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The Passenger PIGEON

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THE PASSENGER PIGEON Vol. 68 No. 2 Summer 2006

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Send all manuscripts and related correspondence to the Editors. Information for "Seasonal Field Notes" should be sent to the Bird Reports Coordinator (see inside back cover). Art work and questions about the art should be sent to the Associate Editor for art (see left column). 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.

Front Cover: Male Bobolink wet with dew, by John Van Den Brandt.

An Introduction

I am humbled by the opportunity to serve on the WSO board, first as vice-president, and now as your president. This being my first president's statement, I thought it would be helpful if I filled readers of the *Pigeon* in with a little bit about myself and my personal journey with birds. I undertake this not without a bit of hesitation, for it means right off the bat that I have to admit to being a flatlander from south of the border (although, importantly, a Packer fan from the beginning). In my town north of Chicago, I was interested in nature as a boy, even in my suburban environment. Lake Michigan, a pond in the nearby cemetery, and the Chicago Sanitary Canal provided fodder for my earliest interest in aquatic creatures. I liked to collect buckets of pond water, dump them into my tank in the basement, and watch whatever was there swimming and wriggling around. By 5th grade, I had 13 fish tanks and a passion for tropical fish as well as whatever native Illinois fish that could tolerate the questionable water quality in the Sanitary Canal!

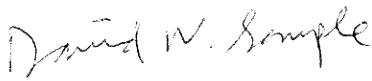
My first exposure to birds began early, as my mother would sometimes take me along on bird walks when sitters were not available. My own interest did not come until later. I can remember being entranced by the regular call of a Mourning Dove on my walks to and from elementary school. One lazy summer afternoon after 8th grade, I looked out the den window and saw 5 brilliant blue birds lining the rim of our birdbath. I could hardly believe my eyes at the sight; could there really be birds of such brilliant color? I ran upstairs to tell my mother what I had seen, and she said they were probably Indigo Buntings. From that moment on, I was hooked. I began to learn to identify the local birds in my neighborhood with the help of my parents' old copy of the Peterson Guide. Reading books, most notably Konrad Lorenz' *King Solomon's Ring*, deepened my interest in birds and their behavior.

Much as I might wish it otherwise, my early bird-watching stomping grounds were not the romantic ideals of pristine northern lakes and wetlands, majestic mountains, or deep, untrammeled woods. Rather, mine were the man-made, box-elder infested "forests" and dug lagoons of the Cook County Forest Preserve system. At the time I knew no better. I knew nothing about plant communities, only that I could see an amazing variety of birds in these places. I hooked up with my friend and active birdwatcher Bill Tweit (ironically, current Minnesota ornithologists Kim Eckert and Bob Russell also grew up in my hometown). Bill in turn introduced me to some older birdwatchers in the Chicago area whom I still remember fondly: Charlie Clark, Larry Balch, Jerry Rosenband, and Jeff Sanders. From then on, it seemed like every weekend I was on another trip with them to some Chicagoland bird hot-spot (or, perhaps more accurately, Superfund site?!). Snowy Owls at the Chicago landfill, warbler migration at a postage-stamp woods at Montrose Park on the Chicago lakefront (we had to stand out-

side the fenced-off woods, looking in), and just missing a Ruff at Lake Calumet and Wolf Lake, which can best be described as industrial shallow "lakes" that represent sorry remnants of what must have once been an incredible wetland complex south of Chicago. Perhaps my favorite was witnessing migration along the Lake Michigan shore, most notably at the landfill along the Northwestern University campus, where we once watched a tiny speck far out over the lake gradually metamorphose into an Eastern Meadowlark as it headed straight for shore and, exhausted, collapsed in front of us on a shrub at the lake edge. In retrospect, these men were wonderfully talented mentors, and amazingly patient with a teenager who needed a lot of the same.

As I moved around after high school, first to college in Maine, then a year in Massachusetts, several years in St. Paul, and finally to Madison in 1982, I became fascinated with the diversity of birds and habitats in these various places. I began to realize that smoke stacks and industrial wastelands were not a requirement of bird habitat. During a 7-year stint as a carpenter, I traveled to Peru, where my observations of familiar Wisconsin birds, including kestrels and Sanderling, made manifest to me the interconnectedness of bird populations and habitats across the hemisphere. From that inspiring trip, a meandering path led me to graduate school at UW and my current position with Wisconsin DNR, where I am lucky enough to research birds of grassland and agricultural habitats. It has been far from difficult to learn to love and admire Wisconsin and its varied landscapes.

I have been a member of WSO since moving to Wisconsin. Prior to serving on the board, my primary involvement was attending occasional annual conventions and working on the Breeding Bird Atlas as a member of the steering committee. While I do know a number of WSO members, there are many more whom I look forward to meeting. I am excited to help promote the mission of WSO in the coming two years. As time goes on, the need for organizations such as WSO grows ever more important to our society. I am happy to be an active participant in that growth along with you.



President

The 2005 Wisconsin Christmas Bird Counts

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Late fall and early winter were unusually cool. By late November the more shallow inland lakes were frozen and the entire state was covered by a layer of snow. Cold conditions continued through the early days of the CBC period. Not until past the first weekend of the count period did temperatures moderate, with January then becoming one of the mildest on record. The result is that the early counts experienced severe winter-like conditions, while those that waited until the last week of the count period met clement conditions. Due to the frozen lakes and the cover of snow, inland waterfowl numbers were low. Certain hawk species, such as the Northern Harrier and American Kestrel, were also affected by the snow. Gulls were nearly absent from inland counts. In turn, the statewide snow created excellent conditions for finding open field and feeder species. Species attracted to the plowed edges of roads were found in especially large numbers. In contrast to the 2004 Count, in which a record high number of species were reported (154) but weak numbers of individuals, the 2005 Count produced 7 fewer species but numerous record and nearly record high numbers of individuals. With record high numbers being set by so many species, the 2005 Count will be remembered as one of the richest in the history of the WSO CBCs.

The 2005 Count produced 147 count day species, with an additional 3 species reported during count weeks. The count week species are Black-backed Woodpecker (Manitowish Waters), Eastern Phoebe (Pardeeville), and American Pipit (Kenosha). This is but the 5th count in the past 25 years that a Black-backed Woodpecker has not been found on a count day. In turn, the American Pipit has now been reported (at least as a count week species) 4 years in succession. Previous to 2002, pipits had been noted for only four count years.

