.

Rails through Shorebird—Virginia Rails were reported for the 3rd consecutive year from Poynette. Sandhill Cranes have now been reported 13 of the last 14 count years, starting in 1990. Previous to 1990, cranes were found only in 1986 and 1987. The only shorebirds reported are Killdeer and Wilson's Snipe.

Gulls—While the two most abundant gulls (Ring-billed and Herring) were less than average, less common gulls continued their trend towards increasing numbers. The Thayer's, Iceland, Lesser Black-backed, and Great Black-backed had record counts. For the first time an Iceland was documented from Madison while, for the first time (with 2 documented from Lake Geneva), the Lesser Black-backed was found at an inland location other than Madison. In 2002, an astonishing 27 Great Black-backed Gulls were reported. Just this one count later, 26 Great Black-backed were totaled at Woodland Dunes NE alone, with another 17 added to that number from 6 other Lake Michigan counts. Before 2002, the highest statewide count of Great Black-backed had been 6 (set in 1999).

Doves—Rock Pigeons were found in nearly normal numbers, while Mourning Doves had their greatest single year increase in the history of the CBCs. Mourning Doves (24,661 over 97 counts) were 18% greater than the previous high of 20,823 (set in 2000) and showed a 36% increase over their 10-year average. In 2001, the first Eurasian Collared-Dove was reported for the count period at Riveredge. In 2002, this Riveredge dove was the first of its species found

on a count day. In 2003, though the Riveredged dove had gone its way, in its stead were 5 similar doves over two counts (Durand and Poynette). Although not yet confirmed, the Colared-Dove likely breeds in the state and can be expected to be a CBC regular in years to come.

Owls—As with the previous year, except for the Snowy, no northern owls appear on the CBC. Even the Snowy (2 over 2 counts) had a poor showing. Both the Long-eared and Short-eared owl had strong totals. The Long-eared (17 over 14 counts) matched a previous high in counts, set in 1977. Perhaps birders are becoming adept at locating N. Saw-whet Owls. Before 2001, the best year for Saw-whets was 1997 with 8 found over 5 counts. In both 2001 and 2002, 13 were found over 9 counts. In 2003, 20 Saw-whets were found over 12 counts. After years of gradual count declines, both the Great Horned and the Barred had numbers above 10-year averages. The also declining E. Screech Owl made no such turn about.

Kingfishers—The Belted Kingfisher (123 over 50 counts) had its third successive year with numbers well above average.

Woodpeckers—As with other counts in the recent past, woodpecker species continue to have numbers well above 10-year averages. The exception, as in the past, is the Red-headed Woodpecker, with numbers this year 24% below its 10-year average. The Yellow-bellied Sapsucker (29 over 15 counts) was record high in both individuals and counts and was 112% above its 10-year average. The Red-bel-

lied Woodpecker (2,273 over 87 counts) continued its long-standing population increase. This year's totals were record high in counts and individuals and 42% above the 10-year average. The Red-bellied also increased its dominance over the more stable Hairy Woodpecker as the state's second most abundant woodpecker species. As recently as 2000, the Hairy had slightly more individuals on the CBCs than the Red-bellied. In 2002, there were 20% more Red-bellied than Hairy; in 2003, there were 28% more Red-bellied than Hairy. Black-backed Woodpeckers were reported from Clam Lake and Phelps.

Shrikes through Ravens—Northern Shrikes (272 over 78) were 16% above the 10-year average and were found on a record number of counts. Only 1995 (with 351 over 73 counts) posted a better showing. Blue Jays were average, while Gray Jays continued to show weak numbers. The 26 such jays reported were the 2nd lowest total since 1980 and are 70% below average. Both the Am. Crow and the Common Raven were slightly above average. Since the mid-1980s, the crow has shown consistently increased numbers. In the 1984–1991 counts, crows averaged 6.0 birds per party hour. In the 1992–1999 counts, crows averaged 7.8 birds per party hour. In the 2000–2003 counts, crows averaged 10.5 birds per party hour.

Larks—The 2003 total of Horned Larks is 43% below the 10-year average. If one subtracts the spectacular lark year of 2000 (when 10,764 were reported), this year's lark total (1,811) would be 11% above the remainder's 10-year average.

Chickadees, Titmouse, Nuthatches and Creepers—Only one Boreal Chickadee was reported and that report comes from the somewhat unlikely location of the Shawano Count. The Tufted Titmouse (611 over 32 counts) was record high and 72% above its 10-year average.

Wrens and Kinglets—After an amazing 2002 in which 30 Winter Wrens were found over 17 counts, the 2003 total is a more modest 11 over 8 counts. Carolina Wrens (9 over 5 counts) were average. Madison reported 5 Carolina Wrens, which matches a single circle record set by Madison in 1998. Golden-crowned Kinglets were 41% below average, while the Ruby-crowned went unrecorded for but the second time in 13 count years.

Thrushes—In 2001, 116 Eastern Bluebirds were reported, with 138 reported in 2002. In 2003, 197 Bluebirds over 20 counts were reported. The 2003 figures are record high and 193% above the 10-year average. In the 61 count years previous to 2001, the highest count of Bluebirds had been 75 (set in 1999) with many years having Bluebirds go unreported or else in single digit numbers. As with the Winter Wren, the 2002 count had an amazing number of Hermit Thrushes, with 27 found over 7 counts. The 2003 Count did nearly as well, with 24 found over 9 counts. The 9 counts are record high. The 14 Hermits gathered in Milwaukee are a single circle record, surpassing the 12 from Milwaukee in 2002. Although the Am. Robin (1,343 over 54 counts) is 53% below its 10-year average, that average contains extremely high num-

bers from 1998 and 2002. Previous to 1998, only two CBCs (over a 59 year period) had totals greater than the 1,343 of 2003. Only three years had totals better than 1,000. From this longer ranged prospective, Robins did well in 2003. A Varied Thrush was reported from Waupaca.

Catbirds through Waxwings—A count period Gray Catbird was reported from Green Bay and a count period N. Mockingbird was reported from Milwaukee. Brown Thrashers were found in Green Bay and Madison, while an Am. Pipit was documented from Racine. This Am. Pipit is the 5th count day record for that species. The 5,306 Cedar Waxwings continue the recent surge in waxwing numbers. The 2003 total is surpassed only by 7,119 in 2002 and 6,117 in 2001. Previous to 2001, no Cedar numbers had approached the 4,000 mark.

Warblers—The Yellow-rumped Warbler (38 over 13 counts) was the only warbler species found. Yellow-rumps have been reported in each of the last 30 count years, starting with 1973. The 2003 total is record high in its number of counts and second only to 53 in 2001 in its number of individuals.

Towhees and Sparrows—Count period Eastern Towhees were reported from Madison, Poynette and Stevens Point but none were found on a count day. This is the first year since 1961 in which this towhee was not located on a count day. Although 12 sparrow species were found, sparrow numbers in general were less than average. Among the better finds were Chipping (Florence and Trempealeau),

Field (Brussels), Vesper (Randolph), Savannah (Lake Geneva and Madison) and Lincoln's (Bridgeport). The Vesper Sparrow is the first since 1994.

Longspurs through Cardinals—

After unusually high numbers from 1997 through 2001, this is the second consecutive count with decreased Lapland Longspur totals. The 2003 sum of 525 is 72% below the 10-year average. Despite an impressive report of 2,428 from Appleton, Snow Buntings were also less than average. The Northern Cardinal is one of a number of common winter residents that showed high numbers (9,090 over 94 counts), being 16% above the 10-year average.

Blackbirds—With high counts of Red-winged Blackbirds from Horicon Marsh and Hustisford, this blackbird is showing extremely strong numbers for the third consecutive year. The 2003 total (3,330 over 27 counts) is 144% over average. With 82 Brewer's Blackbirds documented from Hustisford, the 2003 total of 84 is second only to the 1,277 of 2001. The Brown-headed Cowbird (1,122 over 24 counts) is 124% over average and is bested only by 2,140 in 1967 and 1,208 in 2002. Meadowlarks continue to do poorly. The finding of but 2 meadowlarks over 2 counts is one of the weakest reports on record.

Finches—Even though winter finches made a rebound from last year's worst finch count in history, the rebound was not strong enough to push 2003 totals above 10-year averages. The exception is the Pine Grosbeak, which was 21% above average. This average was boosted by Florence

posting an impressive 240 Pine Grosbeaks. Both the Purple Finch and the Pine Siskin were well below average with neither species found in numbers on the more northern counts. The Red Crossbill, which did well in 2002, had but 8 individuals over 2 counts in 2003. This is the weakest showing for a combination of counts and individuals since 1971. Similarly, the Evening Grosbeak was 52% below its 10-year average. The resident House Finch (10,881 over 83 counts) had a remarkable year, setting record highs and being 32% above average. Hoary Redpolls were documented for Florence, Fremont and Peshtigo.

House Sparrow—The House Sparrow (58,468 over 95 counts) was 13% above its 10-year average and thus put a slight halt in its long decline.

APPENDIX

An alphabetical listing of the counts follows. This listing includes the location of the count center plus the name, address, telephone number and email address of the compiler. For birders wanting to join a count, it is suggested they contact the count compiler. For those wanting to start a new count, they must first contact the state compiler whose address is located at the beginning of this article.

Adams (37); Jct. Hwys. 8th Drive and Beechnut Rd. (3 miles E. of HW 13 and Beechnut), Adams Co.; Darwin Tiede, 2809 Schaefer Cir., Appleton, WI 54915; 920. 997. 9418; ctiede@new.rr.com. **Appleton** (64); Jct. Hwys. 47 and 125, Outagamie Co.; John Shillinglaw, 1952 Palisades Dr., Appleton, WI 54915; 920. 731. 4222;

jashlaw@aol.com. **Arpin** (35); 1/2 mi. N of Jct. Hwy. C and Oak Rd., Wood Co.; Dennis Seevers, 5969 Butternut Rd., Arpin, WI 54410; 715. 569. 4260; rock-cut@tznnet.com. **Ashland** (4); Jct. Hwy. 2 and Sanborn Ave., Ashland; Dick Verch, 906 Ellis Ave., Ashland, WI 54806; 715. 682. 5453; dverch@cheqnet.net. **Baraboo** (94); Jct. City View Rd. and Hwy. A, Baraboo; Kenneth Wood, 3971 Forshaug Rd., Black Earth, WI 53515; 608. 767. 3343; kwwood@wisc.edu. **Bayfield** (3); T 50 N, R 5 W, S-22; Albert Roy, Jr., 906 Water St., Ashland, WI 54806; 715. 682. 5334. **Beloit** (91); Jct. Tracy and Eau Claire Rds., about two miles W of Rock Co. Airport; Brad Paulson, 15034 W. Carroll Rd., Brodhead, WI 53520; 608. 879. 2647; bpaulson@genencor.com. **Black River Falls** (29); Jct. Hwys. H and 54, Jackson Co.; Judy Allen, W12866 River Rd., Black River Falls, WI 54615; 608. 488. 4154; knothole@discover-net.net. **Blanchardville** (92); 2.5 miles SW of Blanchardville; David Willard, Bird Division, Field Museum of Natural History, 1400 S. Lake Shore Dr., Chicago, IL 60605; 312. 665. 7731; dwillard@fieldmuseum.org. **Bridgeport** (99); Hwy. 18 bridge over Wisconsin R.; Dennis Kirschbaum, 1505 E. Parrish, Prairie du Chien, WI 53821; 608. 326. 2718; alice@mhtc.net. **Brussels** (49); Jct. Hwy. 57 and Stevenson Pier Rd., Door Co.; Charlotte Lukes, 3962 Hillside Rd., Egg Harbor, WI 54209; 920. 823. 2478; lukes@dcwis.com. **Burlington** (76); Jct. Hwy. A and Crossway Rd., Racine Co.; John Bielefeldt, Box 283, Rochester, WI 53167; 262. 514. 2376. **Cable** (7); Jct. Hwys. M and D, Bayfield Co.; Brad Gingras, Cable Natural History Museum, P.O. Box 416, Cable, WI 54821; 715. 798. 3890; brad@cablemuseum.org. **Caroline** (43); 2 miles W of Caroline; Mark Peterson, Box 53, Caroline, WI 54928; 715. 754. 2130. **Cassville** (100); Jct. Garden Prairie and Muskellunge Rds., Grant Co.; David Sikorski, 2377 N. 58th St., Milwaukee, WI 53210; 414. 771. 7018; akela317@aol.com. **Cedar Grove** (56); Jct. Hwy. G and Palmer Rd., Sheboygan Co.; Tom Uttech, 4305 Hwy. O, Saukville, WI 53080; 262. 675. 6482; tmutter@prodigy.net. **Chippewa Falls** (22); Jct. Hwys. 178 and S, Chippewa Co.; Charles A. Kemper, 733 Maple St., Chippewa Falls, WI 54729; 715. 723. 3815; cak@millstream.net. **Clam Lake** (8); 7 miles SE of Clam Lake; Keith Merkel, 11722 Robin Rd., Marshfield, WI 54449; 715. 384. 2383; keith.merkel@wick-mail.com. **Clyde** (96); Jct. Hwy. ZZ and Weaver Rd., Iowa Co.; Steve Greb, 1714 Labrador Rd., Oregon, WI 53575; 608. 835. 5266; grebs@dnr.state.wi.us. **Columbus** (85); Jct. Johnson and Jahnke Sts. (south of Columbus); Larry Michael, 713 Clinton St. Apt. 103, Horicon, WI 53032; 920. 485. 2936; lamichael@powerweb.net. **Cooksville** (90); Cooksville, Rock Co.; David and Anna Marie Huset, 242 W. Church St., Evansville, WI 53536; 608. 882. 5648; amdhuset@eishome.com. **Durand** (21); Jct. Hwys. 25 and DD 3 miles N of Durand, Dunn Co.; Charles A. Kemper, 733 Maple St., Chippewa Falls, WI 54729; 715. 723. 3815; cak@millstream.net. **Ephraim** (51); Hwy. A 3 miles S of Jct. with Hwy. 42, Door Co.; Paul Regnier, P.O. Box 152, Baileys Harbor, WI 54202; 920. 839. 2802; paul@ridgesanctuary.org. **Fifield** (9); Fifield Post Office; Thomas Nicholls, W7283 Walnut St. P.O. Box 63, Fifield, WI 54524; 715. 762. 3076;

nicho002@umn.edu. **Florence** (14); just NE of center of Section 19, Town of Commonwealth, Florence Co.; Noel Cutright, 3352 Knollwood Rd., West Bend, WI 53095; 414. 221. 2179; noel.cutright@we-energies.com. **Fond du Lac** (66); Jct. Tower and Cody Rds., Fond du Lac Co.; Jeff Baughman, W2640 Middle Road, Campbellsport, WI 53010; 920. 477. 2442; jeffb@csd.k12.wi.us. **Fort Atkinson** (89); Jct. Hwy. K and Hackbarth Ave., Jefferson Co.; Richard Wanie, W5920 Lee Dr., Fort Atkinson, WI 53538; 920. 563. 6274. **Fremont** (40); Jct. Hwys. I and HH 4 miles SW of Fremont; Daryl Tessen, 3118 N. Oneida St., Appleton, WI 54911; 920. 735. 9903; bhaunts@core.com. **Gilman** (24); 1 mile W of Miller Dam, Taylor Co.; Janice Luepke, B-894 Eau Pleine Rd., Spencer, WI 54479; 715. 659. 3910; luepke@pcpros.net. **Grantsburg** (17); Jct. Hwys. 70 and 48 in Grantsburg; Dennis Allaman, 506 W. St. George Ave., Grantsburg, WI 54840; 715. 463. 2365; allaman@usa.net. **Green Bay** (47); Jct. Allouez and S. Webster Aves.; John Jacobs, 2373 Libal St., Green Bay, WI 54301; 920. 432. 2438; jmdgjacobs@aol.com. **Green Lake** (79); Jct. Hwy. J and Swamp Rd., Green Lake Co.; Thomas Schultz, N6104 Honeysuckle Lane, Green Lake, WI 54941; 920. 294. 3021; trschultz@vbe.com. **Gurney** (5); Hwy. 169 in Gurney; Joan Elias, 11140 W. Edwards Rd., Saxon, WI 54559; 715. 893. 2358; joan-elias@nps.gov. **Hales Corners** (59); Jct. 27th St. and Rawson Ave., (Milwaukee Co. only); Mark Verhagen, 9701 W. College Ave., Franklin, WI 53123; 414. 425. 8550; mark.verhagen@ces.uwex.edu. **Hartford** (72); Jct. Hwys. 60 and 83 in Hartford; Bob Domagalski, W140 N8508 Lilly Rd., Menomonee Falls, WI 53051; 262. 251. 6259; rcd@excpc.com. **Hayward** (6); boat landing at Phipps near Hwy. 63, Sawyer Co.; Brad Gingras, Cable Natural History Museum, P.O. Box 416, Cable, WI 54821; 715. 798. 3890; brad@cablemuseum.org. **Herbster** (2); Hwy. 13, 1 mile W of Herbster; Phyllis Johnson, P.O. Box 249, Cornucopia, WI 54827; 715. 774. 3968; hummer@cheqnet.net. **Holcombe** (23); Chippewa-Rusk county line, 1 mile E of Hwy. 27; Charles A. Kemper, 733 Maple St., Chippewa Falls, WI 54729; 715. 723. 3815; cak@millstream.net. **Horicon Marsh** (83); Jct. Main Ditch and Main Dike in Refuge; Bill Volkert, DNR, N7725 Hwy. 28, Horicon, WI 53032; 920. 387. 7877; brchwood@thesurf.com. **Hudson** (19); Afton, MN; Joseph Merchak, 1723 Laurel Ave., Hudson, WI 54016; 715. 531. 0542. **Hustisford** (84); Jct. Hwys. CJ and M, just east of Clyman; Bob Domagalski, W140 N8508 Lilly Rd., Menomonee Falls, WI 53051; 262. 251. 6259; rcd@excpc.com. **Kenosha** (61); Jct. Hwys. 158 and 104th Ave. (Kenosha Co. only); Ron Hoffmann, Box 886, Kenosha, WI 53141; 262. 654. 5854. **Kettle Moraine** (71); Hwy. DD, W of Auburn Lake, Fond du Lac Co.; Bill Volkert, W996 Birchwood Dr., Campbellsport, WI 53010; 920. 387. 7877; brchwood@thesurf.com. **Kewaunee** (52); Jct. Hwys. 42 and D, Kewaunee Co.; William Mueller, 1242 S. 45 St., Milwaukee, WI 53214; 414. 643. 7279; iltlawas@earthlink.net. **Kickapoo Valley** (98); Jct. Hwys. T and 131, Monroe Co.; Eric Epstein, 22505 Kensington Rd., Norwalk, WI 54648; 608. 823. 7837; tickcity@centurytel.net. **La Crosse** (31); La Crosse Courthouse; Rick Kinzie, 55787 Kinzie Rd., Gays

Mills, WI 54631; 608. 734. 3136; huey@mwt.net. **La Forge** (too few field hours in 2003); Jct. Hwys 131 and 82 in La Forge; Cathy Pierce, La Forge; 608. 625. 2084; tpalace@mwt.net. **Lake Geneva** (77); Interlaken Lodge, Hwy. 50 (approx. 2 M east of Jct. with Hwy 67); Wayne Rohde, W6488 Beloit Rd., Walworth, WI 53184; 262. 275. 5548; wsrohde@genevaonline.com. **Lakewood** (15); Jct. Hwys. T and FR 2117, Oconto Co.; John Woodcock, 2320 S. 10th St., Manitowoc, WI 54220; 920. 683. 3878; mrt doodle@lakefield.net. **Madison** (87); State Capitol; Cheri Carbon, 2714 Harvard Dr., Madison, WI 53705; 608. 233. 0024. **Manitowish Waters** (10); Jct. Hwys. 51 and W, Vilas Co.; John Bates, 4245 Hwy. 47, Mercer, WI 54547; 715. 476. 2828; Manitowish@centurytel.net. **Medford** (25); 2.5 miles NE of Whittlesey, Taylor Co.; Susanne Adams, W2272 Rustic Rd., Rib Lake, WI 54470; 715. 748. 4875, ext. 36; smadams@fs.fed.us. **Merrill** (32); Jct. South End Rd. and Hwy. 107, Lincoln Co.; Sherry Frazier, W4990 Fowler Dr., Merrill, WI 54452; 715. 536. 7969; racin64@whoever.com. **Milwaukee** (58); Jct. Port Washington Rd. and Hampton Ave., Glendale; Marilyn Bontly, 901 E. Fairy Chasm Rd., Bay-side, WI 53217; 414. 228. 0314; mbontly@wi.rr.com. **Montello** (80); Harrisville, Marquette Co.; Daryl Christensen, P.O. Box 182, Montello, WI 53949; 608. 296. 3068; gr8fish@palacenet.net. **Mosinee** (34); Jct. Hwys. O and C (where C intersects from the north), Marathon Co.; Dan Belter, 5903 Heath St., Weston, WI 54476; 715. 359. 6328; bwhawk@earthlink.net. **Mount Horeb** (93); Jct. Hwys. 78 and Bus. 18/151, Mount Horeb; Kenneth Wood, 3971 For-shaug Rd., Black Earth, WI 53515; 608. 767. 3343; kwwood@wisc.edu. **Nelson** (20); 1 mile S of Jct. Hwys. I and D; Charles A. Kemper, 733 Maple St., Chippewa Falls, WI 54729; 715. 723. 3815; cak@millstream.net. **New Franken** (48); Jct. Hwys. P and SS, Brown County; Ed Houston, 2818 Sugarbush Ct., Green Bay, WI 54301; 920. 339. 3273; ezehouston@aol.com. **New Richmond** (18); 2 miles E of Boardman, St. Croix Co.; Joseph Merchak, 1723 Laurel Ave., Hudson, WI 54016; 715. 531. 0542. **Norske** (42); 1 mile E of Jct. Hwy P and Rustad Rd., Wau-paca Co.; Janet Avis Hewitt, E1047 Paulson Rd., Iola, WI 54945; 715. 445. 2489. **Oconomowoc** (73); Hwy 67, 2 miles N of Oconomowoc; Marlyn Winter, 323 Lawn St., Hartland, WI 53029; 262. 367. 6819; birdymom44@aol.com. **Oshkosh** (65); Jct. Hwys. 21 and 41 in Oshkosh; Thomas Ziebell, 1322 Ceape Ave., Oshkosh, WI 54901; 920. 235. 0326; cziebell@new.rr.com. **Owen** (26); Hwy. D 2.5 miles N of Hwy. 29, Clark Co.; Jon Zellmer, 808 West Blodgett St., Marshfield, WI 54449; 715. 384. 8849; zee@commplu-sis.net. **Palmyra** (75); 0.5 miles N of Jct. Hwy 20 and Nelson Rd., Walworth Co.; Eric Howe, N9564 Nature Rd., Eagle, WI 53119; 262. 594. 5853; wibirder@att.net. **Pardeeville** (81); north end of access road that comes from Monthey Rd. into the south side of French Creek Wildlife Area, Columbia Co.; Paul and Glenna Schwalbe, 203 Breezy Point Dr., Pardeeville, WI 53954; 608. 429. 4365; pschwalbe@jvl.net.com. **Pensaukee** (46); Pensaukee; Thomas Erdman, 4094 Hwy. S, Rte. 2, Oconto, WI 54153; 920. 465. 2713; erdmant@uwgb.edu. **Peshigo** (62); Harmony Corners, Marinette Co.; Jerry Smith,