No new species were added to the existing total of 227 found on count days. Among the unusual species reported in 2005 are: Greater White-fronted Goose (Hudson), Harlequin Duck (Milwaukee), all three scoter species (for the fourth consecutive year, with Milwaukee reporting all three for the second consecutive year), Barrow's Goldeneye (Milwaukee), Red-throated Loon (Cedar Grove), Pied-billed Grebe (Lake

Geneva), American White Pelican (Green Bay), Gyrfalcon (Ashland and Bayfield), Virginia Rail (Madison, Palmyra, and Poynette), Boreal Chickadee (found only at Phelps), Townsend's Solitaire (Baraboo and Lake Geneva), Varied Thrush, Gray Catbird, Northern Mockingbird, Brown Thrasher, Chipping Sparrow, Vesper Sparrow (Sturgeon Bay), Savannah Sparrow, Harris's Sparrow (Gurney), and Rose-breasted Grosbeak.

Locations and Details of the Counts

The details of weather and participation for each count are reported in Table 1. There were 99 valid counts in 2005. Starting with 1997, 8 of the last 9 count years have now had 90 or more count circles. Previous to 1997, the highest number of circles in a count year was 86 (set in 1983). Only the years 2002 and 2003 (with a total of 100) had better than 99 circles. In addition to the 99 valid count circles, another 3 could not be used as they lacked the required minimum of 8 field party hours. Those three are Hayward, Herbster, and Merrill. New to the family of WSO CBCs is Brodhead, which is centered in Green County and compiled by Quentin Yoerger. Rejoining the fold, after an absence of a year, are La Farge, Lakewood, Rhinelander, and Stockbridge. A special thanks to Jerry and Karen Smith for reviving the Lakewood Count.

Forty counts reported 50 or more species. This compares to 28 in 2004 and 38 in 2003. Four counts reported 70 or more species. Those four are Madison (83), Milwaukee (83), Poynette (78), and Riveredge (73). For the fifth consecutive year, there were better than 4,000 field party hours. Also, for the fifth consecutive year, owling time was better than 200 total hours.

I again would like to thank the WSO Records Committee for its quick action on the CBC rare bird reports. And another thanks to Brenda Bauer, for without her computer savvy, this report would be lost in a tangle of technical frustrations.

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 show only the 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 2005 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 15 or fewer counts). The common species have their counts divided into seven regions, each region having its own table. Table 8 includes the statewide number of individuals found for each common species and compares that total with the average total (adjusted for party hours) over the past 10 years.

Geese and Swans—Due to the early snow, Canada Goose numbers were half their 10-year average. Horicon Marsh, which often reports the most geese in the state, had but 50 individu-

Table 1. Details of the 2005 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 (34)*	12/17	Clear-PCL	5	W	5–10	–2	12	1	11	6	36.00	2.00
Appleton (61)	12/17	Clear	8	WNW-W	5–15	6	22	13	28	19	88.00	1.00
Arpin (31)	12/24	Cloudy	4–5	S	0–5	34	38	1	11	4	30.00	4.50
Ashland (3)*	12/17	Clear	6–8	W	5–10	4	17	0	6	3	22.00	0.00
Baraboo (92)	12/28	Cloudy-fog-mist	0–3	N	0–10	25	35	22	19	9	53.25	4.00
Bayfield (2)	12/30	Cloudy- Snow	4	E	4–12	30	30	5	8	4	25.00	0.00
Beloit (88)*	12/17	Cloudy	?	?	?	12	18	0	23	7	53.50	0.00
Black River Falls (27)	12/17	Clear	5–6	S-W	4–8	3	16	0	5	2	8.00	0.00
Blanchardville (90)*	12/16	Cloudy-Lt. Snow	8–10	W	10–20	13	15	0	8	6	39.50	4.75
Bridgeport (98)*	12/16	Cloudy-Lt. Snow	4–6	?	5–15	18	23	3	16	7	49.00	3.00
Brodhead (89)	12/14	Cloudy-Snow	4–8	SE	10–20	26	30	0	6	5	25.75	1.50
Brussels (46)	12/18	Clear	4	W	15–20	2	13	6	21	8	47.50	3.50
Burlington (73)	12/20	Cloudy	5	NW	5–10	10	20	0	7	5	32.50	2.00
Cable (5)*	12/17	Cloudy	4–10	SW	0–7	4	12	8	2	2	11.00	0.00
Caroline (40)	12/29	Cloudy	0–2	NW	light	29	32	1	2	2	20.00	1.50
Cassville (99)	12/31	Cloudy	0–3	NW	10–15	30	36	1	13	6	37.75	1.00
Cedar Grove (53)	12/21	Cloudy-PCL	0	W	light	11	22	1	12	6	52.00	8.50
Chippewa Falls (20)*	12/22	Partly Cloudy	6	NW	0–10	19	38	0	16	8	69.50	0.00
Clam Lake (6)*	12/30	Cloudy-Snow	8–10	E	5–20	23	30	2	10	5	38.50	2.50
Clyde (94)	12/29	Cloudy	6	SW	0–10	27	33	2	12	7	39.00	0.00
Columbus (82)	12/23	Pt. Cloudy-Clear	3	WSW	5–10	35	47	1	11	6	40.75	2.00
Cooksville (87)	1/1	Cloudy	1	ESE	5–15	31	38	2	8	4	25.00	3.50
Durand (19)*	12/29	Cloudy	1–2	S	0–5	30	34	0	12	6	46.00	0.00
Ephraim (48)	12/17	Partly Cloudy	8	SW	15–20	9	17	26	19	12	22.00	0.00
Fifield (7)*	12/17	Partly Cloudy	8	W	3–7	6	13	18	7	5	33.50	0.00
Florence (12)	1/5	Cloudy	8	SW	10–20	27	30	4	9	7	50.00	4.00
Fond du Lac (63)	12/17	Cloudy	4–6	W	5–20	12	22	0	3	3	20.00	3.75
Fort Atkinson (86)	12/30	Clear	1	W	8	32	37	15	19	6	31.00	1.00
Fremont (37)	12/19	Clear	5–8	W	4–12	–9	14	1	9	6	32.00	0.00
Gilman (22)*	12/31	Cloudy	1–5	W	5	30	34	4	12	6	46.25	3.00
Grantsburg (15)*	12/18	PCL-Clear	12	SW	3–9	4	13	0	13	8	36.50	1.00
Green Bay (44)*	12/17	Clear	3–8	W	5–15	10	22	22	23	11	76.50	13.50

(continued)

Table 1. (*continued*)

Name of Count	Date	Sky	Snow Inches	Wind Dir.	Wind mph.	Temp. °F Low	Temp. °F High	Observers Feeder	Observers Field	Parties	Party Hours	Owling Hours
Green Lake (76)	12/31	Cloudy	0–3	SW-W	5–15	33	36	2	7	4	25.00	3.00
Gurney (4)	12/17	Clear	15	Calm	0	10	14	3	11	6	17.50	1.00
Hales Corners (56)	12/17	Clear	6	W	7–16	8	19	3	20	17	65.50	0.00
Hartford (69)*	12/30	Cloudy-Rain	2	SE	5–15	31	36	3	10	6	38.00	3.50
Holcombe (21)*	12/15	Cloudy	3–5	SW	5–15	16	21	0	8	4	33.75	0.00
Horicon Marsh (80)	12/17	Clear-PCL	6–10	W	5–15	7	20	0	9	7	46.50	7.00
Hudson (17)*	1/1	Cloudy	5	E	8	27	33	0	12	6	27.25	1.25
Hustisford (81)*	12/16	Partly Cloudy	4	W	5–15	19	22	1	6	5	34.75	2.50
Kenosha (58)	12/16	Cloudy-Clear	5–8	SW-W	10–26	22	26	1	2	2	15.50	1.00
Kettle Moraine (68)	12/18	Partly Cloudy	7–10	W	2–10	2	11	1	5	4	34.25	2.00
Kewaunee (49)*	12/31	Cloudy-Fog	1	W-N	6–12	32	34	1	15	7	45.25	0.25
Kickapoo Valley (96)	12/26	Cloudy	3–6	W	0–5	29	33	0	3	3	22.00	1.00
La Crosse (29)*	12/17	PCL-Clear	6	NW	5–10	0	19	0	18	11	69.75	6.00
La Farge (97)	12/18	Clear	6	W	0–5	–9	18	1	5	2	12.00	1.00
Lake Geneva (74)	12/18	Clear	3–6	W-SW	?	1	22	8	17	15	39.50	0.50
Lakewood (13)	12/16	Cloudy-Lt. Snow	11	W	5–15	21	29	4	7	4	33.00	0.00
Madison (84)*	12/17	Clear	6–7	SW	3–13	6	16	11	69	20	181.00	10.25
Manitowish Waters (8)	12/29	Cloudy	4	SW	1–3	28	32	12	14	6	38.00	2.00
Meadow Valley (33)	12/21	Cloudy-Clear	8–10	W-NW	1–5	5	20	0	8	5	40.00	2.00
Medford (23)*	1/2	Cloudy-Rain	2–6	E	0–20	32	35	12	12	6	48.75	1.75
Milwaukee (55)*	12/17	Partly Cloudy	6	NW	7–15	10	19	13	62	16	107.50	2.00
Montello (77)	12/23	Cloudy-Clear	5	S	0–5	34	45	7	12	6	45.25	7.75
Mount Horeb (91)	1/1	Cloudy	1–2	E	5–15	27	38	18	60	25	104.50	2.00
Nelson (18)*	1/5	Cloudy	0–3	NE	10–14	27	32	0	18	7	42.50	0.00
New Franken (45)*	12/18	Partly Cloudy	2–5	SW-W	8–18	1	13	23	17	16	30.00	2.00
New Richmond (16)*	12/18	Clear	6–8	WSW	5	0	18	0	10	5	28.25	0.50
Norske (39)	12/27	Cloudy	2–5	S	light	31	35	2	4	4	26.25	1.00
Oconomowoc (70)	12/29	Cloudy	0–1	calm	light	34	38	1	23	9	55.00	0.50
Oshkosh (62)	12/17	Cloudy	6–9	SW	4–9	12	18	14	12	8	61.50	1.00
Owen (24)*	12/17	Partly Cloudy	8	?	8–10	1	10	3	10	7	54.25	1.25
Palmyra (72)	12/26	Cloudy	4–5	NW-W	3–8	30	38	0	20	12	81.25	7.75
Pardeeville (78)*	12/15	Cloudy-Lt. Snow	4–9	SW	0–20	27	36	14	12	8	50.75	3.25
Pensaukee (43)	12/18	Clear	2–3	SW	5–15	–4	13	1	5	3	21.00	1.00
Peshtigo (59)	12/17	Clear	10	SW	5–15	11	23	0	7	4	30.00	0.00
Phelps (9)	12/17	Partly Cloudy	8	W	0–5	10	15	3	6	3	18.00	0.00
Plymouth (67)	12/17	Clear	1–4	W	10–15	11	15	0	17	8	29.00	0.00
Poynette (83)*	12/31	Cloudy	3–6	W	5–15	32	34	21	28	12	71.25	2.00
Racine (57)*	12/17	Clear	5–6	WSW	8–15	11	22	4	16	8	35.75	2.25
Randolph (79)	1/1	Cloudy	2	E-ESE	5–15	32	37	4	8	5	34.50	2.00
Rhinelander (11)	12/17	PCL-Clear	10	WSW	6–9	9	10	34	2	2	11.00	1.00
Richland Center (95)	12/17	Clear	8	W	3–10	–2	15	5	38	18	94.00	6.00
Riveredge (54)	12/17	Clear	7	W	5–15	11	16	36	71	25	189.00	25.00
Rosendale (75)	12/18	Clear	8	WSW	0–10	–3	16	0	13	6	43.25	2.00
Sauk City (93)	12/31	Cloudy	2	NW	5–10	33	37	1	28	13	93.25	3.75
Seymour (60)	12/21	Cloudy	4–6	W	3–10	14	22	0	2	2	18.50	0.50
Shawano (41)	12/17	?	?	?	?	?	?	20	11	5	27.25	1.00
Sheboygan (52)	12/17	Partly Cloudy	?	W	5–20	0	18	0	3	2	16.00	0.00
Shiocton (42)	12/16	Cloudy	10	W	4–10	19	23	2	14	7	34.50	0.00
Solon Springs (1)	1/5	Cloudy	8–12	N-NW	7–14	26	30	5	8	4	16.00	0.00
Spencer (25)*	12/18	Clear	2–10	W-WNW	5–10	–5	9	3	11	7	57.00	3.25
Spruce (14)	1/2	Cloudy	8	NE-ENE	10–25	33	35	1	4	3	23.00	0.50
Stevens Point (35)*	12/17	Clear	6	W	8–15	4	19	4	29	8	56.50	5.50
Stockbridge (64)*	12/17	Clear	4–7	W	5	–2	14	0	8	6	29.50	2.00
Sturgeon Bay (47)	12/17	Pt. Cloudy-Clear	4	SW	20–25	14	17	22	34	18	104.00	9.50
Three Lakes (10)	12/18	Clear	6	W	5–10	–7	13	2	5	3	15.00	0.00
Trempealeau (28)	12/18	Clear	?	W	8–10	–4	11	3	12	6	50.50	0.25
Waterloo (85)	12/15	Cloudy-Snow	4	N	0–5	33	35	12	10	6	38.25	1.25
Waukesha (71)	12/17	Clear	6–10	W-SW	5–10	8	22	1	32	8	75.75	3.00
Waupaca (38)	12/14	Cloudy-Snow	2–7	SE	8–18	27	32	2	4	4	23.00	0.00
Wausau (30)	12/17	Pt. Cloudy-Clear	6–9	W-NW	0–15	0	22	6	12	6	42.50	0.25
Wautoma (36)*	12/30	Cloudy	0	E-SE	5–10	33	35	13	6	5	37.25	3.00
Willard (26)*	12/26	Cloudy	0–5	SW-E	5–10	30	35	2	14	6	50.25	2.75
Wisconsin Rapids (32)*	12/18	Clear-PCL	5–6	W	5–10	–8	12	6	19	10	54.00	2.00
Woodland Dunes												
NE (50)	1/1	Cloudy	1–2	SW	5–10	32	38	3	18	11	41.50	0.00
NW (65)	12/31	Cloudy	2	SW	0–5	32	34	1	11	5	21.00	0.00
SE (51)	12/18	Clear	4	W	7–15	1	12	3	9	6	25.00	0.00
SW (66)	12/17	Clear	4	?	10–15	10	15	0	4	3	18.00	0.00
TOTAL								**526**	**1,349**	**692**	**4,154.75**	**216.00**