6865 Fredrickson Rd., Lena, WI 54139; 920. 829. 6353; kajers@ez-net.com. **Phelps** (11); Jct. FR 2199 and FR 2533, 2 miles SW of Phelps; Bill Reardon, 1700 Open Acres Ln., Eagle River, WI 54521; 715. 479. 8055; breardon@nnex.net. **Plymouth** (70); Jct. Hwys. 23 and C, Sheboygan Co.; Robert Brigham, 851 Chaplin Ct., Plymouth, WI 53073; 920. 892. 7716, rbrigham@wi.rr.com. **Poynette** (86); Jct. Hwys. 51 and CS; Mark and Sue Martin, Goose Pond Sanctuary, W7468 Prairie Lane, Arlington, WI 53911; 608. 635. 4160; goosep@chorus.net. **Prentice** (no count in 2003); Jct. Hwys. 8 and 13 in Prentice; Rob Whitmire, 2049 Oak St., Stevens Point, WI 54481; 715. 341. 1957; whitmire@wctc.net. **Racine** (60); Hwy. H 0.5 miles S of Hwy. K (Racine Co. only); Eric Howe, N9564 Nature Rd., Eagle, WI 53119; 262. 594. 5853; wibirder@att.net. **Randolph** (82); Hwy. P midway between Cambria and Randolph, Columbia Co.; Larry Michael, 713 Clinton St. Apt. 103, Horicon, WI 53032; 920. 485. 2936; lamichael@powerweb.net. **Rhineland** (13); Rhineland; Ced Vig, 919 Birch Bend, Rhineland, WI 54501; 715. 362. 3047. **Richland Center** (97); Jct. Hwys. O and TB SE of Richland Center; Robert Hirschy, University of Wisconsin Center-Richland, 1200 Hwy. 14 West, Richland Center, WI 53581; 608. 647. 3042; rhirschy@uwc.edu. **Riveredge** (57); Jct. Hwy. 33 and Lakeland School Rd., Ozaukee Co.; Mary Hollebeck, c/o Riveredge Nature Center, P.O. Box 26, Newburg, WI 53060; 262. 375. 2715; maryh@riveredge.us. **Rosendale** (78); 2.5 miles S of junc. of Hwys. 23 and 26, Fond du Lac Co.; Seth Cutright, 3352 Knollwood Rd., West Bend, WI 53095; 262. 675. 2443; stcutright1@hotmail.com. **Sauk City** (95); 2.5 miles SE of Witwen, Sauk Co.; Nancy Raffetto, 9437 Hwy. Y, Sauk City, WI 53583; 608. 643. 1274; raffetto@wisc.edu. **Seymour** (63); Jct. Hwy. C and Culbertson Rd., Outagamie Co.; Daryl Tessen, 3118 N. Oneida, Appleton, WI 54911; 920. 735. 9903; bhaunts@core.com. **Shawano** (44); 3 miles N of Lunds, Shawano Co.; Mark Peterson, Box 53, Caroline, WI 54928; 715. 754. 2130. **Sheboygan** (55); Jct. 10th St. and Erie Ave., Sheboygan; Scott Baughman, 3043 Rolling Meadows, Sheboygan, WI 53083; 920. 459. 9845; baughman@milwpc.com. **Shiocton** (45); Jct. Hwys. M and 54, Outagamie Co.; Steven Petznick, Mosquito Hill Nature Center, N3880 Rogers Rd., New London, WI 54961; 920. 779. 6433; petznisj@co.outagamie.wi.us. **Solon Springs** (1); Jct. Hanson and Hruska Rds., Douglas Co.; Andy Paulios, 2217 Clover Ln., Janesville, WI 53545; 608. 314. 0894; andypaulios@yahoo.com. **Spencer** (27); Jct. Hwys. F and 153, Marathon Co.; Janice Luepke, B-894 Eau Pleine Rd., Spencer, WI 54479; 715. 659. 3910; luepke@pcpros.net. **Spruce** (16); 1.5 miles N of Spruce on Hwy. B; Jerry Smith, 6865 Fredrickson Rd., Lena, WI 54139; 920. 829. 6353; kajers@ez-net.com. **Stevens Point** (38); Old Main Bldg., U.W.-Stevens Point; Nancy Stevenson, 1890 Red Pine Ln., Stevens Point, WI 54481; 715. 341. 0084. **Stockbridge** (67); 3 miles SE of Stockbridge; Carroll Rudy, W3866 Hwy. H, Chilton, WI 53014; 920. 849. 9021; mcruddy@dotnet.com. **Sturgeon Bay** (50); Jct. Hwys. 57 and P, Door Co.; Charlotte Lukes, 3962 Hillside Rd., Egg Harbor, WI 54209; 920. 823. 2478; lukes@dcwis.com. **Three Lakes**

(12); 6 miles E of Three Lakes; Bill Reardon, 1700 Open Acres Ln., Eagle River, WI 54521; 715. 479. 8055; breardon@nnex.net. **Trempealeau** (30); Jct. Hwy. K and Fremont St., Trempealeau; Thomas Hunter, 11675 Jay St., P.O. Box 114, Trempealeau, WI 54661; 608. 534. 6233. **Waterloo** (88); Jct. of Hwys. O and B on Jefferson/Dane county line, 5 miles west of Lake Mills; Bob Domagalski, W140 N8508 Lilly Rd., Menomonee Falls, WI 53051; 262. 251. 6259; rcd@execpc.com. **Waukesha** (74); Jct. Hwy. D and Brookhill Rd., Waukesha Co.; Patrick Horn, S76 W19840 Sunny Hill Dr., Muskego, WI 53150; 262. 679. 1459; cphorn3@juno.com. **Waupaca** (41); Jct. Hwy. 49 & Smokey Valley Rd, Waupaca Co.; Daryl Tessen, 3118 N. Oneida St., Appleton, WI 54911; 920. 735. 9903; bhaunts@core.com. **Wausau** (33); Jct. Grand Ave. and Thomas St., Wausau; Jim Pellitteri, 9203 Riverbirch St., Rothschild, WI 54404; 715. 359. 9708; jjpellitteri@co.marathon.wi.us. **Wautoma** (39); Mount Morris, Waushara Co.; Chip Hutler, W8733 State Rd. 21, Wautoma, WI 54982; 920. 787. 2479; mecan@network2010.net. **Willard** (28); 1 mile E and 1.5 miles S of Willard, Clark Co.; Janice Luepke, B-894 Eau Pleine Rd., Spencer, WI 54479; 715. 659. 3910; luepke@pcpros.net. **Wisconsin Rapids** (36); Wisconsin Rapids Airport; Darwin Tiede, 2809 Schaefer Circle, Appleton, WI 54915; 920. 997. 9418; ctiede@new.rr.com. **Woodland Dunes NE** (53); Mishicot; **NW** (68); Menchalville; **SE** (54); 2 mi. S of Newtonburg; **SW** (69); 3 miles W of St. Nazianz on Hwy. C; all counts only in Manitowoc Co.; Bernard Brouchoud, Woodland Dunes Nature Center, P.O. Box 2108, Manitowoc, WI 54221; 920. 793. 4007; woodlanddunes@lakefield.net.



Kentucky Warbler by *Dennis Maleug*

Wisconsin Checklist Project: 2002

During 1986–2001, project cooperators submitted 62,092 weekly checklists of birds they saw or heard. During this period the frequency of occurrence decreased significantly for 46 species, increased significantly for 69 species, exhibited a u-shaped trend for 3 species, and an inverted u-shaped trend for 72 species. Reporting frequencies were classified as stable for 76 species.

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BACKGROUND

The Wisconsin Checklist Project (WCP) is a volunteer monitoring program that provides information on annual, seasonal, and geographic variation in abundance for 296 species of birds that occur in Wisconsin. The project originated in 1982 at the University of Wisconsin and has been administered by the Wisconsin Department of Natural Resources (WDNR) since 1989. Data from 1982-96 were used to estimate relative abundance, geographic distribution, migration chronology, and population trend (Temple, Cary, and Rolley 1997). Cur-

rently, the project is primarily used to monitor long-term changes in abundance.

METHODS

Checklist project volunteers were recruited primarily from the Wisconsin Society for Ornithology; an educational and scientific organization dedicated to the study and enjoyment of Wisconsin birds. Participants were requested to maintain careful records of the bird species detected each week. Participants recorded their name, the date of the Sunday that began the week, the county in which they

Table 1. Number of Wisconsin Checklist Project cooperators, number of checklists submitted, percent of checklists that represented active birding, and mean number of species reported per checklist during 1983–2001.

Year	No. of cooperators	No. of Checklists	% active	Mean no. of species
1983	237	8,553	46.3	28.4
1984	169	6,037	46.9	27.9
1985	143	4,988	41.2	27.9
1986	128	5,180	41.1	28.1
1987	117	5,127	46.1	28.4
1988	114	4,767	44.3	28.7
1989	106	3,978	49.5	29.6
1990	120	4,234	51.3	30.7
1991	90	3,683	55.9	32.8
1992	80	3,301	56.6	32.3
1993	95	4,000	54.0	32.2
1994	103	4,233	53.6	32.6
1995	95	3,951	54.2	32.6
1996	92	3,850	55.5	32.4
1997	83	3,627	59.2	31.7
1998	80	3,490	53.7	32.4
1999	77	3,230	50.1	31.3
2000	66	2,887	50.4	31.2
2001	60	2,554	48.7	32.0

birded, whether they “actively” searched for birds during the week, and the bird species detected, on computer readable “bubble forms.” Completed forms were returned to the WDNR’s Research Center in Monona, Wisconsin. Whenever we received completed forms, we then mailed a new supply of forms to project cooperators. Completed forms were scanned by the University of Wisconsin’s Testing and Evaluation Services.

Prior to 1997, checklist forms listed 266 species. Thirty species were added to the checklist in 1997. The percentage of checklists on which a species is recorded (reporting frequency) is used as an index of abundance. Reporting frequencies during 1986–2001 of the original set of 266 species were examined for linear and quadratic trends using regression analysis.

Checklists from all regions of the state and from all months of the year were pooled in these analyses. Trends were classified as stable if regression significance levels were ≥ 0.05 .

RESULTS

Since initiation of the Wisconsin Checklist Project, 430 project cooperators have submitted 86,637 checklists. Only 62,092 checklists for the period 1986–2001 were analyzed for this report. A total of 22,074 checklists have been submitted for years prior to 1986 and 2,471 checklists have been received to date for 2002 and 2003. The number of cooperators contributing checklists and the number of checklists submitted per year have declined since the start of the project with the most rapid decline during the mid 1980s (Table 1). With the de-

cline in number of cooperators, both the percentage of checklists on which contributors indicated that they actively searched for birds and the mean number of species recorded per checklist tended to increase during the mid 1980s through early 1990s. The mean number of species reported has changed little since 1991, while the percentage of active checklists has tended to decline during the past 5 years.

Significant linear declines in percent occurrence on checklists during 1986–2001 were noted for 46 species (Table 2). These were American Bittern, Least Bittern, Oldsquaw (now Long-tailed Duck), Broad-winged Hawk, American Kestrel, Gray Partridge, Ruffed Grouse, Sharp-tailed Grouse, Killdeer, Upland Sandpiper, Ruddy Turnstone, Common Snipe (now Wilson's Snipe), American Woodcock, Wilson's Phalarope, Common Tern, Black Tern, Rock Dove (now Rock Pigeon), Common Nighthawk, Whip-poor-will, Chimney Swift, Belted Kingfisher, Red-headed Woodpecker, Northern Flicker, Eastern Kingbird, Horned Lark, Purple Martin, Barn Swallow, Gray Jay, Boreal Chickadee, Brown Thrasher, European Starling, Louisiana Waterthrush, Kentucky Warbler, Eastern Towhee, Field Sparrow, Vesper Sparrow, Eastern Meadowlark, Western Meadowlark, Yellow-headed Blackbird, Rusty Blackbird, Brewer's Blackbird, Common Grackle, Purple Finch, Pine Siskin, Evening Grosbeak, and House Sparrow.

Reporting frequencies increased significantly during 1986–2001 for 69 species. Species exhibiting highly significant ($P < 0.001$) increases were Canada Goose, Mallard, Turkey Vul-

ture, Bald Eagle, Northern Harrier, Cooper's Hawk, Red-tailed Hawk, Merlin, Peregrine Falcon, Ring-necked Pheasant, Wild Turkey, Sandhill Crane, Ring-billed Gull, Ruby-throated Hummingbird, Red-bellied Woodpecker, Downy Woodpecker, Hairy Woodpecker, Pileated Woodpecker, Eastern Phoebe, Black-capped Chickadee, Blue-gray Gnatcatcher, Eastern Bluebird, Red-eyed Vireo, Black-throated Green Warbler, Northern Cardinal, Chipping Sparrow, Clay-colored Sparrow, and Orchard Oriole.

Seventy-two species had inverted u-shaped trends in reporting rates (increasing during the mid 1980s to early 1990s and subsequently decreasing). These were Common Loon, Cattle Egret, Black-crowned Night-Heron, Wood Duck, Green-winged Teal, American Black Duck, Blue-winged Teal, American Wigeon, Redhead, Ring-necked Duck, Greater Scaup, Lesser Scaup, Common Goldeneye, Bufflehead, Common Merganser, Red-breasted Merganser, Ruddy Duck, Northern Goshawk, Red-shouldered Hawk, Sora, Solitary Sandpiper, Spotted Sandpiper, Bonaparte's Gull, Herring Gull, Glaucous Gull, Forster's Tern, Great Horned Owl, Yellow-bellied Sapsucker, Eastern Wood-Pewee, Yellow-bellied Flycatcher, Acadian Flycatcher, Willow Flycatcher, Great Crested Flycatcher, Northern Rough-winged Swallow, Cliff Swallow, Brown Creeper, Winter Wren, Marsh Wren, Golden-crowned Kinglet, Ruby-crowned Kinglet, Veery, Gray-cheeked Thrush, Swainson's Thrush, Hermit Thrush, Bell's Vireo, Yellow-throated Vireo, Philadelphia Vireo, Golden-winged Warbler, Orange-crowned Warbler, Nashville Warbler, Yellow Warbler, Magnolia Warbler, Black-

Table 2. Percentage of WCP checklists on which each species was reported during 1986-2001. Trends were estimated by regression analysis.

Species	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	Trend ^a
Red-throated Loon	0.5	0.5	0.2	0.1	0.0	0.0	0.1	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	ushp***
Common Loon	5.8	5.9	6.2	6.6	5.9	6.1	6.6	7.3	6.7	7.1	7.4	6.3	6.1	5.9	5.2	5.8	invu**
Pied-billed Grebe	12.2	12.3	12.2	11.1	8.6	12.3	10.7	12.1	14.7	14.0	16.0	14.3	14.3	13.0	13.2	8.8	stbl
Horned Grebe	1.8	1.8	1.3	1.4	1.3	1.9	2.5	2.7	1.8	1.7	2.1	2.2	3.1	2.0	0.9	1.3	stbl
Red-necked Grebe	1.2	1.3	0.8	1.0	0.5	0.5	0.5	0.8	0.5	0.8	0.5	0.4	0.4	0.5	0.6	1.0	ushp**
Eared Grebe ^b												0.1	0.4	0.3	0.3	0.2	
Western Grebe ^b												0.0	0.1	0.0	0.1	0.0	
American White Pelican ^b												1.0	2.1	2.5	3.1	3.8	
Double-crested Cormorant	5.4	6.4	6.2	6.8	7.8	11.8	11.6	11.5	11.7	10.9	13.2	11.5	13.4	12.3	10.5	9.7	incr**
American Bittern	2.9	2.5	2.7	2.6	2.7	3.3	2.3	2.7	2.0	2.3	2.1	1.9	1.9	1.0	0.8	1.6	decr***
Least Bittern	0.9	0.6	0.8	0.8	0.8	1.2	0.9	0.6	0.7	0.2	0.4	0.5	0.4	0.5	0.3	0.4	decr**
Great Blue Heron	25.2	26.1	27.4	30.1	30.9	35.4	33.7	32.8	35.3	31.7	33.9	34.1	32.6	31.9	33.4	33.0	incr**
Great Egret	3.4	3.2	3.7	5.5	4.5	6.5	5.7	4.6	5.6	4.0	3.8	5.6	3.7	5.9	5.8	6.0	stbl
Snowy Egret ^b												0.7	0.6	0.7	0.8	1.1	
Little Blue Heron ^b												0.1	0.1	0.1	0.0	0.0	
Cattle Egret	0.1	0.3	0.1	0.3	0.8	0.8	0.9	1.5	1.2	0.5	0.9	0.4	0.4	0.3	0.2	0.2	invu***
Green Heron	10.6	10.6	11.6	13.1	12.9	14.8	12.2	12.1	11.2	9.6	10.4	9.6	10.7	11.2	11.6	11.6	stbl
Black-crowned Night-Heron	1.7	1.9	2.4	2.7	3.6	6.0	5.0	3.9	4.2	3.5	4.3	2.8	3.0	3.0	3.2	3.3	invu**
Yellow-crowned Night-Heron	0.0	0.4	0.0	0.1	0.1	0.1	0.1	0.1	0.0	0.1	0.2	0.0	0.0	0.0	0.0	0.0	stbl
Tundra Swan	2.7	3.8	3.5	4.2	4.4	5.0	5.5	3.7	4.4	4.4	3.6	3.8	4.6	5.7	5.7	5.2	incr*
Trumpeter Swan ^b												0.6	1.4	0.7	0.9	1.5	
Mute Swan	2.1	2.7	5.2	3.4	2.8	4.6	5.4	3.3	4.1	4.9	4.6	3.2	5.1	4.2	3.6	3.8	stbl
Greater White-fronted Goose ^b												0.2	0.5	0.4	0.7	0.3	
Snow Goose	1.5	1.7	1.7	2.8	2.6	2.6	2.5	2.5	2.2	1.5	1.8	1.1	1.8	2.5	1.8	1.8	stbl
Canada Goose	32.7	38.8	42.3	43.6	47.2	50.6	52.1	54.0	56.9	59.0	58.3	60.5	65.0	65.0	68.2	66.2	incr***
Wood Duck	15.1	19.2	18.6	18.7	20.6	23.2	22.2	21.1	25.1	25.9	23.0	20.8	21.7	20.1	17.0	18.1	invu***
Green-winged Teal	3.7	4.5	4.7	5.4	5.7	8.9	7.5	6.2	7.8	7.3	7.2	6.3	6.7	7.2	7.4	5.3	invu**
American Black Duck	7.4	8.1	8.1	10.2	9.8	13.2	14.9	13.2	11.2	11.4	11.6	8.6	7.5	8.5	7.7	6.6	invu***
Mallard	48.4	52.0	49.7	53.3	55.5	57.6	62.9	62.0	63.2	63.8	64.9	61.3	62.0	61.3	63.2	61.9	incr***
Northern Pintail	2.1	2.8	2.9	3.6	4.4	4.5	4.5	2.6	3.0	2.6	2.7	2.4	2.8	2.6	2.9	2.2	stbl
Blue-winged Teal	15.0	14.7	14.8	15.7	15.2	18.0	15.1	16.5	17.5	15.6	16.3	14.9	15.0	14.6	12.6	11.9	invu***
Northern Shoveler	4.1	3.8	6.5	7.0	7.0	8.6	7.7	8.2	7.9	8.1	8.1	7.3	7.1	7.9	7.8	6.5	incr*
Gadwall	2.3	2.3	3.1	4.1	4.4	6.0	6.3	5.5	4.5	4.4	4.2	4.7	4.2	5.5	5.3	5.3	incr*

American Wigeon	3.6	4.8	5.5	6.5	6.1	7.6	6.2	6.4	7.1	6.3	5.3	5.1	5.6	4.9	5.6	3.6	invu***
Canvasback	2.8	2.9	3.1	3.7	3.1	3.5	3.5	3.5	3.8	3.8	3.0	3.8	3.2	3.6	2.9	3.8	stbl
Redhead	3.4	3.9	3.8	4.1	3.9	6.1	5.5	5.8	5.1	5.0	5.7	6.0	5.1	5.5	4.5	4.1	invu***
Ring-necked Duck	5.2	6.9	6.6	9.0	7.2	8.7	9.2	9.2	9.9	10.4	9.0	7.2	6.8	6.8	6.7	5.8	invu***
Greater Scaup	4.1	3.4	4.0	4.4	4.0	4.8	5.3	4.8	3.9	4.2	5.2	4.9	3.9	5.2	3.2	2.8	invu*
Lesser Scaup	7.1	6.9	7.2	8.6	8.9	9.7	9.1	7.7	7.4	9.3	9.6	9.0	8.3	8.2	6.0	5.5	invu***
Oldsquaw	1.1	0.9	1.4	1.0	1.4	1.5	1.5	1.2	0.4	0.9	1.0	0.8	0.5	0.5	0.2	0.2	decr**
Black Scoter	0.1	0.2	0.1	0.1	0.1	0.2	0.1	0.1	0.1	0.1	0.3	0.2	0.2	0.3	0.2	0.2	incr*
Surf Scoter	0.0	0.2	0.2	0.2	0.2	0.1	0.2	0.2	0.1	0.2	0.3	0.2	0.2	0.5	0.1	0.4	incr*
White-winged Scoter	0.2	0.2	0.3	0.5	0.2	0.2	0.2	0.3	0.4	0.2	0.2	0.2	0.4	0.2	0.1	0.1	stbl
Common Goldeneye	8.9	8.3	10.0	9.6	9.1	10.5	11.5	11.3	8.4	9.1	10.8	9.9	8.9	9.2	6.3	7.9	invu**
Bufflehead	6.8	7.0	8.5	10.2	9.1	9.7	10.7	10.8	10.5	11.7	11.1	10.2	9.8	11.4	8.1	8.7	invu***
Hooded Merganser	3.7	4.0	5.4	6.2	4.8	6.6	6.9	7.1	7.0	8.7	9.1	8.1	7.3	7.2	5.4	6.2	incr*
Common Merganser	6.2	5.7	6.2	6.9	6.8	7.7	10.7	11.5	9.4	9.6	11.4	10.1	9.7	8.4	6.4	7.8	invu***
Red-breasted Merganser	4.6	3.9	4.8	5.1	5.2	7.1	7.0	7.5	5.5	4.6	5.1	4.9	5.0	5.2	3.5	2.9	invu***
Ruddy Duck	5.1	5.3	4.4	5.9	4.8	7.3	6.8	6.7	5.9	6.1	6.7	6.5	7.4	7.3	5.9	4.4	invu*
Turkey Vulture	10.5	11.7	10.7	10.8	14.0	14.7	14.5	15.6	20.5	20.2	20.3	22.3	24.0	23.3	24.4	26.2	incr***
Osprey	3.5	3.3	4.0	3.9	3.9	5.4	5.5	5.8	5.1	5.0	5.2	5.7	5.9	4.1	4.3	5.4	incr*
Bald Eagle	8.2	8.0	9.9	8.6	7.9	9.6	11.3	12.2	13.4	15.8	15.0	16.1	16.7	15.4	16.9	19.5	incr***
Northern Harrier	11.4	13.9	13.8	14.0	14.2	16.0	16.2	15.5	18.9	19.1	17.6	15.9	18.5	17.4	16.1	17.0	incr***
Sharp-shinned Hawk	5.9	6.9	7.7	7.7	6.8	9.4	8.3	8.5	9.1	10.0	8.6	8.7	9.3	7.9	8.5	9.6	incr**
Cooper's Hawk	4.1	3.8	4.9	7.0	8.6	11.8	11.6	12.5	12.1	13.8	13.6	15.3	16.1	15.7	17.9	18.9	incr***
Northern Goshawk	1.4	0.9	0.7	1.2	1.8	2.0	2.4	2.6	2.0	1.1	0.9	0.8	0.9	0.6	0.9	1.0	invu*
Red-shouldered Hawk	1.9	1.9	2.0	2.2	2.3	3.1	3.4	3.6	3.3	3.1	3.0	3.2	3.7	2.4	2.0	1.1	invu***
Broad-winged Hawk	5.9	6.0	5.7	4.7	5.7	6.6	5.8	6.2	6.2	5.2	5.4	4.2	5.4	4.2	3.8	3.6	decr**
Red-tailed Hawk	40.9	44.0	45.3	42.4	45.9	50.6	50.3	49.6	57.1	56.2	51.3	52.2	51.2	52.0	53.9	55.7	incr***
Rough-legged Hawk	6.9	9.1	8.2	7.0	7.7	11.4	9.0	7.5	7.1	10.3	7.4	8.0	7.6	9.7	10.7	6.8	stbl
Golden Eagle ^b												0.1	0.0	0.0	0.1	0.4	
American Kestrel	41.3	45.1	45.1	45.0	45.8	50.8	52.0	48.7	47.1	48.3	40.4	39.6	38.9	39.7	39.4	38.8	decr*
Merlin	1.1	0.7	0.9	1.2	1.4	1.6	1.6	1.7	2.0	2.2	2.2	1.6	2.6	1.5	1.7	2.3	incr***
Peregrine Falcon	0.4	0.4	0.6	0.6	1.3	0.8	1.1	1.1	1.0	1.0	1.3	0.8	1.3	1.7	1.6	1.1	incr***
Gray Partridge	2.5	1.8	2.1	2.5	1.8	2.2	1.5	1.0	1.3	1.0	0.9	1.1	1.1	0.4	0.6	0.1	decr***
Ring-necked Pheasant	12.3	14.3	13.9	15.0	14.9	14.9	13.6	15.0	15.8	16.1	14.9	15.7	15.6	16.9	17.5	19.4	incr***
Spruce Grouse ^b												0.0	0.1	0.0	0.0	0.0	
Ruffed Grouse	14.6	18.7	17.8	18.2	14.7	12.6	12.2	11.3	10.4	12.7	12.3	12.7	15.0	11.9	13.8	13.0	decr*
Greater Prairie-Chicken	0.4	1.1	1.3	1.5	0.6	1.4	0.9	0.7	0.6	0.4	0.7	0.5	1.2	0.6	1.1	1.0	stbl
Sharp-tailed Grouse	0.8	0.9	0.5	1.0	0.2	0.2	0.1	0.5	0.5	0.8	0.4	0.1	0.1	0.1	0.1	0.2	decr**

(continued)

Table 2. (continued)