* 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.

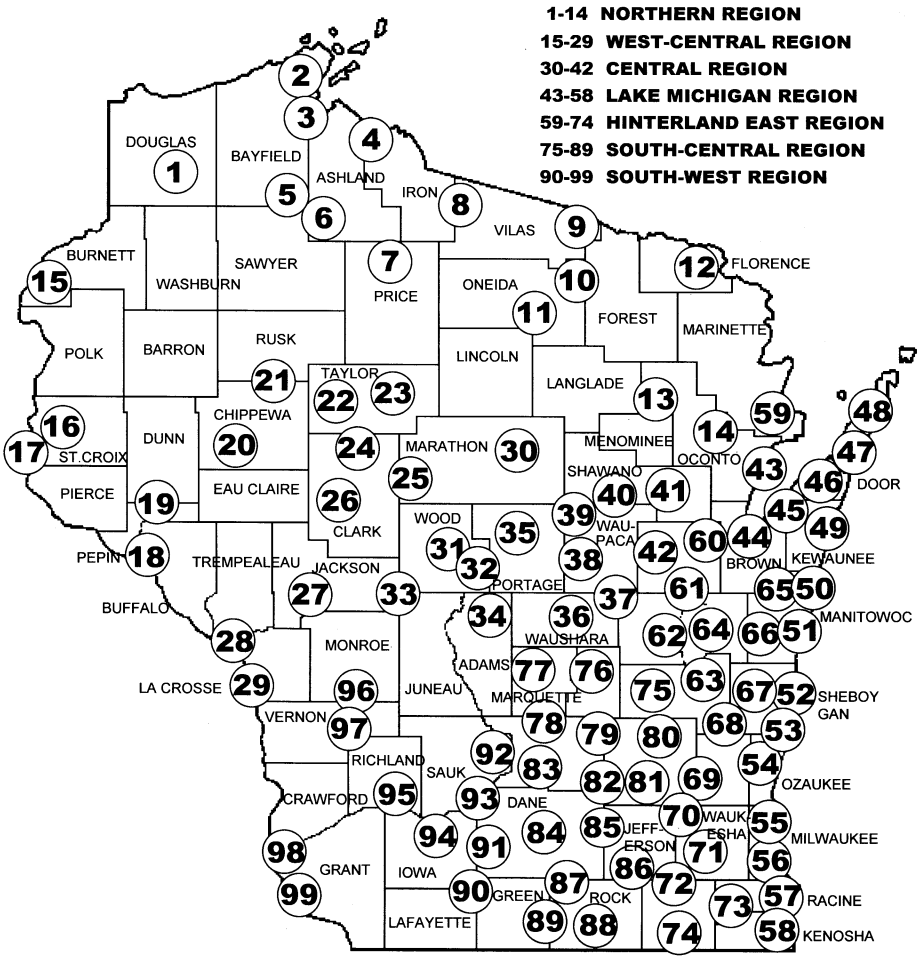
als. This is likely due to the drawdown of water at the marsh. Cackling Geese have now been reported for two consecutive years (these being the only count years since this goose was split into a new species), although the number this year (79 geese over 7 counts) is much less than last year. The Hudson Count documented a Greater White-fronted Goose. This makes 4 consecutive years with white-fronted. Previous to 2002, the white-fronted was reported only once, that being in 1998. Trumpeter Swans, as is the custom, were again found in record numbers. Of the 349 totaled, 300 came from Hudson.

Ducks—As is the case when inland lakes are for the most part frozen, the number of inland ducks was less than average. The American Black Duck continued its long decline towards possible oblivion. The 585 individuals are the least since 1951 and are 47% below the 10-year average. From 1953 though 1974, black duck numbers were often higher than 2,000 individuals. From 1952 though 1982, black duck numbers never fell below 1,000. The record high is 6,817, set in 1961. Over the last 6 years, the American Black Duck has gone over 1,000 individuals only once (2002 with 1,062). Numbers for the more common Lake Michigan ducks were less impressive than in recent years. Most remained near 10-year averages. The exception was the Greater Scaup, which was 21% above that average. For the fourth consecutive year, all three scoter species were found. For the second consecutive count, all three have been found at Milwaukee. Milwaukee was the only count to report Harlequin Duck, Surf Scoter, Black Scoter and Barrow's Goldeneye. Off the shore of Lake Michigan, from central to northern Manitowoc County, Charles Sontag estimated finding 7,650 Long-tailed Ducks for Woodland Dunes NE. He admits the actual number was likely larger than the estimate. In recent years, Long-tailed Ducks have kept more to the east shore of Lake Michigan, with few being found in Wisconsin. Over the previous 7 count years (1998–2004), the highest total had been 544 in 2003–with a low of 12 in 2000. The total of 7,841 in 2005 is the best showing since 11,289 in 1972.

Partridge through Quail—With the entire state of Wisconsin covered by snow, it is to be expected that this grouping should do well. The Ring-necked Pheasant was 109% above its 10-year average, while the Wild Turkey was 56% above average. The total of 909 pheasants is the highest since 1978. The one species in this grouping to not do well is the Ruffed Grouse. The total of 130 individuals is the lowest since 125 in 1969 and, when divided by field party hours, is the worst showing in the history of the CBCs.