Species	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	Trend ^a
Wild Turkey	2.0	2.5	3.3	3.6	5.1	8.3	7.0	9.4	10.7	14.1	14.2	16.1	18.3	21.6	22.0	27.6	incr***
Northern Bobwhite	1.8	2.2	2.6	2.2	2.9	3.8	2.6	2.6	2.2	2.3	1.8	2.3	1.9	1.8	3.2	2.5	stbl
Yellow Rail ^b												0.1	0.3	0.3	0.2	0.3	
King Rail ^b												0.0	0.1	0.0	0.1	0.2	
Virginia Rail	1.1	1.2	0.9	1.0	0.6	1.3	1.6	1.0	1.3	1.1	1.4	1.2	1.4	1.1	0.5	0.8	stbl
Sora	3.3	3.6	3.4	3.8	4.1	5.1	4.0	4.6	4.3	3.3	4.4	3.8	4.5	3.3	2.0	3.0	invu**
Common Moorhen	1.2	1.8	1.2	1.2	0.9	1.8	1.8	0.7	2.2	1.5	1.1	1.0	1.4	1.6	0.6	0.7	stbl
American Coot	12.3	14.7	13.1	14.6	13.6	16.1	14.8	12.3	15.4	16.2	18.6	19.7	17.9	17.0	15.2	12.8	stbl
Sandhill Crane	13.3	15.2	17.7	18.2	18.9	20.9	21.1	23.3	23.7	24.6	26.2	29.0	33.5	31.2	33.9	35.6	incr***
Black-bellied Plover	0.6	0.9	0.8	1.1	0.8	1.6	1.5	1.2	1.1	0.8	0.9	0.4	1.0	0.7	1.0	0.7	stbl
American Golden-Plover	0.7	0.6	0.6	0.7	0.5	0.8	0.9	0.6	0.8	0.4	0.4	0.8	1.0	0.6	1.0	1.1	stbl
Semipalmated Plover	0.9	2.3	2.3	1.5	1.4	2.4	2.8	1.4	2.2	1.0	1.4	1.3	1.7	1.5	1.5	1.8	stbl
Piping Plover ^b												0.0	0.0	0.0	0.0	0.1	
Killdeer	42.2	43.7	39.8	40.4	41.3	40.3	39.4	37.6	40.6	37.3	35.6	36.7	34.7	33.7	34.1	33.7	decr***
American Avocet ^b												0.0	0.0	0.1	0.1	0.1	
Greater Yellowlegs	4.2	3.6	4.4	4.1	3.0	4.3	4.6	3.2	4.7	3.5	4.8	3.5	3.7	3.3	3.1	3.7	stbl
Lesser Yellowlegs	4.9	5.1	5.2	5.7	4.1	5.6	5.6	3.4	5.4	4.4	5.6	4.9	4.9	4.2	4.4	4.6	stbl
Solitary Sandpiper	2.4	2.6	2.9	3.1	2.9	3.9	3.3	2.4	3.6	2.5	3.2	2.8	3.0	2.4	2.3	2.4	invu*
Willet	0.1	0.1	0.3	0.1	0.3	0.1	0.1	0.1	0.3	0.1	0.3	0.2	0.1	0.1	0.1	0.1	stbl
Spotted Sandpiper	5.7	5.7	5.6	5.8	6.6	8.1	7.2	6.4	7.5	6.4	8.0	6.3	6.1	4.6	4.3	4.7	invu***
Upland Sandpiper	1.7	1.5	1.7	1.5	1.6	2.0	1.6	1.4	1.8	1.4	1.2	1.2	1.6	1.3	1.0	1.1	decr**
Whimbrel ^b												0.0	0.0	0.1	0.0	0.0	
Hudsonian Godwit	0.1	0.1	0.4	0.2	0.1	0.0	0.3	0.1	0.1	0.0	0.2	0.2	0.2	0.2	0.3	0.0	stbl
Marbled Godwit	0.0	0.1	0.2	0.1	0.1	0.1	0.2	0.1	0.3	0.1	0.2	0.1	0.1	0.1	0.4	0.2	incr*
Ruddy Turnstone	0.6	0.6	0.6	0.4	0.4	1.0	0.9	0.9	0.3	0.5	0.4	0.4	0.4	0.3	0.3	0.2	decr*
Red Knot	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.2	0.3	0.1	0.2	0.1	0.0	0.1	0.2	0.1	stbl
Sanderling	0.6	0.8	0.6	0.8	0.9	0.9	0.6	0.9	0.5	0.6	0.8	0.3	0.8	0.8	0.8	0.8	stbl
Semipalmated Sandpiper	1.3	2.1	2.3	1.7	2.1	3.2	3.1	1.5	2.2	1.3	2.1	1.3	1.8	1.3	1.9	1.4	stbl
Western Sandpiper ^b												0.1	0.1	0.1	0.0	0.1	
Least Sandpiper	1.9	2.6	2.7	2.6	2.7	3.9	4.2	2.4	2.4	2.1	3.0	2.3	2.7	2.5	2.6	2.1	stbl
White-rumped Sandpiper	0.3	0.5	0.2	0.3	0.3	0.4	0.5	0.4	0.3	0.3	0.6	0.3	0.4	0.5	0.4	0.4	stbl
Baird's Sandpiper	0.4	0.8	0.7	0.3	0.5	0.9	1.0	0.5	0.6	0.4	0.7	0.4	0.7	0.7	0.4	0.7	stbl
Pectoral Sandpiper	2.4	3.4	3.8	2.4	1.8	4.3	3.3	1.4	2.4	1.7	2.2	1.3	2.3	2.6	2.8	2.2	stbl
Dunlin	1.3	1.8	1.1	1.2	1.6	3.1	2.5	1.7	2.1	1.5	1.8	1.5	1.6	1.7	2.2	1.5	stbl

Stilt Sandpiper	0.2	0.7	0.6	0.5	0.2	0.8	0.6	0.2	0.5	0.3	0.5	0.4	0.3	0.5	0.4	0.5	stbl
Buff-breasted Sandpiper ^b												0.1	0.3	0.1	0.1	0.4	
Ruff ^b												0.0	0.0	0.0	0.0	0.0	
Short-billed Dowitcher	0.8	1.6	1.7	1.4	1.3	2.2	1.7	0.9	1.5	0.9	1.4	0.9	1.2	1.2	1.1	0.8	stbl
Long-billed Dowitcher	0.4	0.4	0.4	0.3	0.3	1.0	0.7	0.2	0.2	0.3	0.3	0.2	0.3	0.5	0.5	0.2	stbl
Common Snipe	7.4	8.3	7.5	7.5	5.6	8.8	6.4	7.7	6.9	5.6	6.4	4.6	6.8	6.0	4.3	6.2	decr**
American Woodcock	5.0	5.8	5.2	5.2	4.4	5.3	5.0	4.8	5.2	4.2	4.0	3.9	4.9	4.5	4.1	4.7	decr**
Wilson's Phalarope	0.6	1.0	1.0	0.8	0.7	1.4	1.0	0.7	1.0	0.3	0.8	0.3	0.6	0.2	0.5	0.4	decr*
Red-necked Phalarope	0.1	0.2	0.0	0.1	0.1	0.1	0.1	0.0	0.1	0.0	0.0	0.0	0.1	0.2	0.1	0.2	stbl
Laughing Gull ^b												0.0	0.0	0.0	0.0	0.0	
Franklin's Gull	0.4	0.1	0.1	0.1	0.2	0.6	0.2	0.2	0.2	0.2	0.4	0.1	0.1	0.3	0.1	0.1	stbl
Little Gull ^b												0.0	0.1	0.0	0.0	0.1	
Bonaparte's Gull	3.3	3.3	2.8	2.8	3.6	4.8	3.5	4.4	4.5	4.4	2.8	3.6	4.4	3.5	3.5	3.0	invu*
Ring-billed Gull	21.5	27.1	24.8	27.2	29.9	35.6	35.0	39.3	38.6	38.2	34.7	39.7	46.1	38.9	42.5	40.5	incr***
Herring Gull	20.8	19.2	16.8	16.2	21.3	26.2	27.1	26.4	27.3	25.2	25.0	25.6	26.3	22.0	22.0	23.6	invu*
Thayer's Gull ^b												0.1	0.2	0.1	0.1	0.1	
Iceland Gull ^b												0.0	0.1	0.1	0.0	0.0	
Glaucous Gull	0.5	0.4	0.4	0.4	0.6	0.8	0.9	0.9	0.4	0.6	0.8	0.8	0.9	0.4	0.3	0.3	invu**
Greater Black-backed Gull ^b												0.1	0.7	0.6	0.6	0.5	
Caspian Tern	1.7	1.6	1.9	2.1	3.9	4.9	4.4	4.0	3.9	4.1	4.3	3.5	3.5	3.7	3.6	3.2	incr*
Common Tern	3.1	2.8	3.1	2.9	3.0	2.7	3.4	3.3	3.1	2.8	3.0	3.0	1.8	1.6	1.8	2.0	decr**
Forster's Tern	2.2	1.5	1.9	2.2	3.4	4.5	4.6	4.2	3.7	3.3	3.7	3.2	3.0	2.5	3.0	2.6	invu***
Black Tern	4.8	5.1	5.9	6.0	4.5	5.2	5.1	6.0	5.8	4.7	4.5	4.3	3.6	3.3	2.2	3.1	decr***
Rock Dove	73.9	73.8	72.4	72.6	70.9	72.8	73.7	74.1	73.1	74.0	72.3	71.5	69.9	66.0	65.5	64.8	decr***
Mourning Dove	74.7	76.4	79.2	83.7	85.3	86.0	85.8	84.6	83.7	85.2	84.5	81.9	83.0	82.6	85.8	84.3	incr*
Black-billed Cuckoo	2.8	4.1	4.8	4.2	3.7	6.9	5.6	3.2	2.7	3.3	3.0	4.4	4.3	2.5	2.0	2.6	stbl
Yellow-billed Cuckoo	1.3	1.8	3.3	2.4	1.4	2.8	2.4	1.1	1.0	0.9	1.2	1.9	1.7	2.0	1.1	1.3	stbl
Barn Owl	0.0	0.1	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	stbl
Eastern Screech-Owl	2.1	2.5	2.4	2.5	2.6	4.0	2.9	2.8	2.2	3.1	1.8	1.1	1.5	1.6	1.2	2.4	stbl
Great Horned Owl	11.4	11.4	11.6	12.2	10.7	13.9	15.3	15.4	16.3	13.5	11.7	12.2	11.9	11.1	13.0	13.0	invu*
Snowy Owl	1.1	1.7	1.1	0.3	0.4	1.2	2.0	1.5	0.8	0.3	0.9	1.2	0.4	0.2	0.6	1.1	stbl
Barred Owl	9.9	11.2	8.4	8.5	8.9	9.3	9.7	10.6	9.5	10.4	9.3	8.6	10.3	8.2	8.1	8.4	stbl
Great Grey Owl	0.1	0.0	0.0	0.3	0.0	0.0	0.0	0.0	0.0	0.1	0.3	0.2	0.1	0.0	0.0	0.1	stbl
Long-eared Owl	0.1	0.2	0.1	0.4	0.1	0.1	0.2	0.2	0.3	0.3	0.1	0.3	0.2	0.2	0.1	0.3	stbl
Short-eared Owl	0.4	0.3	0.6	0.7	0.6	1.3	0.5	0.2	0.6	1.1	0.4	0.8	0.5	0.6	1.2	1.0	stbl
Northern Saw-whet Owl	0.6	0.1	0.2	0.5	0.5	0.5	0.7	0.6	1.2	0.5	0.4	0.6	0.6	0.6	0.6	0.6	stbl
Common Nighthawk	13.4	13.1	11.8	11.0	9.6	11.2	11.5	11.1	9.1	8.9	10.7	7.9	8.9	6.9	6.4	6.0	decr***

(continued)

Table 2. (continued)

Species	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	Trend ^a
Whip-poor-will	5.2	4.3	3.8	3.9	3.8	3.9	4.1	3.4	3.5	3.2	2.4	2.6	4.3	3.5	2.8	3.7	decr*
Chimney Swift	21.1	21.6	21.1	20.7	20.2	23.3	21.3	19.5	19.4	18.5	19.0	17.8	18.0	16.2	15.8	17.9	decr***
Ruby-throated Hummingbird	13.4	11.7	15.5	13.4	14.5	16.7	16.7	16.5	19.0	18.4	21.0	22.4	22.0	23.1	25.3	25.0	incr***
Belted Kingfisher	21.1	21.0	21.1	22.7	21.0	22.2	20.9	21.0	20.6	20.1	20.2	18.4	21.2	21.1	18.9	18.4	decr**
Red-headed Woodpecker	16.5	14.3	12.1	12.9	14.6	13.2	12.2	11.4	10.7	10.0	8.9	8.0	7.1	6.6	4.4	5.6	decr***
Red-bellied Woodpecker	25.2	25.2	27.5	28.7	29.7	33.1	34.4	36.6	36.6	38.6	35.7	39.9	42.2	47.2	46.8	48.0	incr***
Yellow-bellied Sapsucker	6.3	7.0	7.0	6.9	8.4	6.7	7.2	6.8	8.7	8.5	7.4	7.7	9.2	7.3	6.4	5.7	invu*
Downy Woodpecker	61.4	62.5	66.0	65.8	66.0	67.4	67.7	67.2	68.5	68.8	68.9	70.1	75.4	75.8	77.0	77.1	incr***
Hairy Woodpecker	43.0	39.2	41.6	40.1	43.1	43.9	48.2	47.5	48.1	49.6	46.9	45.4	50.9	51.4	50.4	53.6	incr***
Black-backed Woodpecker ^b												0.1	0.1	0.1	0.2	0.2	
Northern Flicker	42.0	40.6	40.4	40.8	41.9	42.8	39.6	38.1	39.2	35.9	32.9	33.0	34.1	31.7	32.0	31.1	decr***
Pileated Woodpecker	11.7	11.8	12.5	13.8	14.8	13.8	14.0	14.0	14.8	16.2	16.5	15.3	17.8	15.5	15.7	18.4	incr***
Olive-sided Flycatcher	0.7	0.8	0.7	0.5	1.0	0.7	1.2	0.8	0.9	1.0	1.4	0.8	0.8	1.0	0.9	0.7	stbl
Eastern Wood-pewee	10.3	11.7	13.1	13.5	12.8	17.4	14.9	14.8	15.5	13.7	13.9	13.5	13.9	12.7	12.2	14.8	invu*
Yellow-bellied Flycatcher	0.5	0.6	0.5	1.0	0.9	0.7	1.1	1.1	1.2	1.0	1.6	1.6	1.0	0.7	0.5	1.0	invu**
Acadian Flycatcher	0.2	0.3	0.4	0.3	0.3	0.8	1.0	1.0	0.7	0.7	0.8	0.4	0.4	0.4	0.4	0.6	invu**
Alder Flycatcher	0.9	0.9	1.1	1.2	1.5	2.0	2.2	3.0	2.2	2.2	3.5	2.5	2.7	2.4	2.2	2.2	incr**
Willow Flycatcher	2.2	2.3	2.5	2.8	3.1	4.6	3.1	3.9	3.1	3.5	3.6	3.7	3.8	3.5	2.6	2.5	invu**
Least Flycatcher	4.7	4.5	4.5	5.6	6.2	6.9	7.4	7.4	6.0	6.4	6.6	6.3	6.5	6.8	5.8	6.2	incr*
Eastern Phoebe	14.2	15.9	15.0	18.8	17.3	18.9	16.1	19.0	21.3	21.5	18.7	19.5	24.7	23.8	24.5	24.8	incr***
Great Crested Flycatcher	13.0	13.0	13.6	14.5	14.6	15.6	15.5	14.4	13.7	14.2	13.9	13.2	13.9	12.2	11.9	13.3	invu**
Western Kingbird ^b												0.1	0.0	0.0	0.2	0.0	
Eastern Kingbird	19.9	18.3	19.9	19.9	21.1	21.4	20.7	20.5	20.3	19.4	20.3	18.4	18.7	16.4	16.6	19.4	decr*
Horned Lark	24.1	19.5	19.9	23.5	19.3	19.8	20.6	21.0	20.1	19.6	20.3	21.0	19.3	17.8	16.9	16.5	decr**
Purple Martin	13.7	12.1	13.2	12.3	14.7	12.2	13.2	10.2	10.3	10.1	10.5	8.6	8.1	8.1	6.2	7.7	decr***
Tree Swallow	31.5	29.2	30.0	28.9	29.6	31.7	29.2	29.7	30.5	30.4	31.2	31.3	31.6	29.7	28.5	29.8	stbl
Northern Rough-winged Swallow	6.3	6.1	6.6	7.1	7.5	7.5	7.5	7.4	7.7	7.4	8.0	7.1	6.7	7.1	6.5	7.8	invu*
Bank Swallow	4.3	4.4	3.9	3.3	4.8	5.2	4.5	5.1	3.4	4.5	4.9	3.8	3.6	4.1	3.1	3.2	stbl
Cliff Swallow	7.4	8.0	8.6	7.7	8.1	8.6	8.5	8.3	9.4	9.2	9.4	8.4	10.1	7.4	7.4	7.2	invu**
Barn Swallow	29.4	27.8	28.0	27.6	28.8	29.8	28.1	29.1	28.2	28.1	30.5	27.7	26.9	25.7	24.5	26.6	decr*
Gray Jay	2.5	2.4	2.1	1.7	1.0	0.5	1.2	0.7	0.9	1.0	0.9	0.6	0.5	0.3	0.4	0.6	decr***
Blue Jay	85.2	81.2	82.3	81.6	82.9	83.4	82.4	83.8	84.7	85.5	81.4	81.9	81.4	78.0	80.0	83.9	stbl
American Crow	90.4	89.0	89.2	89.2	88.2	89.7	91.2	90.7	92.6	93.0	92.0	91.5	91.7	89.6	91.7	92.8	incr**

Common Raven	12.7	12.3	11.6	11.5	11.5	10.0	12.7	13.3	14.0	16.6	15.5	13.2	15.8	13.6	14.2	14.4	incr**
Black-capped Chickadee	81.6	80.0	82.9	81.8	83.4	83.6	83.1	84.8	87.0	87.3	84.9	84.9	87.2	87.6	89.4	90.3	incr***
Boreal Chickadee	0.4	0.3	0.1	0.3	0.1	0.2	0.2	0.1	0.2	0.0	0.1	0.1	0.2	0.0	0.1	0.0	decr**
Tufted Titmouse	3.7	4.5	5.7	4.2	2.8	2.9	2.1	2.6	3.4	5.5	4.8	5.7	5.2	7.6	8.1	9.0	incr**
Red-breasted Nuthatch	14.1	16.0	13.9	22.9	29.5	16.3	15.2	27.4	24.9	29.8	28.4	31.8	28.0	27.7	25.3	28.6	incr**
White-breasted Nuthatch	65.6	63.7	65.1	65.2	66.8	65.8	64.6	66.7	69.0	68.7	62.9	63.7	68.6	70.7	70.0	75.3	incr**
Brown Creeper	6.8	7.7	9.3	10.3	9.1	9.8	13.4	12.0	11.2	12.5	10.5	9.5	10.5	8.3	7.7	7.4	invu***
Carolina Wren ^b												0.1	0.1	0.2	0.0	0.1	
House Wren	25.7	23.7	20.7	24.2	26.6	27.9	24.9	25.0	25.1	24.8	22.4	23.2	24.8	26.8	26.3	26.3	stbl
Winter Wren	2.1	2.3	2.0	3.4	3.1	3.9	4.7	5.3	5.0	5.7	4.3	4.5	5.5	3.4	2.9	2.7	invu***
Sedge Wren	3.9	4.3	3.9	3.3	3.8	5.0	6.5	6.0	5.5	4.4	4.8	5.4	4.9	4.9	4.2	5.9	stbl
Marsh Wren	3.1	3.1	3.1	2.9	3.4	6.0	5.3	5.0	4.2	4.3	4.4	4.1	3.9	4.1	2.4	3.8	invu**
Golden-crowned Kinglet	6.1	6.9	7.0	7.1	8.1	10.0	9.2	9.2	8.0	9.6	5.6	6.2	8.1	7.5	7.5	5.0	invu**
Ruby-crowned Kinglet	7.0	5.9	6.6	9.2	7.5	10.0	8.3	7.9	10.0	9.3	8.2	8.1	7.3	7.2	6.9	6.4	invu***
Blue-gray Gnatcatcher	2.5	3.1	2.8	4.3	4.5	6.2	6.1	4.9	5.8	5.8	5.2	5.7	5.6	6.5	6.0	7.0	incr***
Eastern Bluebird	19.3	23.3	23.6	26.2	29.5	31.1	28.0	26.5	31.0	31.1	29.4	28.8	32.3	28.8	33.3	32.7	incr***
Veery	4.3	4.1	4.2	4.5	5.3	6.0	5.8	6.9	5.6	6.3	7.1	6.2	6.1	4.9	3.8	5.1	invu***
Gray-cheeked Thrush	0.9	0.7	1.0	1.0	1.3	1.4	1.6	1.9	1.0	1.5	1.6	1.6	0.9	0.7	0.9	0.6	invu***
Swainson's Thrush	3.0	2.7	2.7	2.9	3.5	4.5	3.3	4.7	2.7	4.6	3.9	4.2	3.8	3.6	2.8	3.1	invu**
Hermit Thrush	5.1	4.6	4.1	5.9	6.0	7.6	6.9	7.4	7.6	8.2	7.9	6.8	7.8	5.6	5.3	6.6	invu***
Wood Thrush	7.2	7.5	7.2	8.0	8.2	7.8	7.1	8.7	8.7	8.5	7.5	8.4	8.1	6.6	6.9	8.6	stbl
American Robin	64.6	64.8	64.4	65.2	67.9	66.7	67.1	63.3	67.0	65.5	64.7	65.1	68.5	68.1	69.4	65.0	stbl
Gray Catbird	23.7	24.3	23.5	25.1	26.0	28.8	27.3	27.9	25.9	25.3	23.7	24.0	24.2	25.2	26.6	29.5	stbl
Northern Mockingbird	0.1	0.3	0.1	0.0	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.6	0.2	0.2	stbl
Brown Thrasher	17.2	16.5	15.5	15.5	16.1	16.2	15.0	13.9	14.3	13.6	13.0	11.2	13.2	10.8	10.4	12.4	decr***
American Pipit	0.5	0.2	0.3	0.6	0.2	0.7	0.2	0.2	0.4	0.3	0.7	0.7	1.0	0.8	0.7	0.9	incr**
Bohemian Waxwing	1.0	0.6	1.1	0.8	0.8	0.2	0.5	0.3	0.4	0.2	0.2	0.3	0.6	0.8	0.7	0.7	ushp**
Cedar Waxwing	26.9	25.4	25.7	29.3	29.9	29.3	29.6	27.3	32.3	26.9	30.5	28.0	31.8	27.6	28.4	34.4	incr*
Northern Shrike	4.9	3.4	3.7	3.3	3.4	4.2	3.6	3.1	4.0	6.8	4.0	3.0	3.6	4.2	4.6	3.2	stbl
Loggerhead Shrike	0.2	0.2	0.3	0.6	0.2	0.7	0.6	0.1	0.3	0.5	0.4	0.3	0.2	1.0	0.6	0.4	stbl
European Starling	83.7	81.4	79.1	80.6	79.0	80.5	81.6	81.3	79.6	79.6	77.2	76.2	76.1	72.7	74.1	74.4	decr***
White-eyed Vireo ^b												0.1	0.1	0.1	0.1	0.1	
Bell's Vireo	0.0	0.1	0.0	0.0	0.3	0.4	0.2	0.5	0.1	0.2	0.2	0.1	0.1	0.1	0.0	0.0	invu*
Solitary Vireo	1.0	0.9	1.1	1.4	2.1	2.1	1.9	2.2	2.2	2.3	2.1	2.3	1.4	1.7	1.7	2.0	incr*
Yellow-throated Vireo	2.4	2.5	2.8	4.5	4.2	5.8	4.5	4.0	4.8	4.3	4.0	4.4	4.4	4.0	3.4	4.4	invu**
Warbling Vireo	5.9	6.2	6.5	7.3	7.6	9.3	8.1	9.1	8.5	8.3	7.8	7.6	8.2	8.4	7.6	9.3	incr*

(continued)

Table 2. (continued)

Species	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	Trend ^a
Philadelphia Vireo	1.0	1.2	1.0	1.0	1.5	1.6	1.2	1.0	1.4	1.0	1.3	1.2	1.0	0.9	0.8	0.9	invu*
Red-eyed Vireo	9.9	10.5	10.4	11.0	11.9	15.3	14.3	13.3	14.1	13.1	14.9	14.1	15.6	13.8	14.4	15.4	incr***
Blue-winged Warbler	2.1	2.4	2.7	3.2	2.7	3.4	3.5	4.1	3.8	3.5	3.6	3.9	3.6	3.2	3.1	3.3	incr*
Golden-winged Warbler	1.4	1.5	1.7	2.0	2.8	2.6	2.8	3.3	2.5	2.1	2.9	3.0	2.6	2.0	1.8	1.8	invu***
Tennessee Warbler	3.5	4.3	3.2	3.7	3.9	6.1	4.4	4.6	3.9	4.1	4.2	4.2	4.3	4.0	3.9	3.8	stbl
Orange-crowned Warbler	0.9	0.9	1.2	1.4	1.4	1.8	1.5	1.4	1.1	1.2	1.4	1.5	0.9	1.1	0.8	0.9	invu**
Nashville Warbler	4.3	3.1	2.8	4.1	4.5	5.6	6.5	5.9	5.6	6.3	6.6	7.0	5.0	5.3	4.3	4.8	invu**
Northern Parula	0.8	0.8	1.2	1.3	1.7	2.0	1.5	1.4	2.1	1.7	2.5	2.4	1.4	1.3	1.5	2.0	incr*
Yellow Warbler	9.0	9.3	9.4	11.4	12.1	13.0	12.4	12.7	12.0	13.0	13.3	12.1	10.3	10.8	10.5	12.3	invu***
Chestnut-sided Warbler	3.6	3.7	4.7	4.4	6.1	6.1	6.4	7.2	6.6	6.3	7.7	6.7	5.9	5.7	5.4	6.7	incr*
Magnolia Warbler	3.3	2.9	3.1	3.8	4.7	5.3	4.9	5.4	4.2	4.7	5.7	5.1	3.7	4.2	3.5	4.0	invu***
Cape May Warbler	2.0	1.8	1.6	2.1	1.6	2.5	2.0	2.8	1.8	2.2	3.0	1.9	1.7	1.8	1.4	2.3	stbl
Black-throated Blue Warbler	0.5	0.4	0.6	0.5	0.8	0.9	0.6	0.8	0.8	1.0	0.9	1.2	0.7	0.8	0.5	0.4	invu**
Yellow-rumped Warbler	11.8	11.8	11.5	13.5	13.9	15.2	12.9	13.7	15.2	15.7	15.9	14.7	14.5	11.4	11.7	12.5	invu***
Black-throated Green Warbler	2.9	2.9	3.0	4.2	5.0	5.7	6.4	6.3	6.1	5.9	6.7	6.3	5.8	5.8	5.5	6.1	incr***
Blackburnian Warbler	1.8	1.6	2.0	2.7	3.5	2.8	3.4	3.8	2.9	3.3	4.2	3.9	2.0	2.6	2.4	1.8	invu***
Yellow-throated Warbler ^b												0.3	0.4	0.4	0.4	0.1	
Pine Warbler	1.3	1.1	0.8	1.1	2.1	3.1	2.0	2.1	3.0	2.8	3.0	2.0	2.8	1.7	2.1	3.0	incr*
Prairie Warbler ^b												0.0	0.0	0.2	0.0	0.0	
Palm Warbler	4.1	3.9	3.9	5.4	5.6	5.9	5.8	4.8	6.2	5.9	6.1	6.6	4.6	4.6	3.9	4.6	invu***
Bay-breasted Warbler	1.3	1.4	1.6	1.5	1.8	2.7	2.6	2.4	1.8	1.7	2.1	2.3	1.5	1.4	1.1	1.8	invu**
Blackpoll Warbler	1.0	1.1	1.3	1.4	1.6	2.9	1.8	2.6	1.6	2.1	2.3	2.0	2.2	1.9	1.3	1.3	invu**
Cerulean Warbler	0.4	0.6	0.5	0.5	0.6	0.8	0.9	0.8	0.6	0.7	0.7	0.4	0.3	0.6	0.6	0.6	stbl
Black-and-white Warbler	3.8	3.3	4.1	5.6	6.2	6.7	6.6	7.0	6.7	6.4	7.4	7.0	5.2	4.9	4.7	5.4	invu***
American Redstart	5.8	6.0	6.7	8.2	9.1	10.8	9.8	9.7	10.0	10.1	10.6	10.8	9.1	8.9	8.0	9.4	incr*
Prothonotary Warbler	0.4	0.4	0.3	0.6	0.4	0.4	0.6	0.7	0.7	0.6	0.9	0.3	0.7	0.7	0.5	0.5	stbl
Worm-eating Warbler ^b												0.1	0.0	0.0	0.1	0.1	
Ovenbird	8.1	7.8	8.4	9.0	10.0	10.2	9.8	11.1	10.9	10.3	11.0	10.8	11.0	8.8	9.6	10.5	incr*
Northern Waterthrush	1.9	2.1	2.0	3.1	3.4	3.6	3.5	3.2	3.5	3.2	4.0	3.7	3.4	2.8	2.9	3.0	invu***
Louisiana Waterthrush	0.6	0.5	0.4	0.5	0.4	0.6	0.5	0.7	0.4	0.3	0.4	0.3	0.3	0.4	0.5	0.1	decr*
Kentucky Warbler	0.3	0.3	0.2	0.3	0.2	0.3	0.3	0.2	0.1	0.1	0.3	0.2	0.1	0.1	0.1	0.1	decr**
Connecticut Warbler	0.5	0.5	0.5	0.8	0.5	0.7	0.6	0.6	0.6	0.9	1.1	0.9	0.5	0.4	0.4	0.4	invu*
Mourning Warbler	1.7	1.6	1.6	2.3	2.6	2.8	3.1	3.6	3.1	3.4	4.2	3.9	3.5	2.5	2.6	2.5	incr*
Common Yellowthroat	16.0	14.7	15.2	16.3	16.4	19.6	18.2	19.6	18.3	17.8	17.9	17.4	17.5	16.0	15.6	17.7	invu**

Hooded Warbler	0.1	0.2	0.3	0.2	0.3	0.2	0.1	0.3	0.2	0.3	0.1	0.3	0.5	0.2	0.3	0.2	stbl
Wilson's Warbler	1.2	0.9	1.5	1.5	2.1	2.2	2.8	2.2	1.6	2.1	3.0	3.2	1.7	2.1	1.8	1.2	invu**
Canada Warbler	1.2	0.9	1.4	1.8	1.8	2.3	2.5	2.2	1.7	2.2	3.4	2.4	1.7	1.8	1.4	1.3	invu***
Yellow-breasted Chat	0.1	0.2	0.2	0.1	0.2	0.1	0.2	0.3	0.1	0.1	0.1	0.2	0.0	0.1	0.0	0.2	stbl
Scarlet Tanager	5.2	4.7	5.5	6.5	6.3	8.6	8.0	7.7	7.4	7.0	6.4	7.0	8.5	6.0	6.7	8.3	incr*
Northern Cardinal	67.6	67.5	67.4	69.6	71.7	75.2	73.5	72.7	74.2	74.7	70.8	71.8	75.4	76.4	77.2	78.5	incr***
Rose-breasted Grosbeak	15.4	15.6	16.0	17.8	19.6	20.2	19.9	20.0	20.2	21.1	20.1	20.7	18.4	18.8	18.0	21.3	incr*
Indigo Bunting	12.9	13.3	13.2	14.2	15.4	16.6	16.7	17.2	15.5	16.2	16.7	15.5	14.7	16.2	15.6	18.6	incr**
Dickcissel	0.3	1.0	2.2	1.6	1.5	2.6	1.8	0.9	1.0	1.8	1.9	1.1	1.5	1.8	2.5	1.4	stbl
Eastern Towhee	10.4	11.1	10.2	9.9	9.4	11.7	10.6	10.8	10.3	10.6	9.6	9.5	9.2	7.7	8.8	9.5	decr**
American Tree Sparrow	15.6	13.6	17.4	21.0	21.3	20.9	19.8	19.9	22.0	24.6	21.5	20.5	20.0	22.2	22.8	21.4	incr**
Chipping Sparrow	27.7	26.8	26.8	28.7	29.7	31.7	28.5	29.7	30.3	29.2	31.7	31.3	32.2	30.9	32.5	32.9	incr***
Clay-colored Sparrow	2.7	2.4	2.5	2.6	3.1	3.7	3.4	3.5	3.8	3.8	4.1	4.6	4.3	3.4	3.6	4.0	incr***
Field Sparrow	13.2	15.3	13.7	14.8	13.7	16.0	13.0	14.3	13.7	13.0	12.7	12.5	12.9	11.0	11.7	11.6	decr***
Vesper Sparrow	7.0	6.1	6.7	6.6	7.3	6.7	6.3	6.1	6.7	6.3	6.6	6.1	5.7	4.0	3.1	3.2	decr***
Lark Sparrow	0.2	0.2	0.2	0.3	0.5	0.5	0.3	0.3	0.5	0.4	0.3	0.2	0.3	0.2	0.3	0.1	invu**
Savannah Sparrow	10.2	10.0	10.1	11.3	11.6	13.5	12.5	12.1	13.0	11.8	12.9	13.7	13.2	10.8	8.8	11.8	invu**
Grasshopper Sparrow	1.7	1.6	1.0	1.7	2.3	4.0	3.4	2.1	1.8	2.0	1.7	1.5	2.3	1.7	1.6	1.4	stbl
Henslow's Sparrow	0.8	0.9	0.6	0.3	0.5	0.8	0.9	0.3	0.4	0.3	0.3	0.3	0.8	0.3	0.5	0.5	stbl
Le Conte's Sparrow	0.3	0.3	0.3	0.2	0.5	0.7	0.4	0.2	0.5	0.5	0.5	0.3	0.3	0.4	0.2	0.2	invu*
Nelson's Sharp-tailed Sparrow ^b												0.0	0.0	0.0	0.0	0.0	
Fox Sparrow	4.6	6.2	6.4	7.0	6.4	8.9	7.3	7.0	5.9	7.1	5.4	5.4	5.0	6.2	6.8	5.3	stbl
Song Sparrow	38.1	40.8	39.6	42.9	43.8	46.4	45.5	44.1	45.3	46.6	46.0	44.4	43.4	40.2	45.8	42.3	invu***
Lincoln's Sparrow	1.3	1.2	1.1	1.7	1.8	2.4	2.2	1.6	1.8	1.5	2.5	2.6	2.0	2.1	1.5	1.5	invu*
Swamp Sparrow	8.2	8.8	8.0	9.7	9.7	13.8	10.5	10.5	10.3	10.1	10.0	8.8	9.4	9.0	6.8	8.1	invu**
White-throated Sparrow	13.4	13.8	13.1	15.5	16.1	19.0	18.8	18.0	18.9	21.1	18.6	18.4	19.8	16.5	17.5	18.5	incr**
White-crowned Sparrow	4.2	3.0	3.5	3.6	4.6	4.6	3.7	3.5	3.4	4.5	3.4	5.4	5.0	5.8	4.6	5.7	incr**
Harris' Sparrow	0.3	0.6	0.5	0.5	0.9	0.1	0.5	0.3	0.2	0.2	0.5	0.6	1.0	0.7	0.6	0.8	stbl
Dark-eyed Junco	45.2	42.7	45.0	43.9	43.3	45.8	42.4	45.0	46.0	47.8	42.6	44.7	46.3	48.5	48.9	47.2	incr*
Lapland Longspur	1.4	1.7	1.1	0.9	1.0	1.4	1.0	0.8	0.9	1.1	0.9	1.7	2.2	2.8	2.4	1.8	incr*
Snow Bunting	4.8	3.5	4.5	5.1	2.8	3.4	3.9	3.5	3.2	3.0	4.4	5.3	3.4	4.6	4.4	4.0	stbl
Bobolink	7.6	7.3	7.5	7.3	6.9	9.0	7.9	9.0	8.1	7.2	9.0	9.3	7.8	6.5	5.2	6.0	invu**
Red-winged Blackbird	51.7	52.6	50.9	50.6	56.4	54.9	55.6	52.5	54.1	51.8	55.0	54.6	52.6	50.3	53.1	51.9	stbl
Eastern Meadowlark	26.0	26.2	23.9	24.3	26.1	28.8	27.2	25.9	25.8	25.8	23.1	22.7	22.2	19.2	18.4	18.7	decr***
Western Meadowlark	8.9	7.1	6.0	7.1	5.3	6.8	6.2	5.2	4.4	3.8	3.5	2.7	3.5	2.1	2.4	1.7	decr***
Yellow-headed Blackbird	4.1	4.6	4.5	5.1	4.5	5.4	4.5	4.0	4.7	3.8	3.9	4.4	4.5	3.6	3.0	2.9	decr**
Rusty Blackbird	2.9	2.8	2.7	2.8	1.9	2.9	2.7	2.5	2.3	1.9	2.0	2.0	2.5	2.6	1.7	1.5	decr**

(continued)

Table 2. (continued)

Species	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	Trend ^a
Brewer's Blackbird	8.5	6.7	5.7	5.0	7.4	7.7	6.4	6.1	5.3	4.6	4.3	3.3	4.4	3.8	4.3	3.9	decr***
Common Grackle	53.8	53.6	52.1	51.4	52.9	51.9	53.8	47.6	50.2	46.6	46.7	45.2	44.1	41.6	43.3	41.0	decr***
Brown-headed Cowbird	26.8	25.8	25.9	26.7	28.5	28.8	26.9	29.1	27.4	25.7	26.7	25.6	27.0	26.0	26.3	24.8	invu*
Orchard Oriole	0.6	0.4	0.5	0.4	0.5	0.9	0.8	1.0	0.6	0.7	1.0	0.9	0.7	1.3	1.4	1.7	incr***
Baltimore Oriole	18.1	17.2	18.6	18.8	19.6	19.1	18.2	18.5	18.4	18.1	18.5	17.7	17.3	17.2	16.5	19.5	stbl
Pine Grosbeak	3.2	0.8	1.2	2.0	4.5	0.6	0.9	0.6	0.6	0.9	1.1	1.6	1.6	0.6	0.7	1.2	stbl
Purple Finch	23.0	22.7	23.3	21.0	25.3	22.0	20.9	22.1	16.6	22.4	20.5	19.9	16.9	20.7	19.3	19.9	decr**
House Finch ^c						19.6	44.6	53.9	61.5	60.6	60.4	57.6	61.5	63.5	63.9	60.3	incr*
Red Crossbill	0.4	1.1	2.9	0.5	1.6	0.7	0.3	0.6	0.4	0.7	0.8	0.6	0.5	0.5	0.2	0.9	stbl
White-winged Crossbill	0.1	0.8	0.7	1.6	3.4	0.1	0.2	0.5	0.4	0.4	0.9	0.8	0.2	0.2	0.2	0.7	stbl
Common Redpoll	7.9	4.7	4.6	2.9	8.0	3.1	7.6	2.3	5.9	2.6	12.5	3.5	6.8	3.0	5.6	2.2	stbl
Pine Siskin	15.4	25.8	28.9	13.5	33.6	9.0	11.0	12.5	9.0	11.4	20.1	9.3	9.2	11.4	10.1	13.6	decr*
American Goldfinch	71.8	72.4	76.6	74.7	77.7	75.8	71.9	77.3	73.6	75.4	75.7	75.2	77.0	77.8	80.1	83.4	incr**
Evening Grosbeak	18.3	11.3	9.4	5.8	7.9	5.7	5.4	6.0	5.8	6.4	6.8	5.5	5.5	4.3	5.3	6.5	decr**
House Sparrow	86.2	84.3	82.4	84.2	82.1	81.5	81.6	79.2	80.9	80.3	74.8	74.9	74.0	74.0	73.9	75.1	decr***

^a stbl = stable: regression equations with $P \geq 0.05$, incr = increasing: significant linear regressions with positive slopes, decr = decreasing: significant linear regressions with negative slopes, ushp = u-shaped: significant u-shaped quadratic trend, invu = inverted-u: significant inverted u-shaped quadratic trend. * = 0.05 > $P \geq 0.01$, ** = 0.01 > $P \geq 0.001$, *** = $P < 0.001$.

^b Species added to checklist in 1997.

^c House Finch was added to checklist in 1991.

throated Blue Warbler, Yellow-rumped Warbler, Blackburnian Warbler, Palm Warbler, Bay-breasted Warbler, Blackpoll Warbler, Black-and-white Warbler, Northern Waterthrush, Connecticut Warbler, Common Yellowthroat, Wilson's Warbler, Canada Warbler, Lark Sparrow, Savannah Sparrow, Le Conte's Sparrow, Song Sparrow, Lincoln's Sparrow, Swamp Sparrow, Bobolink, and Brown-headed Cowbird.

Significant u-shaped trends in reporting frequencies (decreasing during the mid 1980s to early 1990s and subsequently increasing) were observed for 3 species: Red-throated Loon, Red-necked Grebe, and Bohemian Waxwing.

Reporting frequencies were classified as stable for 76 species (linear or quadratic models did not explain a significant portion of the annual variation in reporting rates). However, several of these species did exhibit considerable variation in reporting frequencies. This was particularly notable for irruptive winter finches. For example, reporting rates of Common Redpoll reached highs in 1986 (7.9), 1990 (8.0), 1992 (7.6), and 1996 (12.5) but were as low as 2.3% in 1993

and 2.2% in 2001. Pine Grosbeak, Red Crossbill, and White-winged Crossbill showed similar erratic fluctuations in reporting rates.

Changes in cooperator activity may have affected species reporting frequencies. The potential confounding influence of cooperator activity should be kept in mind when interpreting trends in reporting rates.

ACKNOWLEDGMENTS

This project would not have been possible without the efforts of the 430 volunteers who contributed checklists. Their dedication to the birds of Wisconsin is greatly appreciated. Additionally, I am grateful for the efforts of Stanley and Anita Temple and John Cary who originated the checklist project and maintained it during its first six years.

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50 Years Ago in *The Passenger Pigeon*

A revised management and restoration plan for the Greater Prairie-Chicken is being drafted in 2004, a difficult chore because of the many challenges facing Wisconsin's population today. The WSO stepped forward 50 years ago with the following resolution that was passed at its annual meeting in Madison. The Society along with other agencies and organizations must continue to stand up for this highly valued native species.

"RESOLVED:

Whereas the prairie chicken, a native species of extraordinary interest both aesthetically and scientifically, has been reduced to a dangerously low population level because of loss of breeding habitat, and

Whereas continued loss of habitat and further reduction of the population are clearly foreseeable due to intensifying agricultural pressure on the land, to the extent that the prairie chicken may disappear from Wisconsin unless immediate steps for its preservation are taken, and

Whereas the critical step in preservation of the prairie chicken is preservation of its breeding habitat, namely, relatively undisturbed long-term grassland,

Be It Resolved:

- (1) that the Wisconsin Society for Ornithology buy a tract of land in Wisconsin's best remaining prairie chicken area (the neighboring Buena Vista and Leola marshes);
- (2) that the Wisconsin Society for Ornithology Board of Directors, to accomplish this purpose, is authorized by membership vote of this meeting, to work out the mechanics of, and to assess, a "W. S. O. prairie chicken tax" of approximately \$2.00 per member, by such method as will not require change of the constitution and by-laws; and
- (3) that the Wisconsin Society for Ornithology urge the Wisconsin Conservation Commission to buy such additional lands as are necessary to perpetuate the prairie chicken at least in this area, and in as many others areas as funds and public support will allow." (Excerpt from Vol. 16 (1), 1954)

Prepared by Noel J. Cutright, current WSO President, who will assume the duties of WSO Historian when his term as President ends at the WSO convention in May. 3352 Knollwood Road, West Bend, WI 53095-9414. h. 262.

Climate Change and Wisconsin's Nongame Birds

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INTRODUCTION

Imagine returning to your car after birding on a hot summer's day. Opening the door, you stagger back as a wave of superheated air blasts out. That videotape of *Rare Birds* you forgot to return now looks like a snowman left in a greenhouse—because it was. The windows of your car acted very much like the glass in a greenhouse, trapping some of the incoming infrared wavelengths of light that then heated up the inside of the car. If the greenhouse effect didn't exist then the temperature inside your car would not be much higher than the maximum outside temperature that day.

Water vapor, carbon dioxide, methane, and other gases in the Earth's atmosphere act much like the glass in a greenhouse (or your car), helping to retain heat by trapping and absorbing infrared radiation. This "greenhouse effect" acts to keep the Earth's surface temperature significantly warmer than it would otherwise be. However, since pre-industrial times, there have been significant increases in

the amount of these greenhouse gases in the atmosphere. The current levels of the two primary greenhouse gases are now greater than at any time during at least the past 420,000 years (likely much longer) and are well outside of the bounds of natural variability (IPCC 2001).

Accompanying the increases in greenhouse gases has been an increase in temperature. The 1990s were the warmest decade and the 1900s the warmest century of the last 1000 years. Of the more than 100 years for which instrumental records are available, 1998 was the warmest year on record and 7 of the top 10 years all occurred in the 1990s. The annual global mean temperature is now 1.1°F (0.6°C) above that recorded at the beginning of the century. Limited data from other sources indicates that the global mean temperature for the 20th century is at least as warm as any other period since approximately 1400 AD (IPCC 1996, 2001). And, "*There is new and stronger evidence that most of the warming observed over the last 50 years is attributable to human activities*" (IPCC 2001).

These activities include the burning of fossil fuels, increases in agriculture and other land use changes (such as deforestation). Increases in greenhouse gases (past and projected), coupled with the length of time these gasses remain in the atmosphere are expected to cause a continued increase in global temperatures. Models estimate that the **average** global temperature, relative to 1990 values, will rise by 2.5°–10.4°F (1.4°–5.8°C) by the year 2100 (IPCC 2001).

Warming due to increases in greenhouse gases is expected to be even greater in some areas, especially Northern Hemisphere land areas. Models based on various scenarios for population growth, economic well being, improvements in technology, and fossil fuel use project annual **average** temperature increases of 3°–18°F (1.7°C–10°C) for the United States. These temperature changes are projected to be highest in the north (Arctic) and in winter with lesser increases in the south and in summer (NAST 2000). However, more recent models are projecting even greater temperature increases with more of the change occurring in summer than previously thought. For example, these new models project average temperatures in Wisconsin increasing by 8°–18°F (4.4°–10°C) in summer and 6°–11° F (3.3°–6.1°C) in winter (Kling *et al* 2003). Thus, Wisconsin summers might end up being similar to those currently experienced in Arkansas!

HOW MIGHT THESE CHANGES IMPACT THE SUMMER DISTRIBUTIONS OF WISCONSIN'S NONGAME BIRDS?

Recent regional changes in climate, particularly increases in temperature, have al-

*ready affected hydrological systems and terrestrial and marine ecosystems in many parts of the world" (IPCC 2001). For example, there have been changes in growing season, earlier spring green-up and earlier arrival and breeding in some birds (Root *et al* 2003). If these changes have been observed with only a small change (1°F) in the global average temperature what might happen if the temperature continues to rise? In addition to rising temperatures, many climate models also project an overall increase in evaporation—leading to increases in precipitation (mostly in storms) but also to overall declines in soil moisture. Shifts in the timing of precipitation and snowmelt are also possible and the water levels in Lakes Superior (9–18.5 inches) and Michigan (39 inches to >8 feet) may drop, potentially affecting wetlands (Kling *et al.* 2003). Even after emissions are reduced, CO₂ concentrations, temperature and sea level will all continue to rise for a period ranging from decades/centuries (CO₂ stabilization, temperature rise) to millennia (sea-level rise). Thus, climate change will likely have a continuing impact on Wisconsin's birds and their habitats.*

PROJECTED HABITAT CHANGES

Temperature, precipitation and soil moisture are important factors limiting the distribution of both plants and animals. As the climate changes so will plant and animal distributions. Overall, the geographic range of North American plants and animals will tend to shift poleward and/or upwards in elevation in response to temperature changes. Range shifts of wildlife popu-

lations will be dependent upon factors such as the availability of migration corridors, suitable habitats and the concurrent movement of forage and prey. Range shifts in plants will be dependent upon factors such as soil types, migratory pathways (e.g., no cities blocking the way), seed dispersal mechanisms and pollinator availability. It is very unlikely that plant and animal species will respond in the same manner to climate change. The best available evidence from paleoclimatic studies, models and observations suggests that each plant and animal species will move independently. Thus, communities as we now know them will look different in the future. There is sufficient evidence to indicate that many ecosystems have already begun to change in response to observed climatic changes (Root *et al* 2003).

Over the next 75–100 years models project possible major changes in the suitable climates of many vegetative communities. For example, models estimate that climate suitable for maple-beech-birch and aspen-birch plant communities will potentially becoming more suitable for an oak-hickory forest (NAST 2000). Models of individual species project potential complete loss of balsam fir, northern white-cedar, paper birch and American beech; potential major declines in the extent of sugar maple, aspen, red pine, eastern white pine and eastern hemlock; and potential gain of species like flowering dogwood, sycamore, post oak and sassafras (Iverson *et al.*, 1999).

As many tree species are long-lived and migrate slowly it could potentially take decades to centuries for species in some vegetative communities to be

replaced by others (Davis and Zabin-ski 1992). However, as increased temperatures and drought stress plants they become more susceptible to fires and insect outbreaks. These disturbances could play a large role in the conversion of habitats from one type to another. There could very well be instances where existing plant communities are lost to disturbance but climatic conditions and migration rates limits the speed at which they are replaced. Thus, invasive species, grasslands and shrublands may transitionally replace some of these areas.

PROJECTED CHANGES IN BIRD DISTRIBUTIONS

Summer bird ranges are often assumed to be tightly linked to particular habitats. This generalization is only partially true. While certain species are usually only found in specific habitats (e.g., Kirtland's Warbler breeding in jack pines), others are more flexible in their habitat use. Species found in a particular habitat type throughout their summer range may not be found in apparently equivalent habitat north or south of their current distribution. Birds are also limited in their distributions by their physiology and food availability. The link between physiology and the winter distributions of many species is well-established (Kendeigh 1934, Root 1988a, 1988b). Recent research shows that physiology plays a role in limiting summer distributions as well (Dawson 1992, T. Martin, *pers. comm.*). Often, the choice of a specific habitat may be to provide a microclimate suitable for a species' physiology. While habitat selection, food availability, and competi-

tion may all play a role in influencing *local* distributions of a given bird species, looking at a species' overall distribution often yields different results. This study examined the association between summer bird distributions and climate and how these distributions may change with climate change.

METHODS

Logistic regression was used to develop models of the association between bird distributions (from Breeding Bird Survey data) and climate—the climate variables acting as surrogates for the many factors possibly limiting a species distribution (e.g., physiology, habitat, food availability). One way of determining how 'accurate' these models are is to compare how well the predicted species distribution map based on climate (fig. 1b) matches a map of the actual distribution (fig. 1a) based on similar bird data (Price *et al.* 1995). This comparison (and various statistical tests) indicates that at least a portion of the summer distributions of many North American birds can be modeled accurately based on climate alone.

The next step was to examine how bird distributions might change in response to climate change. For this study, climate projections from the Canadian Climate Center (CCC) were used to determine what the average climate conditions might be once CO₂ has doubled, sometime in the next 75–100 years. For example, for a given point the difference in average summer temperature between the "current" and "future" (both

model derived) climate might be +2°C. This value is then added to the *actual* average summer temperature at that point to estimate what the climate at that point might be with a doubling of CO₂. A more complete explanation of methods used to develop the models and maps has been published elsewhere (Price 1995, Price *in press*).

These results were then used to create maps of the projected possible future climatic ranges for almost all North American passerine birds (e.g., fig. 1c). What these maps actually show are areas projected to have the proper climate for the species, or *climatic range*, under conditions derived from the CCC model. While the results of the models cannot be used to look at the fine points of how a given species' distribution might change, they can provide an impression of the possible direction and potential magnitude of the change in the suitable climate for the species. These maps of projected summer climatic ranges of birds were then compared with the information found in *Wisconsin Birdlife* (Robbins 1991) and *Wisconsin Birds* (Temple and Cary 1987) to determine how Wisconsin's avifauna might change under this climate change scenario.