Loons through Vultures—Two Red-throated Loons were reported from Cedar Grove; Common Loons were found at Madison and Trempealeau. The only grebe was the Pied-billed, with two being reported at Lake Geneva. Four American White Pelicans were documented at Green Bay. These birds went on to survive the winter, becoming only the second valid over-wintering record for this species. This is the first count since 1998 that a Turkey Vulture has not appeared.

Hawks and Eagles—Despite the early snow, raptors made an impressive showing. For the fifth consecutive count, Bald Eagle numbers were well above 1,000 individuals. The 1,418 re-



ported is second only to the 1,462 of 2003 and is 40% above the 10-year average. Cooper's Hawks continue to show significant yearly gains. The 312 individuals reported are record high and 60% above the 10-year average. The Sharp-shinned Hawk also appeared in record numbers (137) and was 44% above its 10-year average. The 70 counts reporting Cooper's Hawks were record high as were the 59 counts reporting Sharp-shinned Hawks. The Red-shouldered Hawk also broke all old records with 20 being found over 15 counts. It is ditto with the Merlin (12 over 10 counts). Three Merlin were documented at Ashland. The 15 Golden Eagles are bested only by the 17 of 2004. It is likely the early snow caused the Northern Harrier to be 40% below average and the American Kestrel to be 34% below average. Gyrfalcons were documented at Ashland and Bayfield.

Rails through Shorebirds—The nearly annual find of Virginia Rails at

Table 2. Number of each species in northern Wisconsin found on 16 or more counts.

Species	Solon Springs 1	Bay-field 2	Ash-land 3	Gurney 4	Cable 5	Clam Lake 6	Fifield 7	Manitowish Waters 8	Phelps 9	Three Lakes 10	Rhine-lander 11	Flor-ence 12	Lake-wood 13	Spruce 14	**Region Totals**
Canada Goose	32	0	250	0	0	0	0	0	0	0	1	0	40	2	**325**
American Black Duck	0	1	12	0	0	0	0	0	0	0	8	0	0	0	**21**
Mallard	1	11	69	0	CW	0	0	0	0	0	3	0	0	1	**85**
Greater Scaup	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
Bufflehead	4	2	0	0	0	0	0	0	0	0	0	0	0	0	**6**
Common Goldeneye	52	24	17	2	0	0	3	0	0	0	0	0	0	0	**98**
Hooded Merganser	1	0	0	0	0	0	0	0	0	0	2	0	0	0	**3**
Common Merganser	0	6	1	20	0	0	0	0	0	0	0	0	0	0	**27**
Ring-necked Pheasant	0	0	0	0	0	0	1	0	0	0	0	0	0	2	**3**
Ruffed Grouse	2	1	0	4	5	4	**11**	6	0	0	5	0	1	1	**40**
Wild Turkey	8	0	0	0	0	0	7	3	0	0	48	146	38	151	**401**
Great Blue Heron	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
Bald Eagle	23	11	15	13	8	5	3	8	0	1	9	4	2	6	**108**
Northern Harrier	0	0	0	0	0	0	0	0	0	0	0	0	1	0	**1**
Sharp-shinned Hawk	0	0	0	0	0	0	1	1	0	0	0	1	0	0	**3**
Cooper's Hawk	0	0	0	0	0	0	0	0	0	0	3	1	1	CW	**5**
Red-tailed Hawk	0	0	0	0	0	0	0	0	0	0	0	2	1	10	**13**
Rough-legged Hawk	0	CW	3	2	0	2	5	0	1	CW	0	6	2	5	**26**
American Kestrel	0	0	1	0	0	0	0	0	0	0	0	1	0	6	**8**
American Coot	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
Ring-billed Gull	0	1	0	0	0	0	0	0	0	0	0	0	0	0	**1**
Herring Gull	0	1129	0	0	0	0	0	0	0	0	0	0	0	0	**1129**
Rock Pigeon	0	4	59	9	0	0	38	0	10	12	5	132	6	414	**689**
Mourning Dove	0	7	126	17	0	1	71	49	6	10	133	92	70	450	**1032**
Eastern Screech-Owl	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
Great Horned Owl	1	0	0	0	0	0	0	0	0	0	2	1	0	CW	**4**
Barred Owl	0	0	0	0	2	1	0	1	0	0	0	0	CW	0	**4**
Belted Kingfisher	0	0	0	0	0	0	0	1	0	0	1	0	0	1	**3**
Red-headed Woodpecker	0	0	0	0	0	0	0	0	0	0	1	CW	0	0	**1**
Red-bellied Woodpecker	1	1	0	0	0	0	0	0	0	0	5	2	2	5	**16**
Yellow-bellied Sapsucker	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
Downy Woodpecker	9	6	8	8	20	7	52	41	14	5	47	48	21	12	**298**
Hairy Woodpecker	11	10	4	11	33	20	42	37	5	8	44	32	13	9	**279**
Northern Flicker	0	0	0	0	0	0	0	0	0	0	0	0	0	1	**1**
Pileated Woodpecker	0	8	2	3	2	3	7	12	3	3	12	4	4	0	**63**
Northern Shrike	3	5	7	1	0	2	2	1	0	0	0	5	1	3	**30**
Blue Jay	111	85	29	107	39	29	37	161	12	28	82	191	36	82	**1029**
American Crow	163	202	175	49	28	34	190	77	38	40	41	95	101	411	**1644**
Common Raven	41	40	22	**110**	20	70	43	12	18	3	6	106	11	15	**517**
Horned Lark	0	0	0	0	0	0	0	0	0	0	0	0	2	20	**22**
Black-capped Chickadee	198	203	180	210	133	413	534	487	222	158	424	929	174	120	**4385**
Tufted Titmouse	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
Red-breasted Nuthatch	61	36	15	12	37	**177**	85	105	45	71	90	97	34	11	**876**
White-breasted Nuthatch	17	22	10	10	26	13	38	73	12	12	77	88	37	8	**443**
Brown Creeper	0	1	0	0	1	3	CW	6	0	1	0	8	2	1	**23**
Golden-crowned Kinglet	9	0	6	2	CW	12	0	3	0	1	0	9	0	0	**42**
Eastern Bluebird	0	0	0	0	0	0	0	0	0	0	0	0	0	1	**1**
Hermit Thrush	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
American Robin	0	0	1	0	0	0	0	0	0	0	0	0	0	1	**2**
European Starling	0	174	193	17	CW	0	121	0	11	0	10	171	21	879	**1597**
Cedar Waxwing	0	0	0	0	0	0	0	0	0	0	0	1	8	120	**129**
American Tree Sparrow	0	0	1	0	0	0	0	0	1	0	0	11	31	213	**257**
Fox Sparrow	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
Song Sparrow	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
White-throated Sparrow	0	0	1	0	0	0	0	0	0	0	2	0	0	0	**3**
Dark-eyed Junco	4	8	1	1	0	0	3	CW	0	0	4	5	22	162	**210**
Lapland Longspur	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
Snow Bunting	CW	0	12	9	0	0	0	50	0	12	147	20	203	49	**502**
Northern Cardinal	7	7	5	0	0	1	3	0	0	0	20	2	6	25	**76**
Red-winged Blackbird	0	0	0	0	0	0	0	0	0	0	1	0	0	0	**1**
Brown-headed Cowbird	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
Purple Finch	0	159	66	8	182	39	117	61	22	46	101	12	51	124	**988**
House Finch	0	2	105	0	0	0	0	0	0	0	0	0	2	92	**201**
Common Redpoll	22	23	47	1	2	1	5	55	13	6	20	86	0	0	**281**
Pine Siskin	152	70	23	0	10	327	158	470	168	186	357	**674**	226	186	**3007**
American Goldfinch	11	236	85	129	105	35	260	571	123	35	398	387	227	352	**2954**
Evening Grosbeak	48	6	0	14	40	17	74	41	82	9	98	111	**115**	0	**655**
House Sparrow	0	0	112	115	0	0	49	0	0	0	28	77	4	131	**516**
Total Species	**31**	**37**	**38**	**31**	**21**	**26**	**31**	**30**	**25**	**23**	**37**	**39**	**38**	**38**	

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 16 or more counts.

Species	Grants-burg 15	New Rich-mond 16	Hudson 17	Nelson 18	Durand 19	Chip-pewa Falls 20	Hol-combe 21	Gilman 22	Med-ford 23	Owen 24	Spencer 25	Willard 26	Black River Falls 27	Trem-pealeau 28	La Crosse 29	**Region Totals**
Canada Goose	1805	2572	4500	633	0	3584	22	0	1	0	0	0	0	29	0	**13146**
American Black Duck	0	5	4	1	0	2	2	1	5	0	1	0	0	CW	1	**21**
Mallard	18	739	677	108	0	721	0	0	407	0	3	0	0	78	483	**3234**
Greater Scaup	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
Bufflehead	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	**1**
Common Goldeneye	0	0	1293	200	0	4	0	0	0	0	0	0	0	0	0	**1497**
Hooded Merganser	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	**2**
Common Merganser	0	0	904	749	0	0	0	0	0	0	0	0	0	0	0	**1653**
Ring-necked Pheasant	11	13	1	4	22	21	0	18	10	4	13	6	0	5	2	**130**
Ruffed Grouse	1	1	0	2	5	1	0	4	9	4	5	7	0	1	0	**40**
Wild Turkey	43	48	18	110	151	246	46	211	157	357	306	179	20	71	47	**2010**
Great Blue Heron	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0	**3**
Bald Eagle	14	6	17	189	14	16	8	13	1	4	5	11	3	94	79	**474**
Northern Harrier	1	0	0	0	2	1	0	0	0	0	0	0	0	0	0	**4**
Sharp-shinned Hawk	0	1	1	0	2	0	1	1	0	3	1	0	0	4	2	**16**
Cooper's Hawk	0	0	0	0	1	0	0	0	1	3	2	2	0	1	2	**12**
Red-tailed Hawk	16	9	11	55	38	24	1	1	4	47	51	26	5	15	39	**342**
Rough-legged Hawk	14	1	0	11	15	10	2	8	0	4	14	8	2	6	0	**95**
American Kestrel	0	0	1	5	9	0	0	0	0	2	3	7	0	2	3	**32**
American Coot	0	0	4	0	0	0	0	0	0	0	0	0	0	CW	0	**4**
Ring-billed Gull	0	0	4	0	0	0	0	0	0	0	0	0	0	0	0	**4**
Herring Gull	0	0	0	5	0	0	0	0	0	0	0	0	0	0	0	**5**
Rock Pigeon	118	217	113	578	644	1244	324	361	281	575	315	775	35	153	237	**5970**
Mourning Dove	8	35	24	8	14	114	49	129	102	186	391	417	34	112	229	**1852**
Eastern Screech-Owl	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4	**4**
Great Horned Owl	1	2	11	0	0	4	0	0	2	1	1	5	0	1	2	**30**
Barred Owl	0	0	2	0	0	0	0	2	0	1	1	1	0	1	2	**10**
Belted Kingfisher	0	4	0	0	0	1	0	0	1	0	0	1	0	2	4	**13**
Red-headed Woodpecker	0	0	0	0	0	0	0	2	0	0	0	0	0	1	0	**3**
Red-bellied Woodpecker	6	9	8	36	17	32	4	7	10	20	22	20	12	24	28	**255**
Yellow-bellied Sapsucker	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	**2**
Downy Woodpecker	23	18	18	49	46	62	27	60	39	95	89	46	20	45	60	**697**
Hairy Woodpecker	10	4	6	16	9	7	11	33	28	33	39	13	15	13	19	**256**
Northern Flicker	0	2	3	0	0	0	0	0	1	0	0	1	0	CW	2	**9**
Pileated Woodpecker	5	3	2	5	7	4	1	11	2	CW	4	3	1	4	14	**66**
Northern Shrike	6	2	2	7	9	3	3	8	**14**	4	8	5	0	0	1	**72**
Blue Jay	163	89	70	228	209	231	161	175	107	169	144	283	27	118	115	**2289**
American Crow	234	647	530	474	737	1124	389	328	615	419	440	448	45	192	254	**6876**
Common Raven	4	0	0	0	2	1	2	68	10	3	0	11	0	0	0	**101**
Horned Lark	0	0	0	0	14	82	0	0	10	9	21	4	10	4	41	**195**
Black-capped Chickadee	107	165	132	379	228	428	324	765	678	745	538	366	87	100	246	**5288**
Tufted Titmouse	0	0	0	4	8	27	2	0	0	0	0	6	3	7	20	**77**
Red-breasted Nuthatch	2	4	0	0	3	6	4	101	97	13	10	7	5	3	1	**256**
White-breasted Nuthatch	15	23	14	67	38	59	45	80	62	109	75	72	23	42	74	**798**
Brown Creeper	0	0	1	1	3	2	0	3	2	0	0	1	0	3	11	**27**
Golden-crowned Kinglet	0	0	0	0	0	0	0	8	5	0	0	0	0	0	6	**19**
Eastern Bluebird	0	0	4	2	1	0	0	0	0	0	0	0	0	15	26	**48**
Hermit Thrush	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	**1**
American Robin	0	686	460	5	31	6	0	0	1	0	4	5	0	11	1	**1210**
European Starling	101	153	533	642	956	861	192	683	576	348	623	1335	50	271	148	**7472**
Cedar Waxwing	86	259	314	58	70	19	12	0	0	18	0	7	0	0	0	**843**
American Tree Sparrow	45	108	35	187	454	325	93	108	24	105	141	246	120	135	201	**2327**
Fox Sparrow	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
Song Sparrow	7	0	0	0	0	0	0	0	0	0	0	1	0	0	0	**8**
White-throated Sparrow	0	2	0	0	0	1	0	0	0	0	0	0	0	0	0	**3**
Dark-eyed Junco	11	151	82	490	705	350	15	16	67	145	228	223	140	312	309	**3244**
Lapland Longspur	0	12	0	0	0	185	0	3	0	18	35	0	0	0	0	**253**
Snow Bunting	137	2	CW	0	0	**661**	14	309	136	300	276	21	0	0	0	**1856**
Northern Cardinal	1	34	14	101	141	108	23	24	41	85	58	63	31	112	91	**927**
Red-winged Blackbird	0	0	0	0	1	0	0	0	0	0	0	0	0	0	220	**221**
Brown-headed Cowbird	0	0	0	0	0	3	0	0	0	0	0	0	0	0	12	**15**
Purple Finch	4	5	3	9	14	12	7	69	**384**	4	12	98	34	23	0	**678**
House Finch	5	49	58	45	98	142	35	1	72	139	61	90	10	68	55	**928**
Common Redpoll	14	0	0	0	0	42	1	**154**	80	2	0	0	0	0	0	**293**
Pine Siskin	15	0	CW	0	0	93	9	101	517	2	0	25	CW	3	11	**776**
American Goldfinch	144	68	65	215	131	399	208	361	510	446	226	307	82	82	212	**3456**
Evening Grosbeak	16	0	0	0	0	0	0	9	6	0	0	8	0	0	0	**39**
House Sparrow	81	43	9	837	486	411	608	841	240	1156	1198	947	6	87	315	**7265**
Total Species	**40**	**43**	**45**	**40**	**39**	**45**	**34**	**40**	**41**	**39**	**43**	**45**	**25**	**50**	**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 4. Number of each species in central Wisconsin found on 16 or more counts.