RESULTS

Species whose future climatic summer ranges might exclude Wisconsin (i.e., possibly extirpated as summer residents)

Olive-sided Flycatcher, Yellow-bellied Flycatcher, Acadian Flycatcher, Alder Flycatcher, Least Flycatcher, Blue-

House Wren

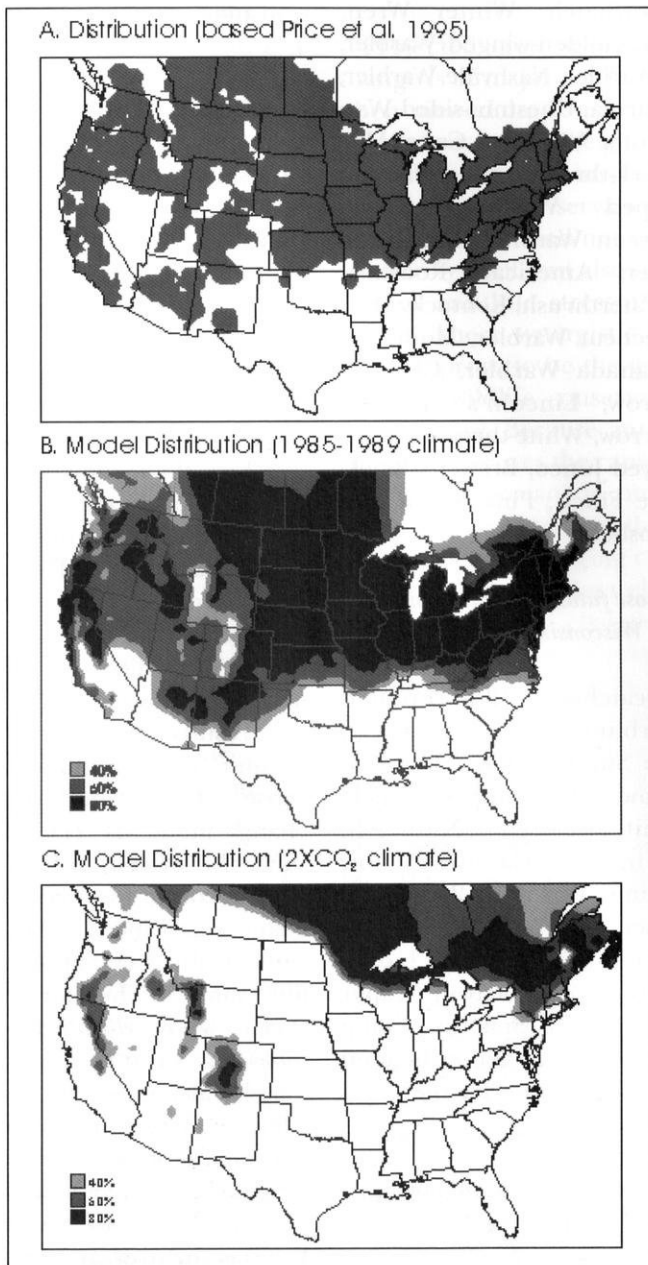


Figure 1.a. Map depicting the distribution of House Wren as detected by the Breeding Bird Survey. This map is based on one found in Price et al. (1995). Figure 1.b. Map depicting a model of the distribution of House Wren based solely upon the climate of 1985–1989. The scale represents the probability of the species' occurrence with shaded areas depicting the distribution of the species (i.e., areas with suitable climate). Figure 1.c. Map depicting the possible distribution of House Wren under the doubled CO₂ climate conditions projected by the CCC. The scale represents the probability of the species' occurrence—shaded areas depicting the distribution of the species (areas with suitable climate for the species).

headed Vireo, Boreal Chickadee, Red-breasted Nuthatch, Winter Wren, Sedge Wren, Golden-winged Warbler, Tennessee Warbler, Nashville Warbler, Northern Parula, Chestnut-sided Warbler, Magnolia Warbler, Cape May Warbler, Black-throated Blue Warbler, Yellow-rumped Warbler, Black-throated Green Warbler, Blackburnian Warbler, American Redstart, Northern Waterthrush, Kentucky Warbler, Connecticut Warbler, Mourning Warbler, Canada Warbler, Clay-colored Sparrow, Lincoln's Sparrow, Swamp Sparrow, White-throated Sparrow, Dark-eyed Junco, Brewer's Blackbird, Purple Finch, Pine Siskin and Evening Grosbeak.

Species whose future climatic summer ranges in Wisconsin might contract

Willow Flycatcher, Yellow-throated Vireo, Warbling Vireo, Red-eyed Vireo, Tree Swallow, Bank Swallow, Cliff Swallow, Black-capped Chickadee, White-breasted Nuthatch, House Wren, Gray Catbird, Yellow Warbler, Pine Warbler, Black-and-white Warbler, Ovenbird, Scarlet Tanager, Rose-breasted Grosbeak, Indigo Bunting, Chipping Sparrow, Vesper Sparrow, Savannah Sparrow, Song Sparrow, Bobolink, Yellow-headed Blackbird, Baltimore Oriole and American Goldfinch.

Species whose future climatic summer ranges in Wisconsin might expand

Western Kingbird, Loggerhead Shrike, Tufted Titmouse, Northern Mockingbird, Bell's Vireo, Yellow-breasted Chat, Dickcissel, Lark Sparrow and Orchard Oriole.

Species whose future climatic summer ranges might eventually include Wisconsin

Ash-throated Flycatcher, Scissor-tailed Flycatcher, White-eyed Vireo, Carolina Chickadee, Carolina Wren, Bewick's Wren, Blue Grosbeak, Painted Bunting and Great-tailed Grackle.

DISCUSSION

These lists are not all-inclusive, since results obtained from models of some species were not adequate to assess how their climatic ranges might change. Nor do the lists include those species whose climatic ranges may undergo little change. Finally, these lists are based on output from a single commonly used climate model. Using output from different climate models may therefore yield somewhat different results. In addition, the geographic scale of these models, like those of the underlying climate change model, is relatively coarse. As such, the models are unable to take into account localized topographic changes and the possible existence of suitable microclimates—along rivers, for example. Therefore, some of the species whose *climatic* ranges are projected as shifting out of Wisconsin may be able to persist in refugia if a suitable microclimate is available.

It is helpful to consider how species' ranges may change to know what sorts of changes to look for in the future. Even as the average temperature (climate) increases, weather will continue to occur with some years cooler and others warmer than otherwise expected. So, colonization will most likely occur in fits and starts before a

species can truly be considered to be established as part of Wisconsin's breeding avifauna. In some cases, a species may start appearing as a vagrant, off and on, for several years before breeding is attempted. In other cases a species may start breeding in an area, then become extirpated, and then resume breeding—possibly in greater numbers than before.

How quickly distributional changes might occur is unknown—the rate of change will largely depend on whether limits to a given species' distribution are more closely linked with climate (especially temperature), vegetation, or some other factor. The rate of change will also likely be tied to the rate of change of the climate itself. If the climate changes relatively slowly, then species may be able to adapt to the new climate. However, many changes could occur (and are occurring) relatively quickly. One pilot study found that the average latitude of occurrence of some species of Neotropical migrants has already shifted significantly farther north in the last 20 years, by an average distance of almost 60 miles (100 km) (Price and Root 2001; Price, unpublished data). In another study, the arrival date of 20 species of migratory birds in Michigan was found to be 21 days earlier in 1994 than in 1965 (Price and Root 2000; Root, unpublished data). In Wisconsin, Eastern Phoebes and Rose-breasted Grosbeaks have also been found to be arriving earlier (Bradley *et al.* 1999). Many other species have been found to be arriving and breeding earlier, not only in the US but also in Europe and elsewhere (Root *et al.* 2003).

CONCLUSION

Projected future rapid climate change is of major concern, especially when viewed in concert with other population stresses (e.g., habitat conversion, pollution, invasive species). Research and conservation attention needs to be focused not only on each stressor by itself, but also on the synergies of multiple stressors acting together. These synergistic stresses are likely to prove to be the greatest challenge to wildlife conservation in the 21st Century. Because anticipation of changes improves the capacity to manage, it is important to understand as much as possible about the responses of animals to a changing climate.

Society may ultimately need to adapt not only to changes in ranges but also to the loss of ecological services normally provided by wildlife. For example, it may be necessary to develop adaptations to losses to natural pest control, pollination and seed dispersal. While replacing providers of these services may sometimes be possible, the alternatives may be costly. Finding a replacement for other services, such as contributions to nutrient cycling and ecosystem stability/biodiversity are much harder to imagine. In many cases, any attempt at replacement may represent a net loss (e.g., losses of the values of wildlife associated with recreation, subsistence hunting, cultural and religious ceremonies).

In summary, a high probability exists that climate change could lead to changes in bird distributions. Even a relatively small change in average temperature could impact bird distributions within the state. Some of these changes could occur (and may be oc-

curing) relatively quickly. While these changes may have some ecological and, possibly, economic effects, the magnitude of these effects is unknown. Ultimately, the greatest impact on wildlife and vegetation may not come from climate change itself, but rather from the rate of change. Given enough time, many species would likely be able to adapt to climatic shifts, as they have done in the past. However, the current projected rate of warming is thought to be greater than has occurred at any time in the last 10,000 years (IPCC 1996). This rate of change could ultimately lead to many changes in Wisconsin's Nongame avifauna.

Birders can help scientist look for and document changes in bird ranges and populations. Besides participating in regular events like the Breeding Bird Survey or Christmas Bird Count, information is also needed on nesting, arrival and departure. If you, or your club, has 10 or more years of data please contact me at the address listed above.

ACKNOWLEDGMENTS

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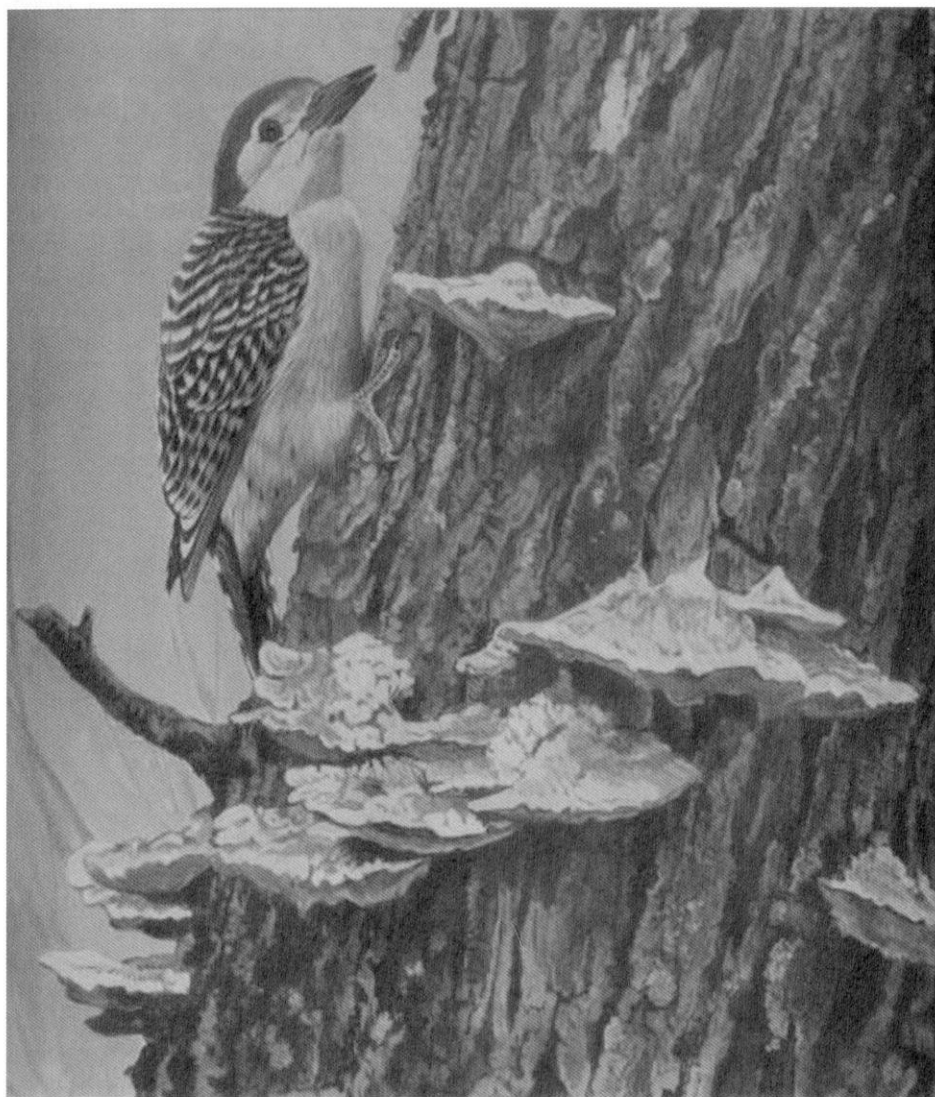
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Mourning Doves enjoying "Spring Thaw" by Betsy Popp



Red-bellied Woodpecker *by David Brandon*

WSO Records Committee Update—2004

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The Wisconsin Society for Ornithology established a Records Committee on April 15, 1978 with the intention of “evaluating the validity of aberrant or unusual records of bird sightings.” This action followed the lead of a number of other state ornithological organizations around the country during the 1970s.

A need to catalog the growing number of unusual bird sightings around the country without relying on “scientific collection” precipitated these committees. Photographic evidence for some of these records was available, but photographic equipment did not have anywhere near the sophistication of 21st century technology. Even with today’s photographic potential, many records aren’t possible to photograph due to habitat, distance, and the limited percentage of birders investing in today’s equipment. In addition, photographs can only present a two-dimensional view of a bird. Many times the angle presented does not capture the necessary information to identify some species.

The latter half of the 20th century found the growing number of amateur birders surpassing the number of

professional ornithologists with a resultant deluge of potential data on the biogeographical distribution, migratory patterns, and field identification of birds. In order to attempt to standardize the collection of this ornithological information, written documentation was adopted as an acceptable method of accumulating these data.

The purposes of the WSO Records Committee stated in its Procedural Rules are:

- A) Validate records of birds found in the state of Wisconsin;
- B) Maintain permanently the original bird records and all committee votes and comments for use by future bird students;
- C) Publish at least minimal data on all records receiving a decision;
- D) Provide a means by which sight records can gain universal acceptance as valuable scientific data;
- E) Establish standards of observation and reporting against which field observers may compare their own techniques; and,
- F) Maintain the official Wisconsin State List.

PROCEDURE

In more realistic terms, species as-terisked on the WSO Seasonal Report Forms, those species absent from the forms, and species sighted outside of their normal dates should be "documented" on the WSO Rare Bird Report Form and submitted to the Bird Reports Coordinator of *The Passenger Pigeon* along with the Seasonal Reports. These documentations are then copied and submitted, along with any available photographic information, to the five Records Committee members for evaluation. Drawing on their own field experience, numerous reference books and articles, or on occasion, other personal contacts and experts around the country, each member votes independently to accept or not accept the record as written and/or photographed. Reasons for an individual committee member's skepticism and non-acceptance are then circulated on questionable records. Most receive one round of analysis, but in some instances, a second round of voting occurs based on new information from a committee member or observer. A 4-1 or 5-0 vote is required for acceptance of an unusual record into the state ornithological record.

Following final voting, observers of accepted records are notified by postcard or e-mail of the committee's decision. In the cases of records not accepted, the observer receives a letter explaining the reasons the report was not considered sufficient for identifying the species in question. Finally, the seasonal report of the Records Committee's deliberations is published in *The Passenger Pigeon*. In this seasonal report, the committee at-

tempts not just to publish the accepted records, but to summarize the pertinent field marks on which the decisions were based. In the instances of non-acceptance of a report, reasons are also supplied as to why that report may not have completely separated the species in question from other similar species. These summaries are an attempt to keep all Wisconsin observers aware of appropriate field marks for rarer/unfamiliar species. When significant identification articles are in print, reference is made to further educate interested birders.

If the report of an accepted species is not previously found on the State List, it requires two or more independent observations/documentations of the bird, a photograph, or a skin specimen for addition to the State List. Single observer or collaborative group sightings of birds not yet on the State List, if accepted, are placed on the Hypothetical List for the State. The Hypothetical List thus comprises birds having strong, but not conclusive evidence of occurrence in Wisconsin. Once a species is added to the State List, any previous hypothetical records for that species are moved from the Hypothetical List to the State List as well.

COMMITTEE MEMBERSHIP

Five year terms of Records Committee membership are extended to interested birders based on two factors. Birders sought for membership are generally very "field experienced." Not only do they have experience in identifying a broad spectrum of species, but have probably witnessed the perilous deception distance has

on the size of a bird and the alteration in color that various degrees and angles of sunlight have on a bird's plumage. In other words, they have an appreciation of the pitfalls of field identification. In addition to that field experience, these birders have demonstrated an understanding of the importance of documenting rare birds through their own thoughtful submissions to the committee.

In 1979, the Records Committee became operational under the guidance of chair Bill Hilsenhoff and committee members Bill Foster, Joe Hickey, Sam Robbins, and Daryl Tessen. Since 1979, other WSO members who have served five year terms on the committee include John Bielefeldt, (chair), Fred Leshner (chair), Eric Epstein, Roger Sundell, John Idzikowski, (chair), Charles Sontag, Dick Verch, Janine Polk (chair), Al Shea, Tom Schultz, Mark Peterson, Robbye Johnson, Randy Hoffman, Jeff Baughman, and Dennis Gustafson. The 2004 Records Committee consists of Bob Domagalski, Scott Baughman, Dan Belter, Mark Korducki, and Jim Frank (chair).

EVALUATING DOCUMENTATIONS

The committee evaluates these documentations from the standpoint of a future WSO member doing a retrospective look at the state's ornithological record. The committee lays aside the name/field skills of the observer and accepts each documentation as a statement of facts, reading it for accuracy in the identification of the species and **completeness**.

During the past four years the Records Committee has reviewed ap-

proximately 700 documentations of rare birds. Roughly 575 have been accepted for an 82% acceptance rate. Of those not accepted, at least half of those are judged more than likely to be accurate identifications, but the documentation is extremely sketchy, leaving the committee to **assume** certain field marks must have been seen—which it cannot do. Even experienced observers may miss a field mark, not have a long enough look to see the pertinent field marks, or not know all of the necessary field marks. Just as the committee accepts each documentation as an accurate representation of the event, it must accept any events/field marks not reported as not occurring/not observed. Most birders would agree that an out-of-focus photograph doesn't usually identify a bird, just as an "out-of-focus" or **incompletely** written documentation would not necessarily identify that bird either.

Another reason for a few records to not be officially accepted involves the suspected origin of the bird in question. A bird can be accurately identified, but if there is strong suspicion that the bird is an escape or release from captivity, it isn't accepted. In Wisconsin, the Records Committee will assume that reports of psittacine birds are escapees because they are commonly kept as caged birds with no known wild breeding populations in the state. Species such as European Goldfinches and Chaffinches are also presumed to be escapees. The distinction between wild and captive becomes more blurred when it comes to waterfowl. Numerous species, both North American as well as Old World are legally held by collectors. Wild waterfowl are also notoriously strong fly-

ers and subject to wandering far enough to be potential vagrants here in Wisconsin. There are times that it can be established that a waterfowl collector lost an individual of rare status shortly before a “wild” sighting. This makes it easier to presume a captive origin. If the bird survives for a year in the wild, tracing its escaped origin becomes much more difficult. In such instances, records committees are faced with literally guessing which source seems most plausible. Cases can be legitimately made for either status. Species such as Eurasian Wigeon, White-cheeked Pintail, and Smew fall into this category. At times, as the history of vagrancy or captive prevalence develops over time, committees do rescind previous decisions, adding or removing species from the state lists. Another group of birds presenting a similar dilemma are raptors. Falconers are known to lose their captive birds on occasion. Records committees are then faced with deciding on the possibility of a Gyrfalcon or Harris’s Hawk being of captive origin. Once again, the answers are not clear cut. A final source of captive origin birds that must be considered is deliberate release, as in the case of the Whooping Crane introduction project. Until the flock is reproducing successfully on its own and thus sustaining if not increasing their numbers, they are not considered wild birds. Although there are species that have questionable origins, documenting them creates data that could be valuable in the future should they establish a viable wild population.

There are of course some observations in which the bird is inaccurately identified, often because the observer lacks the experience to have consid-

ered all of the other possible species that might have the characteristics reported. Another possible pitfall includes not having immature or female plumages represented in the field guide consulted, deceiving the observer to believe the bird is a more unusual species. Check your field guide for the 1st year male Rose-breasted Grosbeak’s plumage. In many books it isn’t depicted, but a female Black-headed Grosbeak is. Without the suggestion that there is a second, more likely species to consider, the misidentification potential should be evident. Does the field guide show what a male Ruby-throated Hummingbird gorget looks like when the light isn’t at a reflective angle? The depictions lead one to believe only Black-chinned Hummingbirds have black gorgets. Unexpectedly to many observers, there is variation within a species that cannot always be shown in field guides. A few eastern Slate-colored Juncos have white wingbars, suggesting White-winged Juncos, a separate, western subspecies. A few Black-legged Kittiwakes have pink legs!

This leads to a final pitfall in misidentifications, focusing on one characteristic instead of examining the entire bird. When witnessing a yellowish tanager with black wings, reporting only that it had pale yellow wingbars will not clinch the identification as a Western Tanager. After indicating that the size of the bird eliminates a Goldfinch from consideration, the bill shape needs to be checked to rule out the oriole family. The color of the back needs to be noted because a few Scarlet Tanagers can have a line of yellow along the median coverts. If the back is streaked, it would now draw a Flame-colored Tanager into

consideration. One characteristic can be the major identification mark, but secondary, supportive characteristics are essential to convincingly document a bird. These secondary traits minimize the chance of the bird just being an aberrant form of a another species. Partial albino birds pop up with more frequency than observers realize. If the entire bird is examined, this won't be a confusing identification in most cases.

SUBMITTING DOCUMENTATIONS

In an effort to encourage all observers to document their rare sightings for the ornithological record, a synopsis of documentation techniques follows.

When possible, submission on the Exceptional Record Documentation Form is suggested. The use of this form is more for the observer's benefit than anything else because it asks for specific information in an organized manner. There is less likelihood of overlooking pertinent information although in some instances that obviously still occurs.

Initial Impressions—

Note the general family or species of the bird based on the first fleeting glimpses of it. What size, shape, or color characteristics led you to that assumption? If you stayed with the initial identification, proceed to describe the bird more completely. If you didn't stay with the initial impression, what changed your mind? For instance, if your attention is drawn to an all white gull flying toward you, your mind has a probability factor in Wisconsin that initially expects a Glaucous Gull. As it

gets nearer, or as a Herring Gull approaches it, you then realize it is smaller than that Herring Gull. Now you are perhaps thinking it is an Iceland Gull. As it wheels around to land on the beach 50 yards from you, the black specks on the flight feathers and coverts along with the black dusting on the face tell you it's an Ivory Gull. You then note the bill and leg color, etc. The initial impressions convey the reason your attention was initially drawn to the bird. They do not mean you misidentified the bird or that you lacked birding skills. They were logical, based on the information limitations at given moments. All identifications progress in that manner, some more rapidly than others. An all-white gull has a probability of being a Glaucous Gull, but unless more definitive information is provided, the description could fit several species, although they might be quite unexpected possibilities. Identifications are not based on probabilities, but on accurate, complete descriptions.

Comparison to Similar Species—

There is nothing in a documentation that better defines an identification than comparison to familiar species. In citing the initial impression, this process is already begun. You have compared the bird in question with more familiar data you have accumulated from other observations and demonstrated how this bird didn't fall into the usual categories. In particular families of birds, such as gulls, shorebirds, and waterfowl, observations are only infrequently made of solitary birds. Make use of adjacent "known species" to continue the comparison. To identify and document many rare gulls, using the size, head

shape, mantle color shade, etc. in comparison to the immediately adjacent Herring or Ring-billed Gulls is essential. The use of seemingly inexact terms “bigger than” or “slightly smaller than,” are much more believable and accurate than specifying the bird to be “10 inches long,” unless the bird is in hand of course. How many times have you observed a solitary bird, such as a loon, at a distance and assumed it to be of a certain size, only to have a “known quantity” swim up next to it and greatly change your initial assumption of its size? Those events help you realize how deceiving distance can be when estimating size. Comparison is imperative in such observations and documentations. Similar comparative data should be noted in shorebirds regarding bill length and shape, leg length, body length, etc.

The same technique can be used for sparrows under your winter bird feeder. If you are glancing at the birds, your attention could be drawn to a sparrow with a heavily streaked breast and central breast spot because the rest of the birds are “clean-breasted” House Sparrows and Juncos. After that initial impression, you might be thinking it is a Song Sparrow until you realize it is noticeably smaller than these two species present for comparison and its tail is proportionately shorter than the Juncos. Perhaps Savannah Sparrow comes to mind, but the yellowish superciliary coloration isn’t present; it is instead gray. The yellowish wash to the breast and the fineness of the breast streaking tell you it must be a very out of place Lincoln’s Sparrow. Being able to compare the bird to other similar appearing birds was helpful in your ulti-

mate identification and would make your documentation very believable. You obviously know what a Lincoln’s Sparrow is, but your mind had a different set of expectations in January and it would be very legitimate to admit the circumstances temporarily took you a different direction until you **compared** the bird. This demonstrates that you considered other possibilities during the observation and that you discarded them for specific reasons.

Thorough Description—

At this point in the documentation, there is some tendency to assume that one or two points of identification are all that is necessary. Perhaps there aren’t too many birds to confuse a male Painted Bunting with, but there aren’t many birds that don’t have something that they need to be differentiated from. The description should include a systematic comment on as many aspects of the bird as you looked at; head, eye, eyeline, supercilium, crown, lores, throat, neck, back, rump, wing coverts, wings, wingbars, tail, breast, flanks, belly, undertail coverts, bill, legs, and feet. This should include colors as well as relative size, shape, and length to the more familiar species, even if that species isn’t present at the time of observation. Again the usefulness of the terms longer than, more curved, darker than, and browner than cannot be overemphasized. A reminder should also be made to observers not to fall into the habit of using phrases such as “the characteristic color of” or “the characteristic pattern of.” You must state what that color or pattern is. The “characteristic facial color pattern” of a Yellow-crowned Night-

Heron may seem obvious to most birders, but what exactly is it? The head and face are black with a white cheek patch, forehead, and crown. The hind crown has white plumes trailing down from it. Additional information about flight patterns, foraging habits, or aggressiveness can also be helpful in describing a species.