Species	Wausau 30	Arpin 31	Wisc. Rapids 32	Meadow Valley 33	Adams 34	Stevens Point 35	Wautoma 36	Fremont 37	Waupaca 38	Norske 39	Caroline 40	Shawano 41	Shiocton 42	**Region Totals**
Canada Goose	8	0	147	0	97	161	154	60	785	0	0	5478	11	**6901**
American Black Duck	0	0	0	0	0	2	2	1	5	0	1	0	0	**11**
Mallard	2	0	526	0	16	778	348	102	134	6	138	**5445**	33	**7528**
Greater Scaup	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
Bufflehead	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
Common Goldeneye	35	0	176	0	0	53	0	0	1	0	0	2	0	**267**
Hooded Merganser	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
Common Merganser	0	0	4	0	0	0	0	0	0	0	0	1	0	**5**
Ring-necked Pheasant	1	3	CW	0	0	1	1	20	1	0	2	14	1	**44**
Ruffed Grouse	0	6	2	2	0	0	3	0	0	0	1	4	0	**18**
Wild Turkey	54	149	202	133	149	286	177	502	147	118	72	487	84	**2560**
Great Blue Heron	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
Bald Eagle	3	1	1	10	CW	10	2	3	4	1	4	42	4	**85**
Northern Harrier	0	0	0	0	1	0	0	1	2	0	0	3	7	**14**
Sharp-shinned Hawk	2	1	0	0	0	1	1	2	2	0	1	3	2	**15**
Cooper's Hawk	1	CW	4	0	1	1	1	3	5	1	CW	4	1	**22**
Red-tailed Hawk	9	36	20	3	6	20	13	44	13	12	7	18	24	**225**
Rough-legged Hawk	4	7	8	0	9	4	9	**28**	5	1	5	4	12	**96**
American Kestrel	0	7	3	0	0	1	0	4	3	1	2	5	9	**35**
American Coot	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
Ring-billed Gull	0	0	0	0	0	0	0	0	0	0	0	1	0	**1**
Herring Gull	0	0	0	0	0	0	0	0	1	0	0	0	0	**1**
Rock Pigeon	310	531	148	0	50	312	148	360	572	475	455	459	596	**4416**
Mourning Dove	126	309	117	61	59	289	197	622	194	140	166	268	270	**2818**
Eastern Screech-Owl	0	0	0	1	0	0	0	0	1	CW	0	0	0	**2**
Great Horned Owl	1	7	3	1	4	3	4	1	2	1	1	4	1	**33**
Barred Owl	0	0	0	0	0	4	0	0	1	1	0	4	0	**10**
Belted Kingfisher	0	0	3	0	0	0	CW	0	1	1	2	1	0	**8**
Red-headed Woodpecker	0	0	0	0	0	2	0	0	0	0	0	2	0	**4**
Red-bellied Woodpecker	8	7	9	5	4	24	20	39	12	2	5	23	15	**173**
Yellow-bellied Sapsucker	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
Downy Woodpecker	31	18	37	19	14	70	43	79	25	13	23	80	36	**488**
Hairy Woodpecker	14	9	17	19	14	27	24	22	14	3	9	32	9	**213**
Northern Flicker	0	0	CW	0	1	2	3	10	1	1	1	6	5	**30**
Pileated Woodpecker	0	CW	1	10	2	12	5	CW	3	3	3	9	2	**50**
Northern Shrike	0	2	2	6	1	4	3	1	3	1	1	1	2	**27**
Blue Jay	67	89	89	89	66	175	150	202	101	106	72	272	126	**1604**
American Crow	315	302	286	126	270	399	739	367	365	336	379	486	352	**4722**
Common Raven	0	2	5	40	3	3	0	1	5	4	2	31	1	**97**
Horned Lark	8	10	CW	0	5	2	0	219	10	38	2	14	126	**434**
Black-capped Chickadee	224	170	266	276	130	549	204	367	180	93	100	418	157	**3134**
Tufted Titmouse	0	0	1	1	0	2	0	0	0	0	0	0	0	**4**
Red-breasted Nuthatch	15	0	21	10	5	30	27	4	6	17	4	40	3	**182**
White-breasted Nuthatch	29	22	42	35	31	69	43	66	24	28	15	69	34	**507**
Brown Creeper	4	0	2	1	0	3	1	2	0	1	1	5	0	**20**
Golden-crowned Kinglet	2	0	0	2	0	2	0	3	0	0	1	0	0	**10**
Eastern Bluebird	0	0	5	0	0	0	1	2	7	4	0	0	12	**31**
Hermit Thursh	0	0	0	0	0	1	0	1	0	0	0	0	0	**2**
American Robin	2	44	50	1	0	36	77	23	16	48	27	157	1	**482**
European Starling	91	1033	23	2	3	598	437	1096	915	781	725	546	1507	**7757**
Cedar Waxwing	30	CW	72	2	0	171	288	46	320	232	127	34	CW	**1322**
American Tree Sparrow	15	178	57	103	140	168	78	882	92	121	128	81	259	**2302**
Fox Sparrow	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
Song Sparrow	0	0	1	0	1	1	1	0	1	0	0	8	3	**16**
White-throated Sparrow	6	0	0	1	0	1	0	1	0	CW	0	3	1	**13**
Dark-eyed Junco	65	106	254	107	227	265	498	1570	344	432	550	352	539	**5309**
Lapland Longspur	0	0	0	0	0	CW	0	34	200	0	0	0	42	**276**
Snow Bunting	106	178	92	93	67	153	8	58	20	38	0	175	344	**1332**
Northern Cardinal	27	24	23	5	15	43	49	134	34	52	28	73	56	**563**
Red-winged Blackbird	0	0	0	0	0	0	0	0	CW	1	0	0	1	**2**
Brown-headed Cowbird	0	0	0	0	0	CW	0	0	1	0	0	0	0	**1**
Purple Finch	49	CW	9	28	3	40	108	0	20	77	175	53	0	**562**
House Finch	60	5	37	2	0	188	34	245	96	63	36	197	138	**1101**
Common Redpoll	3	0	0	6	0	0	0	0	0	0	0	28	0	**37**
Pine Siskin	25	0	17	2	10	36	6	17	12	66	106	135	22	**454**
American Goldfinch	256	169	116	144	185	344	152	322	210	117	149	464	276	**2904**
Evening Grosbeak	6	0	0	0	0	0	0	0	0	6	0	12	0	**24**
House Sparrow	176	247	136	40	29	280	65	736	168	86	108	297	567	**2935**
Total Species	**39**	**33**	**47**	**38**	**35**	**53**	**43**	**47**	**50**	**41**	**40**	**56**	**45**	