Sometimes an observer will see something about a bird that is not mentioned in standard field guides or is inconsistent with what is depicted. There is a tendency to ignore or fail to supply those facts. There are several good reasons not to overlook this information. First, the field guides cannot show all plumages of a species. Many species have a juvenile and an immature plumage in the first year before reaching something close to adult plumage. Others will have less colorful adult plumage in the first breeding season. Of course gulls maximize the dilemma for birders, some taking 4 years with several transitional plumages each year to reach adult patterns. There are also numerous subspecies of many species with slight, noticeable variation from what we may be accustomed to seeing here in Wisconsin. Providing those "inconsistent with the field guide" characteristics may prove the bird to be of a more western or tropical subspecies. Of surprise to some birders is that some field guides have occasional significant inaccuracies in their depictions. In addition, there are always refinements in our understanding of bird identification so information in them may become outdated. The bottom line is the apparent inconsistency you saw is there for a reason. Report it, as it may be significant to the accuracy/consistency

of the sighting. It may even shed new light on unknown characteristics.

Additional Documentation Evidence—

The old adage "a picture is worth a thousand words" is worth mention here. Of course observers who can photograph an unusual bird should make every effort to do so. Even a distant photo could be of value. This doesn't preclude supplying written description because only so much can be seen on field photographs given distance and angle considerations. There are several circumstances in recent years in which even with photographs a consensus identification couldn't be reached by the Records Committee.

Documentation of "Heard Only" Birds—

There are circumstances where this is the only evidence available on a given bird identification. There is every reason to submit this and for it to be accepted—if it is tackled with the same attention to detail and comparison as visual documentation. It is admittedly more difficult for people to express audible observations. For example, simply stating that the bird's call went "will's-widow" doesn't separate the call from "whip-poor-will." Both calls have 3 notes. The report should include the number of syllables, any rising or falling patterns to the notes, accents or increased volume on any of the syllables, and slurring, buzzing, or clarity of the notes. In the case of the Whip-poor-will, the accents are on "whip" and "will", but for a Chuck-will's-widow, the accent is on "wid." If you are close enough to hear the faint first note of a Chuck-will's-widow, that is of course an important point to note. Again, **comparison** of an unusual song to familiar

songs can be very useful.

Some cautionary notes about songs should be made because it greatly influence the acceptability of many “heard only” identifications. First, that old nemesis distance can alter our perceptions of song. Second, hearing a song or call once is similar to getting a visual glimpse of a bird while you were driving down the highway. It needs to be heard repeatedly to analyze its qualities accurately. There also is considerable variation in song patterns within species as well as surprising overlap of songs across species. Birders are well aware of the mimicry ability of mockingbirds, catbirds, thrashers, and starlings. They may be less cognizant of the overlap in songs across species within the warbler family.

TIMING OF THE DOCUMENTATION

Finally, remember to document your sightings as soon after the event as possible. Some observers have developed the good habit of taking notes during or immediately after the observation. This assists them in taking a thorough look at the bird because they take another look or two to fill in other details they did not initially notice. It also helps them not to forget pertinent information between the sighting and the writing of the documentation. For all of the times you have observed a Blue Jay, could you describe all of the plumage patterns, relative shades of blue of different areas, and location of the black stripes and marks? If time hasn't etched that information into your head, it is difficult to imagine accurately recalling the details of one

sighting of a Sharp-tailed Sandpiper three months before.

SAMPLE DOCUMENTATION

In an effort to demonstrate the pitfalls of a weak documentation, suppose you have been asked to document your report of an American White Pelican on the Horicon Christmas Bird Count. As many birders would react, it may seem like a waste of time to be required to document such an obvious sighting. The following is representative of some of the weaknesses in abbreviated documentations.

Species: American White Pelican
 Date: December 16, 2003
 Time: early morning
 Length of Observation: very brief
 Location: Horicon NWR
 Distance to bird: I'm not good at estimating distance
 Optics used: None, seen while I was driving
 Weather and light condition: clear skies
 Description: I saw a large white bird with black wingtips while I was driving down Hwy 49. The bill looked yellow.
 Vocalization: none
 Bird's behavior: flying
 Specific habitat: wildlife refuge
 How were similar species eliminated: Nothing looks like a Pelican
 Previous experience with this species: I am quite familiar with pelicans
 Name: Lee Z. Burder

Mr. Burder's 25 words or less ap-

proach to the project and sometimes vague answers to a number of questions can leave the person assessing the documentation with a number of questions. Granted, an American White Pelican is unique, but does this documentation make that evident?

When reading this report, the first concern would be the brevity of the sighting. A bird seen while one is driving raises questions about how well it could be seen, particularly when no estimation or a vague estimation of distance is given. The **assumption** the reader would be left with is: if the distance was hard to estimate, it must have been quite far. The lack of specificity in the time of "early morning" for the observation could mean anything from before the sun came up to mid-morning. A very early time could preclude decent light for the observation. Under light and weather conditions, the lack of an indication of whether the observer was looking east into the sun also creates concern about how well the bird was seen.

The description, while probably true, leaves a number of possibilities unaddressed. "Large" can mean quite a range of things. Compared to a sparrow, many birds are large. A "large white bird with black wingtips" could bring to mind a Snow Goose, White Ibis, Whooping Crane, a Ring-billed Gull, even a Rock Dove, or the underside of a male Harrier. The bill size and shape wasn't addressed and the light and distance issue was a concern so it is difficult to know how much to eliminate because the bill was "yellow." The pelican and gull have yellow bills, the pinker bill of the goose and ibis might just look light or yellowish depending on observation conditions. The crane's bill could have a glint of

sunlight catch it to make it look light in color. Remember this was a brief, perhaps distant, "no binoculars look" at this bird.

When asked to compare this bird to other species, Mr. Burder chose to take affront at the question, by suggesting it was impossible to mis-identify this species. Under "previous experience" he is asserting that he knew what a pelican was. If he was visiting Wisconsin from Vermont, saw a couple of pelicans 20 years ago on a trip to the Everglades, and has seen a lot of photographs and field guide representations, he may feel familiar with pelicans, but in actuality that isn't very much "real world" experience. If he were to state similar "familiarity" with jaegers based on that level of experience, most birders would question if that was anywhere near enough experience with the "real thing."

The bottom line is, the words in this description do not accurately describe an American White Pelican. Other species can fit the "word picture" and no effort was made in the "similar species" section to suggest any consideration of any of them. Little in the rest of the information leads us to think the bird was seen under good observation conditions. To accept this documentation, a number of assumptions would need to be made, and they may or may not be correct assumptions. With a little more thought, effort, and time, this documentation can be improved without writing a thesis.

Species: American White Pelican

Date: December 16, 2003

Time: Approximately 8:30 a.m.

Length of observation: A minute or two

Location: north side of Highway 49 in
Horicon NWR

Distance to bird: Perhaps a hundred
yards or so

Optics used: None, seen while I was
driving

Weather and Light Conditions: Sunny
morning, I was driving west along
Highway 49, with this bird flying in
the same direction as I was for a
couple minutes

Description: From quite a distance
away, I noted a large white bird fly-
ing away from me along the north
side of Hwy 49. My initial thought
was a swan because this bird was
huge, noticeably larger than a small
flock of Canada Geese nearby. As I
approached the bird a bit closer, I
noted the black wingtips. At that
point I was admittedly confused,
this was a Christmas Count after all,
not mid-summer. As I pulled even
with the bird, the long yellow-or-
ange bill with a slight suggestion of
a pouch along the lower side be-
came apparent. The disproportion-
ately large head was tucked back
over its neck as it flew.

Comparison to similar species: The
size being much larger than the
Canada Geese, eliminates other
white birds with black wing tips
such as Snow Goose, gulls, and
White Ibis. The black wing tips eli-
minate other large white birds such
as the three swan species. The only
other large white bird with black
wingtips would be a Whooping
Crane, but the bill size, shape, and
color do not fit a crane. In addition,
I did not see any legs trailing be-
hind the bird and the neck was not
outstretched in flight.

Familiarity with the species: I have
seen White Pelicans this past sum-

mer at Horicon, and on trips to
North Dakota 4 years ago, and a
winter trip to Texas 7–8 years ago.
My previous 12 years of birding in
upstate New York didn't offer many
opportunities to see White Pelicans
of course.

Name: Joe Burder

This documentation isn't very ex-
tensive, but it supplies us with infor-
mation indicating the bird was seen at
a reasonably close distance for a large
bird like a pelican, in good lighting
(looking northwest on a sunny morn-
ing), and thus even though it was a
“drive-by,” the observation sounds
credible. The observer indicated ini-
tial, though incorrect first impressions
about the bird, but demonstrated why
they changed. The distance to the
bird improved, allowing other charac-
teristics to be seen. The similar species
discussion addressed the **comparisons**
to other species that had to be consid-
ered and eliminated based on the
same characteristics noted in the first,
abbreviated documentation. The ob-
server also admitted a limited number
of observations of the species under
“experience,” but also suggested a sig-
nificant amount of time in general
birding activity. This documentation
would be accepted without a problem
because the questions were answered
thoughtfully and yet briefly, supplying
the reader with the information the
questions were designed to extract
from the observer.

SUMMARY

Documentation is not meant to be
an English composition challenge.
Write phrases, sentences—whatever is
comfortable. It also is not a contest to

describe a bird in 25 words or less. Take the little extra time to do it completely. Make the effort to do it soon after the observation while the excitement is still there to give it relevance and the memory is there to give it accuracy.

DO IT!! Unfortunately too often the other birders observing the same bird assume someone else will do the documentation and it doesn't get done.

COMPARE, COMPARE, COMPARE!! This is essential for accurate field identification skills and well substantiated documentation. Written documentation is essential to expanding the ornithological record unless we want to return to relying on skin collections for our ornithological history.

WISCONSIN STATE LIST—2002

The Wisconsin State List stood at 392 species in 1988, 398 in 1993, and with a seeming increase in vagrancy patterns in the bird population in general, the list in 2003 reached 422 species. Additions in the past ten years are:

1994

- 399. Brambling—17 January 1994, Winnebago Co.
- 400. Harris's Hawk—25 October 1994, Sheboygan Co.

1995

- 401. Bullock's Oriole—added due to splitting of Baltimore Oriole
- 402. Spotted Towhee—added due to splitting of Rufous-sided Towhee
- 403. Scott's Oriole—late November 1995, Adams Co.

1996

- 404. Glaucous-winged Gull—1 January 1996, Ozaukee Co.
- 405. Western Wood-Pewee—17 September 1996, Oconto Co.
- 406. Dusky Flycatcher—8 October 1998, Oconto Co.

1997 no additions

1998

- 407. Streak-backed Oriole—early January 1998, Iron Co.
- 408. Eurasian Collared-Dove—20 May 1998, Ozaukee Co.
- 409. Green Violet-ear—22 September 1998, La Crosse Co.

1999

- 410. Black-bellied Whistling Duck—19 October 1999, Trempealeau Co.

2000

- 411. Smew—24 March 2000, Douglas Co.
- 412. MacGillivray's Warbler—10 May 2000, Waukesha Co.
- 413. White-winged Dove—15 June 2000, Portage Co.
- 414. Broad-billed Hummingbird—20 October 2000, Dodge Co.
- 415. Ash-throated Flycatcher—30 October 2000, Kewaunee Co.
- 416. Rufous-crowned Sparrow—25 November 2000, Waukesha Co.

2001

- 417. Vermilion Flycatcher—20 November 2001, Jefferson Co.
- 418. Ross's Gull—6 December 2001, Bayfield Co.

2002

- 419. Black Rail—4 May 2002, Milwaukee Co.

418. White-cheeked Pintail—retraction of 1929 record from Winnebago Co. due to questions of origin.

419. Thick-billed Murre—December 1896, Milwaukee Co.

420. White Ibis—10–14 September 2002, Burnett Co.

421. Band-tailed Pigeon—24–27 October 2002, Waushara Co.

2003

422. Black-tailed Gull—12 June 2003. Racine Co.

RECORDS COMMITTEE REVIEW LIST AS OF JANUARY 2004

(H) indicates on the state Hypothetical List; all the species on this list need to be documented if you see them.

Pacific Loon
Clark's Grebe (H)
Brown Pelican
Anhinga
Magnificent Frigatebird
Tricolored Heron
White Ibis
Glossy Ibis
White-faced Ibis
Roseate Spoonbill
Wood Stork
Black-bellied Whistling Duck
Fulvous Whistling Duck
Brant
Cinnamon Teal
Eurasian Wigeon
Common Eider
King Eider
Barrow's Goldeneye
Smew
Masked Duck
Black Vulture
American Swallow-tailed Kite

White-tailed Kite
Mississippi Kite
Harris's Hawk
Swainson's Hawk
Ferruginous Hawk
Gyr Falcon
Prairie Falcon (H)
Willow Ptarmigan
Black Rail
Purple Gallinule
Whooping Crane
Snowy Plover
Black-necked Stilt
Spotted Redshank (H)
Eskimo Curlew
Long-billed Curlew
Black Turnstone
Western Sandpiper
Purple Sandpiper
Curlew Sandpiper
Ruff
Red Phalarope
Pomarine Jaeger
Long-tailed Jaeger
Black-tailed Gull
Laughing Gull (immature plumages)
Little Gull (away from Lake Michigan)
Common Black-headed Gull
Mew Gull
California Gull
Iceland Gull
Lesser Black-backed Gull
Glaucous-winged Gull
Black-legged Kittiwake
Ross's Gull
Sabine's Gull
Ivory Gull
Royal Tern
Roseate Tern
Arctic Tern
Least Tern
Sooty Tern
White-winged Tern
Thick-billed Murre
Dovekie
Ancient Murrelet

Long-billed Murrelet (H)
White-winged Dove
Eurasian Collared-Dove
Common Ground-Dove
Groove-billed Ani
Barn Owl
Northern Hawk-Owl
Burrowing Owl
Boreal Owl
Great Gray Owl (southern two-thirds
of state)
Chuck-will's-widow
Green Violet-ear
Broad-billed Hummingbird
Anna's Hummingbird
Rufous Hummingbird
Lewis's Woodpecker
Three-toed Woodpecker
Western Wood-Pewee
Dusky Flycatcher
Say's Phoebe
Scissor-tailed Flycatcher
Fork-tailed Flycatcher
Vermilion Flycatcher
Cassin's Kingbird (H)
Clark's Nutcracker
Black-billed Magpie
Brown-headed Nuthatch
Bewick's Wren
Northern Wheatear (H)
Mountain Bluebird
Sage Thrasher
Curve-billed Thrasher
Sprague's Pipit
Phainopepla
Gray Vireo
Black-throated Gray Warbler
Townsend's Warbler
Hermit Warbler
Kirtland's Warbler
Painted Redstart (H)
Swainson's Warbler
MacGillivray's Warbler
Western Tanager
Black-headed Grosbeak
Blue Grosbeak

Lazuli Bunting
Painted Bunting
Green-tailed Towhee
Spotted Towhee
Black-throated Sparrow
Lark Bunting
Baird's Sparrow
Golden-crowned Sparrow
Smith's Longspur
Chestnut-collared Longspur
Bullock's Oriole
Streak-backed Oriole
Scott's Oriole
Brambling
Gray-crowned Rosy Finch
Hoary Redpoll
Lesser Goldfinch (H)
Eurasian Tree Sparrow

QUESTIONABLE ORIGIN LIST

Species listed here are often escaped cage birds or re-introduced (not wild) species.

Barnacle Goose—Manitowoc Co.,
23 October 1977

Dodge Co., 26 October 1985

Common Teal—Vernon Co., 29 November 1998

White-cheeked Pintail—Winnebago Co., ? September 1929

Harris's Hawk—Columbia Co., 1 September 1969 (2 birds)

Whooping Crane—all sightings of 2000 or after

Ringed Turtle-Dove—Numerous sightings

Mexican Jay—Waukesha Co., 11 December 1981–8 January 1982

Great Tit—Racine Co., October-December 2001

Red-crested Cardinal—Barron Co., 5 September 1974–April, 1975

Washington Co., fall 1980

European Goldfinch—Milwaukee
Co., 12 May 1935
Ozaukee Co., 5 May 1956
Langlade Co., 15 April 1988
Waupaca Co., 1–28 February 1989

Walworth Co., 12 April 1998
Dane Co., 14 December 2002
Waukesha Co., 25 January 2003
Vernon Co., May 2003



Greater Yellowlegs by Jack Bartholmai

The Summer Season: 2003

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The five observers who commented on the season's weather agreed that it was rather unremarkable. Temperatures rarely exceeded the low 90s, and in fact there was little in the way of temperature extremes. Mid-July brought something of a cool spell.

The distribution of at least some of the rain that fell was spotty. Duerksen noted that it was very dry after the third week in June in Richland County, although not that far away in Dane County, Ashman said that the first two thirds of July were wet. Hale noted that on one day when Lake Mills received nearly an inch of rain, Madison received none.

Temperature and rainfall patterns helped to produce excellent shorebird habitat in several areas. The Highway 49 part of Horicon Marsh was excellent for part of the season. Berner noted that Portage County areas that normally are very poor for shorebirds held good numbers of a variety of species for much of the season. And throughout the season, the Nine Springs area in Madison proved very attractive for shorebirds and marsh birds.

Berner characterized the weather as

having been "extremely benign" and postulated that it "may have been responsible for the rapid progression of the nesting cycle in terms of species generally single-brooded . . . as well as the extent of the season for multi-brooded species and renestings."

Observers recorded a total of 259 species during the season. The account that follows gives details on 174 of them. An additional 59 species that are not mentioned were common and widespread enough to be reported from more than 25 counties. The remaining 26 species, generally noted in 10–25 counties, are listed here, along with the number of counties in which each was recorded: Hooded Merganser (16), Ring-necked Pheasant (21), Pied-billed Grebe (17), American Bittern (10), Bald Eagle (19), Northern Harrier (15), Cooper's Hawk (25), Sora (13), Black Tern (13), Black-billed Cuckoo (19), Yellow-billed Cuckoo (15), Great Horned Owl (15), Barred Owl (14), Yellow-bellied Sapsucker (13), Pileated Woodpecker (21), Least Flycatcher (23), Horned Lark (19), Tufted Titmouse (12), Brown Thrasher (23), Nashville Warbler (13), Chesnut-sided Warbler

(20), Black-and-white Warbler (11), Eastern Towhee (18), Vesper Sparrow (18), Purple Finch (11), and House Finch (24).

The most exciting find of the summer was a Wisconsin first record Black-tailed Gull that Eric Howe saw and fortunately could photograph well in Racine County June 12. John Idzikowski also was able to obtain photographs. [See "By the Wayside."] Nearly all of the relatively few North American records of this species are coastal.

A second real rarity of the season was the Mississippi Kite seen by Barbara Stover in Door County June 17. This species is much more widespread in North America than the gull, but it has visited Wisconsin very infrequently. This individual was only the fourth to be recorded in the state in summer.

Although considerably less rare, a number of additional species—some out of season—made for interesting twists to the season's birding, including: White-winged Scoter; Long-tailed Duck; Spruce Grouse; Little Blue Heron; Northern Goshawk; King Rail; American Avocet; Willet; Whimbrel; Western Sandpiper; Laughing, Little, Lesser Black-backed, Glaucous and Great Black-backed Gulls; Eurasian Collared-Dove; Black-backed Woodpecker; Western Kingbird; Carolina Wren; White-eyed and Philadelphia Vireos; Northern Mockingbird; Yellow-throated and Prairie Warblers; Yellow-breasted Chat; and Le Conte's and Nelson's Sharp-tailed Sparrows.

Two one-day group birding events that took place this summer are worthy of special mention. One was new this year, a "Birding Blitz" coordinated by Beth Goeppinger, naturalist at

Richard Bong State Recreation Area in Kenosha County. Many volunteers covered parts of this large and wonderful area on June 21, locating 99 species, several of which had not been recorded there previously. A number of Kenosha County birds reported in the seasonal summary were seen or heard during this survey.

The other event is a field trip in the northern unit of the Kettle Moraine State Forest that Jeff Baughman leads each June. This is an area that boasts a wonderful mix of "northern" and "southern" species, and what this year's participants found reflects that variety. Now admittedly there might have been a few straggling migrants present, but are there many other places in the state where one could envision finding relatively easily—on June 10—a total of 101 species, including no less than 10 species of flycatchers and 18 species of warblers?

Another part of the state that boasts a "northern-southern" mix is Portage County. Extensive explorations of the county by Murray Berner and others have verified breeding of a number of these species. One can encounter there such species as Acadian Flycatcher and Blue-winged, Cerulean, and Hooded Warblers not very far from the likes of Yellow-bellied Flycatcher, Golden-crowned Kinglet, Golden-winged, Yellow-rumped and Palm Warblers, and Lincoln's Sparrow. Berner wondered in his report this year whether there is another county in North America with breeding populations of the 5 eastern *Empidonax* species.

The 46 individuals who submitted formal reports represent the lowest number in many years, even lower than last year's 52. But e-mails sent by

many birders to the Wisconsin Bird-Net again allowed us to augment our seasonal summary considerably. We made use of reports from an additional 41 individuals in preparing this year's report. Their names are included in the list of contributors at the end of the seasonal summary.

Again this year, a number of "regulars" did not submit reports from their home counties, and fewer individuals visited multiple counties. This reduced coverage contributed to the lack of reports from these counties: Ashland, Bayfield, Buffalo, Calumet, Clark, Dunn, Eau Claire, Iron, Lafayette, Lincoln, Marquette, Polk, Price, Rusk, Sawyer, Taylor, and Waushara.

REPORTS

(1 JUNE–31 JULY 2003)

Snow Goose—Tessen observed one in Ke-waunee County June 1.

Mute Swan—Reported from Dane (Ashman, Martin), Door (Stover), and Washington (Domagalski) Counties.

Trumpeter Swan—Noted in Barron (Haseleu), Burnett (Prestby), Grant (Holschbach), and St. Croix (Rudesill) Counties.

Gadwall—Observers found these in only four counties: Columbia (Stutz), Dodge (Mueller), Oconto (the Smiths), and Winnebago (Ziebell).

American Wigeon—All observations were in July; in Dodge (Bahls, Stutz), Milwaukee (David), Ozaukee (Bontly), and Oconto (the Smiths) Counties.

American Black Duck—Reported from Manitowoc (Sontag), Oconto (the Smiths), Sheboygan (the Brassers), and Winnebago (Ziebell) Counties.

Northern Shoveler—The season's only report came from Walworth County June 4-7 (Rohde).

Northern Pintail—Also represented by only a single observation this season: Walworth County June 4 (Paulios).

Green-winged Teal—Present in these seven counties: Dane, Dodge, Pierce, Portage, St. Croix, Walworth, and Winnebago.

Canvasback—Noted in Dodge County June 23 (Moretti) and from July 3 on (Tessen) and in Ozaukee County June 14 (Frank).

Redhead—Reported from Dane, Dodge, Fond du Lac, Kenosha, Manitowoc, Milwaukee, Ozaukee, Racine, Walworth, and Winnebago Counties.

Ring-necked Duck—Recorded in these seven counties: Barron, Douglas, Fond du Lac, Langlade, Oconto, Portage, and Vilas.

Greater Scaup—Present through the season in Manitowoc County (Sontag). Eight birds were in Sheboygan County June 1 (Tessen).

Lesser Scaup—Sontag found these through the season in Manitowoc County. There were early June observations in Dane (Ashman, Evanson) and Brown and Milwaukee (Tessen) Counties.

White-winged Scoter—A bird in Milwaukee County June 11 was very unusual (Tessen).

Long-tailed Duck—One remained in Manitowoc County through June 12 (Sontag). Most unusual was a Dane County bird that remained in University Bay in Madison's Lake Mendota through mid-June. Many observers enjoyed the rare opportunity to see this species at close range. For some details, see Stutz's account in "By the Wayside."

Common Goldeneye—There were more reports this year than most, from these counties: Chippewa June 18 (Polk); Door July 23 (Shillinglaw); Manitowoc June 11-16 (Sontag); Oconto from July 10 on, including two young (the Smiths); Ozaukee June 3 (Bontly); and Portage through June 5 (Bernier).

Common Merganser—Reported from four counties: Door (Stover), Douglas (the LaValleys), Langlade (Schimmels), and Portage (Bernier).

Red-breasted Merganser—Noted in Door (Stover, Tessen), Kewaunee, and Sheboygan (Tessen) Counties.

Ruddy Duck—Observed in these ten counties: Columbia, Dane, Dodge, Jefferson, Langlade, Milwaukee, Outagamie, St. Croix, Walworth, and Winnebago.

Gray Partridge—Only a single report this year, from Dane County June 1 (Burcar).

Ruffed Grouse—Rudesill reports having found none for two years in Pierce and St. Croix Counties. Noted in these counties: Burnett, Douglas, Florence, Iowa, Langlade, Oconto, Portage, Richland, Sheboygan, and Washburn.

Spruce Grouse—This elusive species was observed in Forest County July 16 (Fitzgerald).

Sharp-tailed Grouse—Reported from Burnett County June 24 (Prestby) and Douglas County through the season (the LaValleys).

Greater Prairie-Chicken—Christensen found three booming in Adams County June 4, and Berner noted them through July 1 in Portage County.

Northern Bobwhite—Present in these counties: Columbia, Dane, Green, Iowa, Juneau, Kenosha, Manitowoc, Richland, Rock, Sauk, Waupaca, and Winnebago.

Common Loon—The latest migrants along Lake Michigan were observed in Manitowoc County June 9 (Sontag). A bird in Jefferson County June 29–July 13 was unusual (Hale). Noted in eight additional counties, all in the northern half of the state.

Red-necked Grebe—Wood observed up to four birds near two nests in Horicon Marsh, Dodge County, but at least through June 22 there was no evidence of successful nesting. Cutright found a family June 29 at Lake Maria, Green Lake County. Ziebell counted 14 in Winnebago County June 14. Noted also in early June in Burnett (Haseleu, Prestby), Dane (Burcar), and Sheboygan (Tessen) Counties.

American White Pelican—Reported from these 11 counties: Columbia, Dodge, Fond du Lac, Green Lake, Jefferson, Marathon, Oconto, Pierce, Portage, Trempealeau (300 birds July 2, Leshner), and Winnebago.

Double-crested Cormorant—Sontag found 220 in Manitowoc County June 3, and Ziebell noted 1,200 in Winnebago County June 13. Observed in 11 additional counties.

Least Bittern—Recorded in these nine counties: Dane, Dodge, Jefferson, Marathon, Oconto, Portage, Shawano, Washington, and Winnebago.

Great Egret—Ziebell observed 210 in Winnebago County June 13. Noted in 18 additional counties, mostly in the southern part of the state.

Snowy Egret—Birds were seen by a number of observers through much of the summer at Bay Beach Wildlife Sanctuary in Brown County and in or near parts of Horicon Marsh, both in Dodge and Fond du Lac Counties.

Little Blue Heron—Fitzgerald saw an adult both standing and flying in Racine County June 5, noting its small size and “purplish blue color throughout its whole body.”

Cattle Egret—Recorded in three counties: Brown (Tessen), Fond du Lac (Stutz, Tessen), and Winnebago (Bruce, Paulios, Ziebell).

Black-crowned Night-Heron—Ziebell noted 300 in Winnebago County June 13. Observed in 10 additional counties, all in the eastern part of the state.

Yellow-crowned Night-Heron—Two immature birds were reported this season, in Milwaukee County June 9 (Prestby) and Shawano County June 24–25 (Peterson, Tessen). Both were observed under conditions good enough to see distinctive plumage and shape characteristics.

Osprey—A nest on a tower near the University of Wisconsin Arboretum in Madison produced a number of Dane County reports this season. Observed in an additional 14 counties.

Mississippi Kite—A bird seen on June 17 in Door County by Barbara Stover is only the fourth Wisconsin summer record. Accepted by the Records Committee. See “By the Wayside.”

Sharp-shinned Hawk—A bird was seen well in Walworth County June 15 (David). Other reports came from Dane (Burcar, July 27), Outagamie (Tessen, July 15), and Ozaukee

(Bontly, June 7) Counties, as well as from five counties further north.

Northern Goshawk—Noted in Door County (Van Duyse) and Florence County (Burcar) July 3, and in Forest County June 4 (Peterson).

Red-shouldered Hawk—Noted June 26 in Florence County (Strelka). Also reported from these more southern counties: La Crosse, Outagamie, Portage, Sheboygan, St. Croix, and Waupaca.

Broad-winged Hawk—A Milwaukee County bird was brought to a wildlife rehabilitation center in early July (Diehl). Also noted in Dane, Grant and Sauk Counties, as well as in nine counties further north.

Rough-legged Hawk—There are summer reports of this species every few years. This season, Hale saw one in Winnebago County June 1. See "By the Wayside."

Merlin—Reported from these counties: Burnett, Door, Douglas, Kenosha, Manitowoc, Marinette, and Portage.

Peregrine Falcon—In addition to birds nesting in several counties bordering the Mississippi River, this species was noted in Brown, Dane, Dodge, Douglas, Manitowoc, and Milwaukee Counties.

King Rail—Uncertainties (and/or ignorance) about vocalizations of this secretive species may make its identification by sound alone suspect. For example, some observers have watched Virginia Rails mimic quite well one of the kinds of vocalizations attributed (at least formerly) to King Rails. This year observers were lucky to have at least one sometimes obliging bird be present near a highway in the Bong Recreation Area in Kenosha County. Howe obtained some excellent photographs of it. The Schwalbes called one up on June 6 near Mud Lake, Columbia County.

Virginia Rail—Noted only in these counties: Columbia, Dane, Dodge, Oconto, Oneida, Portage, Richland, Sauk, and Winnebago.

Common Moorhen—Reported from Dane, Dodge, Kenosha, Waukesha, and Winnebago Counties.

American Coot—This species was observed in these counties: Burnett, Columbia,

Dane, Dodge, Outagamie, Ozaukee, Portage, Waukesha, and Winnebago.

Black-bellied Plover—Birds were present June 2 in Oconto County (Tessen), June 8 in Racine County (David), and July 23 in Door County (Shillinglaw).

American Golden-Plover—Tessen saw two birds in Oconto County June 2.

Semipalmated Plover—The latest spring migrants were recorded in Dane County June 9 (Ashmen) and Manitowoc County June 10 (Sontag). Birds had returned to Manitowoc County by July 15 (Sontag) and were observed in several other counties about a week later.

American Avocet—Appeared only once during the season, when six birds were present July 26 at Horicon Marsh, Dodge County. Fortunately this was a day when people on an organized field trip, plus additional birders, happened to be there, and therefore the birds were seen by a number of individuals.

Greater Yellowlegs—Still in Dane County June 2 (Stutz). Dane County was also the place where fall migrants were first seen (Martin, July 1). Birds appeared in several other locations within the next week.

Lesser Yellowlegs—Reported from Manitowoc County June 1 (Tessen). Had returned to Washington County by June 28 (Domagalski), Sheboygan (Cutright) and Waukesha (Fitzgerald) Counties by June 30, and several further counties within the next few days.

Solitary Sandpiper—Migrants were present by July 1 in Dane (Ashman) and Portage (Berner) Counties, July 3 in Dodge County (Tessen), and July 5 in Milwaukee County (David).

Willet—Noted in Manitowoc County June 19 (Sontag), Racine County June 25 (Fitzgerald), 3 birds, and Dane County July 4 (Evanson, 11 birds).

Upland Sandpiper—Reported from these ten counties: Dane, Door, Douglas, Forest, Oconto, Ozaukee, Portage, St. Croix, Walworth, and Winnebago.

Whimbrel—Peterson saw seven in Sheboygan County June 1.

Ruddy Turnstone—Present in five counties in early June, latest in Racine County June 12 (David). The only fall migrant reported was also in Racine County, on July 27 (Prestby).

Red Knot—Noted in Manitowoc (Tessen) and Sheboygan (Peterson, Tessen) Counties June 1 and in Racine County June 5 (Fitzgerald).

Sanderling—Observed in Manitowoc and Sheboygan Counties June 1 and Oconto County June 2 (Tessen) and Racine County June 5 (Fitzgerald). Had returned to Racine County by July 22 (Fitzgerald).

Semipalmated Sandpiper—Present in several counties in early June, with the latest departures June 8–11. The first fall migrants appeared in Manitowoc County June 26 (Sontag) and Sheboygan County June 30 (Christensen, Cutright).

Western Sandpiper—The only reports accepted by the Records Committee were of birds in Dane County July 28 (Martin) and 30 (Prestby). See "By the Wayside."

Least Sandpiper—Lingered until June 1 in Dane County (Ashman) and until June 3 in Manitowoc County (Sontag). Noted June 26 in Manitowoc (Sontag) and Portage (Bernier) Counties and in four more counties within the next week.

White-rumped Sandpiper—Remained in five counties into June, latest June 9 in Dane (Ashman, who counted 18 there June 7) and Portage (Bernier). Noted in July in these counties: Milwaukee July 5 (David); Dodge July 18 (Fitzgerald) and 23 (Tessen); and Racine July 22 (Fitzgerald) and 27 (Prestby).

Baird's Sandpiper—Spring migrants were noted in Sheboygan County June 1 and Milwaukee County June 11 (Tessen). Fall migrants appeared in these five counties July 18–29: Dane (Ashman), Dodge (Frank, Tessen), Manitowoc (Sontag), Portage (Bernier), and Racine (Fitzgerald).

Pectoral Sandpiper—Remained in Dane County through June 9 (Ashman). Present in Dodge County July 3 (Frank), with migrants appearing in several additional counties within 10 days.

Dunlin—The latest spring birds were seen in Manitowoc (Sontag) and Sheboygan

(Tessen) Counties June 7. Birds had returned by June 24 in Manitowoc County (Sontag), June 30 in Sheboygan County (Tess), and July 4 in Dane County (Evanson).

Stilt Sandpiper—The first fall migrants in these counties were noted as follows: Portage July 10 (Bernier), Dodge July 12 (Tessen), Dane July 15 (McDowell), and Racine July 29 (Fitzgerald). Tessen counted 60 in Dodge County July 26.

Short-billed Dowitcher—The earliest migrants appeared in Manitowoc County by July 3, Milwaukee County by July 4 (David), and Portage County by July 8 (Bernier).

Long-billed Dowitcher—Tessen noted one in Dodge County July 18.

Wilson's Snipe—Reported from these nine counties: Dane, Dodge, Douglas, Fond du Lac, Kenosha, Oconto, Portage, Sauk, and Winnebago.

American Woodcock—A baby was brought to a rehabilitation center in Milwaukee County (Diehl). Noted also in Douglas, Langlade, Oconto, and Portage Counties.

Wilson's Phalarope—Noted throughout the season in Portage County and as indicated in these counties: Brown June 1, Oconto June 8, Kenosha June 21, Dodge July 9–26, and Dane July 27.

Red-necked Phalarope—Reported from Dane County through June 3 (Ashman, Stutz), Chippewa (Polk) and Racine (Fitzgerald) Counties June 3, and Dodge County July 13 (Wood).

Laughing Gull—Observers provided documented reports from three counties: Manitowoc from July 18 on (Sontag, 2 birds); Racine June 29 (David) and July 22 (Fitzgerald); and Sheboygan June 20–29 (Scott Baughman, Tessen, Wood). See "By the Wayside."

Franklin's Gull—Birds were seen in these counties: Manitowoc June 8 (Sontag), Milwaukee June 9 and Kenosha June 13 (David), Dane June 14 (Prestby), Dodge June 28 (Wood), and Racine June 29–30 (David).

Little Gull—There were documented reports from Sheboygan County June 11 and 28 (Tessen) and Manitowoc County June 26–27 (Sontag). See "By the Wayside."

Bonaparte's Gull—Reported from these counties: Dane, Manitowoc, Marinette, Milwaukee, Oconto, Racine, Sheboygan, and Winnebago. Large numbers were noted in Manitowoc County (1,100 on June 26, Sontag) and Sheboygan County (thousands on June 1, 5,000 on June 28, Tessen).

Black-tailed Gull—A bird found and photographed by Howe in Racine County June 12 constitutes Wisconsin's first record of this species. There are relatively few North American records, with almost none from the interior of the continent. The Records Committee accepted the record, which included photographs by both Howe and Idzikowski. See "By the Wayside."

Ring-billed Gull—Very large numbers were reported in several areas this summer, including over 3,000 in Oconto County July 15 (the Smiths), about 10,000 in Manitowoc County June 1, before the eradication program in the containment area (Sontag), and 12,000 in Winnebago County June 14 (Ziebell). Noted in 18 counties overall.

Herring Gull—Reported from these counties: Dane, Door, Douglas, Manitowoc, Milwaukee, Oconto, Ozaukee, Portage, Sheboygan, and Winnebago.

Lesser Black-backed Gull—Observers reported this species from both Door and Sheboygan Counties this summer, but only one report was accompanied by adequate documentation: a bird seen in Sheboygan County June 29 (Wood). See "By the Wayside."

Glaucous Gull—Present in Manitowoc County through June 3 (Sontag) and in Racine County June 5 (Fitzgerald).

Great Black-backed Gull—Noted through the summer in Manitowoc (Sontag) and Sheboygan (the Brassers, Tessen) Counties and also in these counties: Door June 24 and July 23 (Shillinglaw) and Racine July 22 (Fitzgerald).

Caspian Tern—Noted in Douglas County June 1 (the LaValleys), La Crosse County July 12 (Leshner), Dane County from July 4 on (Evanston, Ashman), and nine additional counties further east.

Common Tern—Reported from these counties: Douglas (the LaValleys), Oconto (the Smiths), and Sheboygan (Tessen) through the

season, Langlade June 5 (Schimmels), Racine July 9 (Howe), and Winnebago through much of the season (Bruce, Knispel, Ziebell).

Forster's Tern—Noted in these nine counties: Dane, Dodge, Green Lake, Manitowoc, Oconto, Outagamie, Racine, Sheboygan, and Winnebago.

Eurasian Collared-Dove—Although a number of observers reported the birds in Arlington, Columbia County, only Heikkinen, Holschbach, Sufka, and Unson provided documentation.

Eastern Screech-Owl—Noted July 28 in Richland County (Duerksen) and through the summer in Dane (Burcar) and Winnebago (Ziebell) Counties.

Short-eared Owl—Reported only from Portage County (Bernier, Hall).

Northern Saw-whet Owl—Recorded only in Portage (Hall) and Vilas (Fitzgerald) Counties.

Common Nighthawk—The number of counties represented by this year's reports (18) does not differ much from that of the past few years, but a number of observers noted that they had seen or heard only one or very few birds all season and/or that birds had been present for only a short time. Only in Pierce and St. Croix Counties were nighthawks said to be common (Rudesill).

Whip-poor-will—Reported from a very low number of counties: Columbia, Door, Florence, Forest, Portage, and Sauk.

Red-headed Woodpecker—It is possible that the low number of reporting counties this year (18, compared to an average of 25 in the preceding six years) is a result of the disturbing population decline that we know is taking place, but it also could be at least partly due to generally poorer coverage of the state this season.

Red-bellied Woodpecker—The most northern of the 25 reporting counties were Burnett (McInroy), Door (Stover), Oconto (the Smiths), and Washburn (Haseleu).

Black-backed Woodpecker—Schimmels watched both parents delivering food to young in a nest in Langlade County in mid-June, and Peterson saw a male carrying grubs in Vilas County June 4. There were further reports from

Vilas (Fitzgerald, Paulios) and Forest (Fitzgerald) Counties. See "By the Wayside."

Olive-sided Flycatcher—Reported from two counties within normal range (Douglas and Forest). The other six reports, all June 9 or earlier, were of migrants in more southern counties.

Yellow-bellied Flycatcher—Noted in six southern counties in early June, last in Milwaukee County June 12 (Zehner). Berner reported three territorial males in Dewey Bog, Portage County on three dates through June 30. Noted in five additional counties further north.

Acadian Flycatcher—Heikkinen and Unson saw one on a nest June 22 in Baxter's Hollow, Sauk County. Berner and Hall found at least four in Portage County. Observed also in these counties: Dane, Grant, Iowa, Richland, Rock, Sheboygan, Washington, and Waukesha.

Alder Flycatcher—Small numbers could be found in these southern counties after mid-June: Columbia, Dane, Dodge, Kenosha, and Sauk. Noted in 23 counties overall, with most southern observations occurring before mid-June.

Willow Flycatcher—Reported from 22 counties overall, Oconto (the Smiths) being the most northern.

Western Kingbird—Fitzgerald saw one in Kenosha County June 21, noting its yellow undersides and black tail with white on its sides.

Loggerhead Shrike—The only report this summer was of a successful nesting in St. Croix County (Persico).

White-eyed Vireo—A number of observers found a bird at least through mid-July at the Brooklyn Wildlife Area in Dane County. Documentation of this bird came from Stutz, who heard and saw it well June 1, noting its "white eye, 2 white wing bars, yellow flanks, olive upper parts, and grayish throat and nape." Other reports came from Kenosha County June 21 (Rohde) and Milwaukee County July 8 (Bontly).

Bell's Vireo—Some fledged in La Crosse County (Leshner). Also reported from these counties: Columbia June 27 (Heikkinen), Grant June 14 (McDowell) and July 27 (Holschbach), Green June 9 (Ashman) and July 27 (Kluber-tanz), Kenosha June 5–23 (Cutright, Fitzgerald,

Johnson), and Trempealeau (Leshner, Thometz).

Yellow-throated Vireo—The most northern reports came from Douglas (the LaValleys), Florence (Strelka), and Oconto (the Smiths) Counties. Noted in 20 counties in all.

Blue-headed Vireo—The only reports came from Douglas County through July 17 (the LaValleys), Florence County July 4 (Strelka), and Oconto County June 8 (the Smiths, 4 birds).

Philadelphia Vireo—Hoffman found three birds exhibiting territorial behavior in one location in Douglas County June 4. Although some birds of this species can migrate late, it's worth following up on far northern reports in early June. They breed rarely but regularly in northeastern Minnesota, and reports from Wisconsin's Atlas project suggest the possibility that they might do so here as well.

Gray Jay—Reports came from Douglas (Hoffman) and Vilas (Fitzgerald, Paulios) Counties.

Common Raven—The most southern of the reporting counties was Monroe (Lichter). Noted in 12 counties overall.

Boreal Chickadee—Reported from three counties: Forest (Fisher, Fitzgerald), Oneida (Peterson, Ruhser), and Vilas (Fitzgerald, Paulios)

Red-breasted Nuthatch—Noted only in Columbia, Dane, Door, Douglas, Langlade, and Portage Counties.

Brown Creeper—Found only in Door (Stover), La Crosse (Leshner), and Vilas (Fitzgerald) Counties, the lowest number of reporting counties in many years.

Carolina Wren—Because this season produced the greatest number of reports in at least a decade, all of them are included here, with the caveat that Holschbach and Stutz were the only observers to provide documentation. Five nestlings were brought to a rehabilitation center in Milwaukee County in early July (Diehl). Capobianco and Holschbach found one on the same weekend (July 26–27), independently, at Wyalusing State Park, Grant County. Other reports came from Rock County June 2 (Kluber-tanz, who heard one less than a mile from a known cluster of these wrens; in early August he

heard and saw at least two birds in this "new" location), Dane County June 11 (Stutz), Marinette County June 27 (Bridge), and Sheboygan County July 6 (Pope).

Winter Wren—Reported from these counties: Douglas, Florence, Langlade, Oconto, Portage, and Sauk.

Sedge Wren—Ziebell found 110 in Winnebago County June 14. Noted in 24 counties in all.

Marsh Wren—The count of this species was 460 in Winnebago County on June 14 (Ziebell). Also reported from an additional 17 counties.

Golden-crowned Kinglet—Dewey Bog in Portage County was again home to this species, with up to three birds present through June (Berner). A bird in Manitowoc County July 21 was unusual (Sontag). Also noted in Florence (Burcar) and Vilas (Fitzgerald) Counties.

Ruby-crowned Kinglet—Reported only from Douglas (the LaValleys) and Vilas (Fitzgerald) Counties.

Blue-gray Gnatcatcher—Noted feeding fledged young June 29 at Baxter's Hollow, Sauk County (McDowell). No less than 40 were counted June 21 on the Bong Birding Blitz, Kenosha County. The most northern of the 25 reporting counties were Door (Stover), Marathon (Soulen), and Oconto (the Smiths) in the east and Washburn (Haseleu) in the west.

Eastern Bluebird—The only comment on abundance of this species this year came from Rudesill, who said there were "fewer than usual" in Pierce and St. Croix Counties. Reported from a total of 32 counties.

Veery—Among this year's 16 reporting counties were these in the southern part of the state: Columbia, Dane, Green, Iowa, Jefferson, and Waukesha.

Swainson's Thrush—Migrants were present June 2 in Manitowoc (Sontag) and Milwaukee (Zehner) Counties, and one had returned to Dane County by July 28 (Fallow).

Hermit Thrush—Reports came from Douglas, Florence, Langlade, Oconto, Oneida, Portage, and Washburn Counties.

Wood Thrush—The most northern reports came from Door (Stover), Douglas (the LaValleys), Langlade (Schimmels), and Oconto (the Smiths) Counties. Noted in 23 counties overall. Lichter reported the unusual phenomenon of countersinging in this species in Monroe County. See "By the Wayside."

Northern Mockingbird—A bird behaving territorially was noted in Portage County in early June (Overholt, Hall). Also reported from Dane County June 4 (Burcar).

Blue-winged Warbler—Berner found up to 10 birds in Portage County, and the Smiths reported one in Oconto County July 6. The remaining nine reporting counties were further south. McDowell observed fledged young being fed in Sauk County June 29. Twenty-six were counted in Kenosha County June 21 (Bong Birding Blitz).

Golden-winged Warbler—Hoffman counted 34 males per hectare on a survey in Douglas County June 4, and Persico was surprised to tally 17 in Burnett County June 1. Other observations came from Florence, Langlade, Oconto, Portage, Sheboygan, and Washburn Counties.

Tennessee Warbler—Among the few spring stragglers, the latest was in Dane County June 12 (Evanson). A bird singing in Shawano County July 6 was unusual (Peterson). Birds of this species heard singing for just a day in mid-summer turn up from time to time, but it's difficult to define the status of such individuals. A fall migrant was noted as early as July 14, in Portage County (Berner), with others appearing during the last week of July in several counties.

Northern Parula—Present in Burnett County June 1 (Persico). Birds in Portage County June 16 (Berner) and Sauk County June 29 (McDowell) were unusual. Also noted in Douglas, Florence, and Langlade Counties.

Magnolia Warbler—Lingered in southern and central counties into early June, longest until June 6 in Milwaukee County (Bontly) and June 7 in Sheboygan County (Jeff Baughman). Present later in Door and Douglas Counties in normal range.

Cape May Warbler—The only report came from Douglas County June 4 (Hoffman).

Black-throated Blue Warbler—Noted in Forest (Fitzgerald), Langlade (Schimmels), Oneida (Fisher), and Shawano (Peterson) Counties.

Yellow-rumped Warbler—Many fewer reports than usual, from only eight counties. Birds in Milwaukee County June 5 and Ozaukee County June 7 were unusual (Bontly). Berner found 10 on June 30 in Dewey Bog, Portage County. The other reporting counties were Burnett, Douglas, Florence, Oconto, and Vilas.

Black-throated Green Warbler—There have been occasional previous summer reports of this species from Waukesha County. This year Johnson and Moretti noted it there. Other somewhat southern observations were in Sauk (Burcar, Holschbach) and Sheboygan (the Brassers) Counties. The remaining reports came from seven more northern counties.

Blackburnian Warbler—Lingered until June 2 in Manitowoc County (Sontag), June 5 in Portage County (Berner), and June 7 in Sheboygan County (Jeff Baughman). As many as five spent the summer in Sauk County (Holschbach). Also noted in five northern counties.

Yellow-throated Warbler—Noted in its usual haunts in Wyalusing State Park, Grant County on June 14 (McDowell) and July 27 (Holschbach). Although several observers submitted reports from Token Creek County Park in Dane County, most were not documented. Martin saw and heard a bird there June 21, noting its "gray back, yellow throat and black side of face, black streaks along sides."

Pine Warbler—Reports came from these counties: Burnett, Door, Douglas, Florence, Langlade, Oconto, Portage, Sheboygan, and Waupaca.

Prairie Warbler—Fitzgerald heard and saw a bird well in Kenosha County June 13.

Palm Warbler—Berner found a nest with young, plus eight singing males, in Dewey Bog, Portage County on June 30. Noted also in Vilas County (Fitzgerald, Paulios).

Blackpoll Warbler—Lingered until June 1 in Burnett County (Persico), June 3 in Winnebago County (Ziebell), and June 5 in Milwaukee County (Bontly).

Cerulean Warbler—Nested successfully in

Portage County (Berner). Also noted in Dane, Grant, Iowa, Pierce, Rock, Sauk, Sheboygan, and Waukesha Counties.

Prothonotary Warbler—Johnson found nearly a dozen on a canoe trip on the Sugar River in Rock County June 21–22. Peterson reported two singing in Waupaca County June 22. Also noted in Grant, Jefferson, La Crosse, and Pierce Counties.

Worm-eating Warbler—Several June reports, none accompanied by any documentation, came from Baxter's Hollow, Sauk County.

Northern Waterthrush—Present in these seven counties: Langlade, Oconto, Ozaukee, Portage, Shawano, Sheboygan, and Waupaca.

Louisiana Waterthrush—Peterson found birds in Shawano County June 2 and 21. The remaining reports came from Grant and Sauk Counties.

Kentucky Warbler—Heikkinen and Unson saw young birds being fed June 22 in Baxter's Hollow, Sauk County. Also noted in Grant County June 14 (McDowell) and July 27 (Holschbach), Green County June 1 (Yoerger), and Iowa County early in the season (Burcar).

Connecticut Warbler—Reported only from Burnett (Paulios, Prestby) and Douglas (Hoffman) Counties.

Mourning Warbler—Reported from 18 counties, at least a third of them southern.

Hooded Warbler—Noted in no less than 10 counties this season: Dane, Milwaukee, Portage, Rock, Sauk, Shawano, Sheboygan, Walworth, Washington, and Waukesha.

Wilson's Warbler—Reported from these counties June 1–5: Manitowoc (Sontag), Milwaukee (Bontly), and Winnebago (Ziebell).

Canada Warbler—Observed feeding young June 29 at Baxter's Hollow, Sauk County (McDowell). Birds in Green County June 1 (Yoerger) and Columbia County June 3 (Dischler) probably were migrants, as a bird in Milwaukee County June 11 (Bontly) might have been. Reported also from Door, Portage, and Sheboygan Counties.

Yellow-breasted Chat—Birds were reported from two areas where they have sum-

mered previously. A number of observers found them at the Brooklyn Wildlife Area in Dane County. Stutz was the only one to provide any documentation. He saw one bird chasing another on June 1 and noted that they were "medium size passerines with olive backs, a fairly long tail, yellow breast, white eye-ring, white belly, black bill." Also noted July 12 at Governor Dodge State Park, Iowa County (Paulios).

Clay-colored Sparrow—Fitzgerald found three in Kenosha County June 21. Noted in 21 counties in all, representing many parts of the state.

Field Sparrow—The most northern of the 25 reporting counties were Florence (Burcar) and Oconto (the Smiths).

Lark Sparrow—Noted in Sauk County (Burcar) and in Trempealeau County (Leshner, Thometz), where adults and young were seen.

Grasshopper Sparrow—Rudesill found these to be "common" in Pierce and St. Croix Counties. Reported from 20 counties, with Vilas (Fitzgerald) being the only northern one.

Henslow's Sparrow—The 12 Rudesill found in St. Croix County represent about twice the "normal" number she has noted previously. Fitzgerald counted eight in Kenosha County June 21. Reported from 13 counties overall, the most northern ones being Oconto (the Smiths) and Shawano (Peterson).

Le Conte's Sparrow—Noted in Burnett (Paulios, Prestby), Douglas (the LaValleys), and Oneida (Peterson, Van Duyse) Counties.

Nelson's Sharp-tailed Sparrow—The only bird noted was one singing near the pump-house, Crex Meadows, Burnett County June 11 (Paulios).

Lincoln's Sparrow—Reported from these counties: Douglas (the LaValleys), Oneida (Ruhser), Portage (Bernier, a nest in Dewey Bog June 15, with 30 birds counted there June 30), and Vilas (Fitzgerald).

White-throated Sparrow—Most unusual was a pair on territory in downtown Milwaukee through June 16 (David). Present in Sheboygan County June 7 (Jeff Baughman). Other reports came from Douglas, Florence, Langlade, Oconto, Oneida, Portage, Shawano, and Vilas Counties.

Dark-eyed Junco—Observed in Douglas (the LaValleys) and Vilas (Fitzgerald, Peterson) Counties.

Northern Cardinal—Of the 29 counties from which observers reported these, the most northern were Langlade (Schimmels), Oconto (the Smiths), Shawano (Soulen), and Washburn (Haseleu).

Dickcissel—A generally low year for this species. Noted in 17 counties in all, with the only semi-northern reports coming from Oconto (the Smiths), Portage (Bernier), and Shawano (Peterson) Counties. Many observers noted only one to a few birds, often on only a single day. Rock County hosted good numbers, as it usually does; Klubertanz noted more there this year than last.

Eastern Meadowlark—The Bong Birding Blitz in Kenosha County yielded 129 of these on June 21. Leshner reported numbers to be up in La Crosse County. Noted in 25 counties in all.

Western Meadowlark—Observers found these in only 11 counties this season. Rudesill encountered only one all summer in St. Croix County. Bernier located seven in Portage County June 27, somewhat fewer than he had found last year. The remaining reports came from these counties: Dane, Grant, Iowa, Racine, Rock, Sauk, Sheboygan, Walworth, and Winnebago.

Yellow-headed Blackbird—Ziebell located 250 in Winnebago County June 14, the Bong Birding Blitz found 28 in Kenosha County June 21, and Bernier reported 10 in Portage County the same day. Rudesill noted unusually high numbers in St. Croix County. Reported in 14 counties in all.

Brewer's Blackbird—Observers found these in eleven counties: Dane, Dodge, Douglas, Florence, Langlade, Oconto, Oneida, Portage, Shawano, Vilas, and Walworth.

Orchard Oriole—Thometz found at least 12 birds July 9 in Trempealeau Wildlife Refuge, Trempealeau County. Birds with young were noted in St. Croix County July 6 (Rudesill). Noted in 13 counties in all, including Oconto (the Smiths) and Vilas (Fitzgerald).

Red Crossbill—For the second summer in a row, there were no reports.

White-winged Crossbill—Noted in Forest (Fitzgerald) and Vilas (Paulios) Counties.

Pine Siskin—For the first time in at least a decade, there were no reports.

Evening Grosbeak—Birds were reported from Douglas (the LaValleys), Florence (Burcar), Forest and Shawano (Peterson), Oconto (the Smiths), and Vilas (Fisher, Fitzgerald) Counties.

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“By the Wayside”—Summer 2003

Species documented include Long-tailed Duck, Ruffed Grouse, Mississippi Kite, Rough-legged Hawk, Western Sandpiper, Laughing Gull, Little Gull, Black-tailed Gull, Lesser Black-backed Gull, Black-backed Woodpecker, and Wood Thrush.

LONG-TAILED DUCK (*Clangula hyemalis*)

15 June 2003, University Bay, Lake Mendota, Madison, Dane County—It is unusual for this species to be seen away from Lake Michigan in any season, so when I went to see this bird I expected it to be injured or an escapee from a private collection. Because of these preconceptions I was surprised that after getting the bird in my scope, it promptly flew off and did a complete circle of University Bay before landing in front of me again. The bird was very capable in flight, moving above and below the tree line at a rapid speed. The bird's flight feathers showed no sign of ever being clipped. I was never able to check the bird's feet for a band.

The bird's appearance was similar to the illustration of a spring female in Sibley, but the bird appeared to be entering eclipse (more faded) plumage. The bill was small with a greenish base below the nostril and gradually becoming darker on top and towards the tip. The bird was brown in color overall with white feathers above and in

back of the eye. The bird also had white flanks and undertail coverts.

One other note. The Long-tailed Duck never dove during the half hour I observed the bird. Whenever it would feed it just dipped its head beneath the water in the dabbling motion so often seen in Mallards. Is this the common feeding behavior of this species in the shallow ponds of its feeding grounds?—*Aaron Stutz, Madison, WI.*

RUFFED GROUSE (*Bonasa umbellus*)

14 June 2003, Burnett County Breeding Bird Survey—A female Ruffed Grouse was leading ten 2–3 day old chicks across the road. I pulled up alongside her and she flared out her “ruffs,” spread her wings and started hissing at me. Then she ran/flew at my left front tire. As I leaned out the window to see if she was attacking the tire she changed directions and hit me right in the face and knocked my hat back into the car!! She then flew back into the ditch and headed off with her brood.—*Andy Paulios, Janesville, WI.*

MISSISSIPPI KITE
(*Ictinia mississippiensis*)

17 June 2002, Southeast of Gill's Rock, Door County—A friend and I were birding on Isle View Road east of Timberline around an old orchard/agricultural field when we saw a small falcon-like bird that my friend thought was a Peregrine Falcon. It appeared smaller than a Peregrine to me but I noticed a very erratic flight that I had never seen before. The bird flew off before I could be sure of any identification. We fortunately encountered the bird about a mile away flying over an agricultural field. The erratic flight was again very noticeable, with much wheeling, twisting, turning on very flat pointed wings. After this rather stiff flapping, it would glide for quite some time and then again twist and careen around. The underbody was very light on the belly (almost appearing white when the sun hit it) with a darker breast. The tail was long, dark and very slightly forked. We were unable to see any streaking in the tail, breast or belly. The underwings were darkly patterned—the primaries and secondaries being the darker. At one point we saw dark smudgy areas on both sides of the face. The bird stayed about 4-5 minutes before flying off. At this point I felt it probably was a Mississippi Kite. We checked the field guides and felt quite certain that it was a sub-adult as the head was not as light as an adult's would be and it lacked the white secondaries of the adult.—*Barbara R. Stover, Milwaukee, WI.*

ROUGH-LEGGED HAWK (*Buteo lagopus*)

1 June 2003, Uihlein Marsh, Winnebago County—Tod Highsmith, Joan Braune and I, while birding at Uihlein Marsh on the way home from the WSO Convention, saw the bird circling at some distance, way off over the far eastern edge of the marsh area. It was clearly a long-winged buteo, soaring with its wings held at a slight dihedral. The bird had a white tail with a dark terminal band. There were light patches at the wrist on the upper wing with dark areas underneath. It hovered in place more than once, dropped fast and hit the ground once (and maybe found some prey, as it didn't come up for several minutes), went back up and circled and hovered again.—*Karen Etter Hale, Lake Mills, WI.*

WESTERN SANDPIPER (*Calidris mauri*)

28 July 2003, near the junction of CTH DM and CTH I, Dane County—The birds in question were with a group of 10–12 Semipalmated Sandpipers and 6–7 Least Sandpipers. They stood out from the other peeps in being slightly larger than the Semis and clearly larger than the Least. Their bills were longer than those of the Semis, tapered from a wider base and showed a definite droop at the tip. The upper 2–3 rows of scapulars were darker than those of the Semis, with dark centers and rufous edges. The scapulars contrasted with the rest of the upper parts of the birds. The breast was pale and unstreaked. There was a grayish smudge below the "shoulders." The bills and legs were black. The wings did not extend be-

yond the tip of the tail. I believe that these 2 birds were juvenile Western Sandpipers.—*Chester B. Martin, Jr., Middleton, WI.*

LAUGHING GULL (*Larus atricilla*)

29 June 2003, Wind Point, Racine County—An adult bird being seen off and on all spring and summer by many observers. Franklin's Gull seen about half an hour later while comparisons still fresh. Latter had much more prominent eye-ring, less complete hood with still some white on forehead, white spots on primaries of folded wing, whereas Laughing's were all dark. Biggest difference—much more serious looking bill on the Laugher!—*Karl David, Racine, WI.*

18 July 2003, Manitowoc County—At least 2 adult birds have appeared with the Ring-billed Gulls—one was “further” into the summer molt at this writing. Both appeared about the same size, and about 1–2” smaller [than the Ring-bills] in length. The “large” bill, dark red in color, gave a slightly drooped appearance. The primaries were black with white invading the tips. This was evident both while the bird was standing and in flight. The black hood was invaded by white feathering in one of the birds . . . The almost black mantle is usually the first characteristic that attracts your attention. The feet appear dark reddish in good light/almost black otherwise.—*Charles Sontag, Manitowoc, WI.*

29 June 2003, North Point, Sheboygan County—This gull landed on the rocks at the very tip of North Point. It was much larger than the Bonaparte's Gulls, and nearly the same size as the Ring-billed Gulls that were crowded

on the rocks. It had a dark gray back, black wingtips with no visible white spots, and clean white underparts. The head was partially hooded, with a dusky gray coloration (not the solid black of a breeding adult) and the eye was bordered top and bottom with white crescents. The legs and bill were dark. The bill was rather long and drooped at the tip. The shape of the bill eliminated Franklin's Gull, and the identification was further supported when the bird flew out over the lake, showing on the upperwing extensive black wingtips with no white separating the tips from the gray upperwing, and no white tips on the primaries.—*Thomas C. Wood, Menomonee Falls, WI.*

LITTLE GULL (*Larus minutus*)

26–27 June 2003, Little Manitowoc River, Manitowoc County—Although both subadult and adult birds were found in May, only a subadult individual was found in June. This bird was found with a large flock of Bonaparte's Gulls near the mouth of the Little Manitowoc. Its call note (sounding like a Black Tern) announced its presence. Then all that was necessary was finding the individual. This bird sported an “M” wing pattern in flight, but appeared as a very distinct “carpal bar.” In flight, the “shorter” wings were rounded at the tips, and the tip of the tail was dark.—*Charles Sontag, Manitowoc, WI.*

BLACK-TAILED GULL (*Larus crassirostris*)

12 June 2003, Shoop Park, Racine, Racine County—We were scoping



Head of Black-tailed Gull, this gull shows a red tip to bill. Photo by Eric Howe on 12 June 2003, Shoop Park, Racine, Wisconsin



Black-tailed Gull by John Idzikowski on 12 June 2003, Racine, Wisconsin

gulls from the Shoop Park parking lot when a dark-mantled gull caught my eye. From the distance it appeared to have a ringed-bill as well as red near the tip. Eager for a closer look, we walked along the edge of the golf course near the 2nd hole. Refinding the gull, Ted Keyel and I watched this bird for about 10 minutes. Larger than a Ring-billed by an inch or two, this dark-mantled gull indeed had a ring near the end of its bill and the most unusual red tipped bill, unlike anything we had encountered before. Yellowish legs nearly matched those of the adjacent Ring-billed Gulls. Clean white head. From the photos, portions of a few of the tertials (?) are white at

the edges. Looking at the Sibley Guide afterwards, however, we noticed the white crescent appearance that is illustrated in the book was not as conspicuous on this bird (at the angle we viewed from, anyway). [See photos.]

It stretched its wings casually and preened for several minutes before taking flight to the south. In flight, the rear of the tail was black, a clean definition between the black and white rump. It appeared the area of black was half that of the area of white shown on the rump, giving a one third black/two thirds white appearance for the entire tail/rump area. Photos indicate a thin white band of white at the end of the tail. While it was in flight the white edge at the rear of the tail was less obvious during a



This Black-tailed Gull found by Eric Howe and Ted Keyel at Shoop Park in Racine on 12 June 2003 is a first state record for this species in Wisconsin. Note darker mantle and small white areas on primaries. Photo by Eric Howe.



Black-tailed Gull with three Ring-billed Gulls by John Idzikowski on 12 June 2003 in Racine, Wisconsin.

pass it made from 125 and 300 feet. The under-wings graded from whitish-gray towards the all dark wing tips. It circled at least three times (large circles of a couple hundred feet or more). I continued to watch it through the scope as it traveled south towards the Racine Harbor/North Beach area. Last seen at about 7 A.M. about a third to half way down towards North Beach when it was 500+ feet from the shoreline.—*Eric R. Howe, Racine, WI.*

LESSER BLACK-BACKED GULL
(*Larus fuscus*)

29 June 2003, North Point, Sheboygan County—This gull was intermediate in size between Ring-billed and Herring Gulls in the area. It rested on a rock about 30 feet out on the lake, and later in the afternoon was on a concrete pier. It had a dark gray back, not as dark as a Great Black-backed Gull, and the back was lighter than the black wingtips, which had visible white spots that were smaller than the spots on the Herring Gulls' wingtips. This bird did not appear to be a full adult because there was a brownish hue to some of the wing coverts. The underparts and head were all-white. The eye was a pale yellow, not as yellow as the Ring-billed Gull eyes. The legs were also a pale yellow, but the bill was a very bright yellow with a red spot at the gonys and a small black area near the gonys. It did not have the massive thick appearance that Great Black-backed Gulls' bills have. This observation was made with a 20–60×, 80 mm scope from about 100 yards.—*Thomas C. Wood, Menomonee Falls, WI.*

BLACK-BACKED WOODPECKER
(*Picoides arcticus*)

16 July 2003, Vilas County—I was observing a mixed flock of Palm Warblers, Boreal Chickadees, and other warblers as they responded to my pishing. I was very surprised when an adult Black-backed Woodpecker flew into a nearby Tamarack and watched me for about a minute before it flew back into the dense bog where it had come from. The bird was about the size of a Hairy Woodpecker, but was uniformly dark on the back. The bird had a white throat and had barring on the breast. The crown was all dark with no hint of yellow, so I assume that it was a female bird. A thin white stripe started at the top of the beak and ran across the back of the neck. The tail was mostly dark with a white stripe along the edges of the tail. This was visible primarily when the bird was in flight and as it was about to land.—*Sean Fitzgerald, Burlington, WI.*

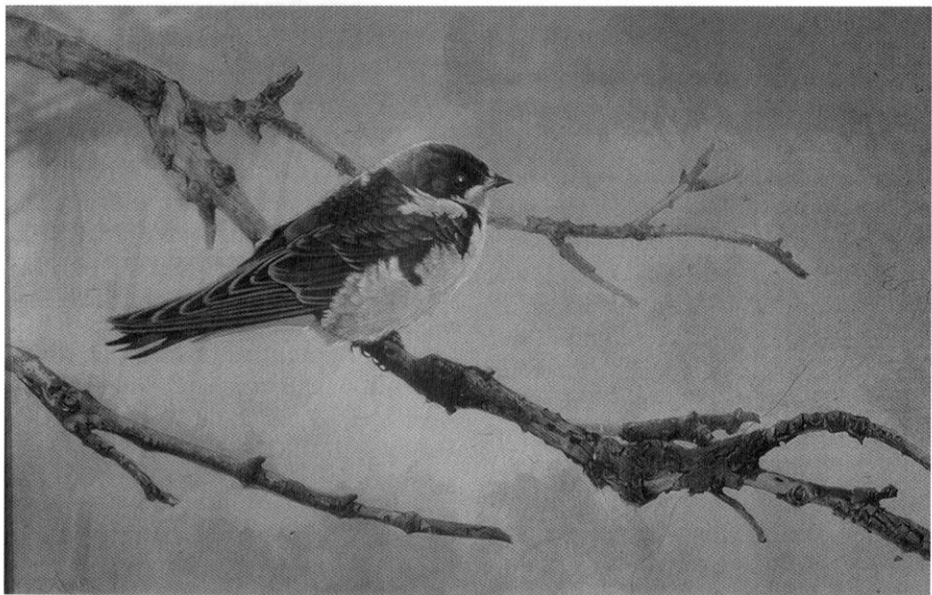
WOOD THRUSH
(*Hylocichlia mustelina*)

1 June 2003, Monroe County—I was sitting on the porch, listening to three Wood Thrushes singing. The one up the valley behind the house seemed to be singing totally independently of the other two. The other two were doing something I hadn't heard Wood Thrushes do before. For the period of at least 10 minutes I was listening to them, each time the bird across the road sang a phrase, the exact same phrase was repeated by the bird up the creek to the south.

I have heard this countersinging by Northern Cardinals, sometimes by

pairs, sometime by neighboring birds. I have also heard this done by Song Sparrows when there were more pairs nesting closer together here. I assumed these sparrows were siblings or otherwise related, and had learned the same phrases when they were raised, and just happened to be singing the same phrases at that time.

However, though I have heard some interesting Wood Thrush songs here over the years (including one that sounded kind of like a short ballad, with a series of 4 phrases repeated over and over—second verse same as the first), this was the first time I have heard countersinging.—*Lennie Lichter, Monroe County, WI.*



"Immature Tree Swallow" by David Brandon

WSO Records Committee Report: Summer 2003

Jim Frank

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The WSO Records Committee reviewed 11 records of 7 species for the summer 2003 season accepting 7 of them. One additional record from the summer of 2002 was reviewed and accepted. That old record was of Wisconsin's fourth record of a Black-bellied Whistling Duck. The most noteworthy report of this season was of course Wisconsin's first record, as well as inland North America's first record, of a Black-tailed Gull. This addition raises the state list to 422 species.

ACCEPTED

Long-tailed Duck—

#2003-026 (1-d) Dane Co., 15 June 2003, Stutz.

This apparent female was overall brownish with white above and behind the eye. In addition white was noted on the flanks and undertail coverts. The bill was relatively small, dark toward the tip, but greenish at the base.

Other individuals indicated the bird

was still present on the 16th and 17th of June.

Mississippi Kite—

#2003-027 (1-d) Door Co., 17 June 2003, Stover.

This small falcon-shaped bird flew in a much more erratic fashion than a falcon would have; gliding, careening, and flapping stiffly. The wrists protruded forward more than the rest of the front line of the wing. The dark tail was somewhat long, and slightly forked. The breast was uniform in color, relatively darker than the very uniformly pale belly. No streaking was evident on the body or tail. The underwings were darker on the flight feathers than the coverts. A smudge of darker color was also noted on the side of the face.

Black-tailed Gull—

#2003-025 (1-ddpp) Racine Co., 12 June 2003, Howe (photo), Idzikowski (photo).

#2003-025 (1-d) Kenosha Co., 12 June 2003, Boldt

This Ring-billed Gull-sized bird

stood out because of the very dark gray mantle. Although the yellow legs and mantle color fit a Lesser Black-backed Gull, the size presented a problem for the observers. The bill was slightly longer than that of the Ring-bills with a dark ring toward the tip. Distal to this ring however, the bill was red! The dark primaries had very minimal white spots and the tertial crescent was rather thin, particularly in comparison to a Lesser Black-backed Gull. A clean white head, yellow eye and red orbital ring completed the description until the bird flew. The tail had an extensive black band across it. The rump was white and the very tip of the tail had a white border.

This is the first inland record for North America and Wisconsin's 422nd species for the state list. This bird was subsequently reported in the following days in Lake Co., Illinois and later in the summer appeared in northwestern Indiana and again in Illinois, this time in Cook Co.

Western Sandpiper—

#2003-029 (1-d) Dane Co., 28 July 2003, Martin (2 birds).

#2003-030 (1-d) Dane Co., 30 July 2003, Prestby.

The first two birds were suggestive of juvenile plumaged individuals. The rusty scapulars were noted. The bill was longer than the "Semis", drooped at the tip and wider at the base. There were no breast markings, only a pale smudge below the shoulder. The legs were black.

The July 30th bird was reported from a different site than those of the 28th. This bird had rufous in the scapulars and on the cheek. The bill was thick, but drooped at the tip. The

breast had extensive fine, dark "arrows" extending down to the belly, indicative of an adult plumage.

OLD RECORD ACCEPTED

Black-bellied Whistling-Duck—

#2002-104 (1p) Milwaukee Co., 28 July 2002, Boldt (photo)

The relatively long-legged and long-necked duck exhibited the red bill, gray face, brown neck and breast, black belly, white wing patch, and pink legs of an adult plumaged individual.

This is Wisconsin's first summer record and fourth overall record.

RECORDS NOT ACCEPTED

Mew Gull—

#2003-028 (4-d) Manitowoc Co., 28 June 2003.

The description of this gull was rather brief, suggesting a gull slightly smaller than the Ring-billed Gulls. The bill was thin and dark and the body was dark. If this brief description was of a Mew Gull, it suggests an immature bird. This plumage would seem quite unusual for such an early date. All other Wisconsin and adjacent state records have in the past been from October to April. A record at this time, in this plumage requires consideration of very early and local breeding.

Western Sandpiper—

#2003-031 (4-d) Racine Co., 22 July 2003.

This individual was compared to adjacent Semipalmated Sandpipers. It was felt to have a slightly longer, and "droopy" bill than the "Semis", but felt

to be an “average bill length for a Western”. There was rufous coloration through the scapulars. No indication of relative size nor leg color was given. In addition, no indication was given of throat or upper breast markings. It was simply described as a juvenile.

These are of course tricky to separate from the extremely similar Semipalmated Sandpiper. “Semis” can also have some rufous in the scapulars as can White-rumped Sandpipers. The bill length of Westerns and Semipalmated Sandpipers overlaps extensively so this too can limit usefulness to the more extreme bill lengths.

Buff-breasted Sandpiper—

#2003-032 (4-d) Dodge Co., 27 July 2003.

This very early date indicated a bird running rather extensively on the grassy flat on the south side of Highway 49 in Horicon NWR. A report was also received of a Pectoral Sandpiper from this exact spot 3 days later. In this second report, an observer felt the Buff-breasted had been relocated because the long-necked posture, brownish upper breast, and running behavior were all evident on the suspect individual. Yet another observer was asked to confirm the Buff-breasted identification, but after much observation concluded that the second observation was of a Pectoral Sandpiper. The Pectoral stood very long-necked, and ran very plover-like from place to place on the grassy flat. The distances covered were longer than even routinely seen in plovers. The distance from the bird allowed a blurring of the upper breast streaking, with even a bit of smudging of buff below the end of the upper breast streaks. Although the neck was pos-

ured very vertically, the head shape wasn't as round or as small as would be expected of a Buff-breasted. After 15–20 minutes of “plover-like behavior,” the Pectoral ended up on the mudflat adjacent to the receding water. It almost instantaneously transformed its shape and behavior into the familiar horizontal walking and random poking of a Pectoral Sandpiper. After a few minutes, it wandered back into the grassy area and again became very erect in posture, running across the flat, stopping to look around before running again.

The coincidental observation of a Pectoral exhibiting this extensive running behavior at the exact site of the Buff-breasted doing likewise makes the acceptance of this report difficult. The second observer and for a short time even the third observer gave strong consideration to this Pectoral being a Buff-breasted Sandpiper.

Plumage patterns of birds and even behaviors should be taken in context with the size and shape of the bird. Color patterns and behaviors show much more plasticity than size and shape.

Jaeger (sp.)—

#2003-033 (4-d) Racine Co., 22 July 2003.

Another very brief description indicated a dark bird flying a mile out on Lake Michigan. Although the bird was suggested to be Ring-billed Gull-sized, the distance from the bird restricts the accuracy of such size perceptions. At times white was noted on the wingtips.

This is another very unusual date for the species suspected. The possibility of immature Ring-billed or Herring Gulls must be considered on such a distant bird.

About the Artists

Jack R. Bartholmai is an amateur wildlife photographer and wood sculptor who lives in Beaver Dam. He is currently working on photographing the birds of Dodge County. His photos appear frequently in local newspapers, travel brochures, calendars, art shows, and bird publications.

David Brandon is a self-taught artist who has taught basic drawing and illustration at the college level. This award winning artist's interests are in nature and landscape painting. He does freelance illustration work from his home in Minnesota.

Judith Huf has worked as an artist in many fields, from painting and sculpture to technical and scientific illustration and creating exhibits for nature centers and museums. She is a very generous volunteer in using her art abilities for WSO and WBCI, creating displays for both organizations.

Major Dennis R. Kuecherer retired from the US Army in 1992 and then spent nine years doing breeding bird surveys for the Department of the Interior, WDNR, and the WSO. Dennis has been an avid birder for most of his life and has a U.S. Lower 48 total of 702 species. Besides drawing, his other hobby is woodcarving wild flowers. This life member of WSO currently lives in Salmon, Idaho.

Dennis Malueg is a serious amateur bird and wildlife photographer. The backyard, prairie, and 80-acre forest at his Waushara County home serve as his photo studio for capturing images of birds native to the area.

Betsy Popp is a wildlife artist in Townsend, Wisconsin, who works in a variety of media, including oils, watercolor, and oil pastels. When not painting, she enjoys photography, taxidermy, and wood carving.

THE WISCONSIN SOCIETY FOR ORNITHOLOGY

The Wisconsin Society for Ornithology is an educational and scientific non-profit organization founded in 1939 "to encourage the study of Wisconsin birds." The Society achieves this goal through programs in research, education, and conservation, and publication.

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