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 16 or more counts.

Species	Pen-saukee 43	Green Bay 44	New Franken 45	Brus-sels 46	Sturgeon Bay 47	Ephraim 48	Kewau-nee 49	Woodland Dunes NE 50	Woodland Dunes SE 51	She boygan 52	Cedar Grove 53	River-edge 54	Mil-waukee 55	Hales Cor-ners 56	Racine 57	Keno-sha 58	Region Totals
Canada Goose	161	1220	139	482	2337	74	6322	868	945	4808	2282	3708	4299	607	2762	615	**31629**
American Black Duck	2	**191**	0	2	21	0	2	9	18	26	0	4	21	0	23	0	**319**
Mallard	20	3210	0	1	1388	103	63	308	166	824	262	136	843	53	851	331	**8559**
Greater Scaup	0	0	0	0	12	17	2	75	20	6	778	2262	**6720**	1994	207	21	**12114**
Bufflehead	0	0	0	0	100	132	36	0	21	48	165	44	508	70	148	23	**1295**
Common Goldeneye	27	50	0	0	223	101	548	91	104	160	**2756**	98	1960	71	510	20	**6719**
Hooded Merganser	0	5	0	0	4	20	2	0	0	0	0	4	6	2	10	2	**55**
Common Merganser	158	84	0	0	51	0	65	17	34	3	25	21	67	40	22	13	**600**
Ring-necked Pheasant	3	1	34	18	4	2	18	1	0	5	25	28	0	0	0	2	**141**
Ruffed Grouse	CW	1	0	0	8	3	4	0	0	0	0	0	0	0	0	0	**16**
Wild Turkey	95	37	309	566	252	61	190	112	13	55	93	259	3	CW	0	CW	**2045**
Great Blue Heron	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	**1**
Bald Eagle	2	15	CW	4	4	2	2	1	0	0	0	1	CW	0	0	0	**31**
Northern Harrier	0	1	0	2	1	2	0	0	1	0	3	9	3	3	4	CW	**29**
Sharp-shinned Hawk	CW	3	2	1	4	0	1	3	1	2	2	5	6	CW	1	2	**33**
Cooper's Hawk	2	**20**	3	1	1	0	5	1	1	1	7	16	16	8	5	1	**88**
Red-tailed Hawk	15	65	16	28	13	2	9	8	5	13	33	95	41	7	9	5	**364**
Rough-legged Hawk	3	8	2	14	8	0	1	0	0	0	6	4	4	0	1	1	**52**
American Kestrel	5	7	4	1	1	1	6	11	2	1	6	14	2	CW	2	1	**64**
American Coot	0	0	0	0	0	0	0	0	0	0	0	7	53	10	9	12	**91**
Ring-billed Gull	0	10	0	0	32	30	2	33	0	155	0	85	**385**	313	40	119	**1204**
Herring Gull	103	1067	8	13	101	2	210	483	287	379	42	49	**2171**	4	495	25	**5439**
Rock Pigeon	197	**1972**	71	619	101	55	762	145	68	326	1038	1696	987	58	50	78	**8223**
Mourning Dove	244	745	313	180	256	60	512	307	68	380	486	762	598	224	222	59	**5416**
Eastern Screech-Owl	0	3	0	1	0	0	1	0	0	0	2	20	2	0	8	0	**37**
Great Horned Owl	2	9	5	1	1	0	2	1	1	5	3	17	10	2	5	CW	**64**
Barred Owl	CW	1	3	0	0	0	0	0	0	0	0	**12**	0	0	0	0	**16**
Belted Kingfisher	1	1	0	1	0	0	0	1	1	0	0	3	2	1	0	0	**11**
Red-headed Woodpecker	0	0	5	0	0	0	0	0	0	0	0	0	0	0	0	0	**5**
Red-bellied Woodpecker	6	36	44	11	32	13	11	6	7	2	10	100	38	17	8	3	**344**
Yellow-bellied Sapsucker	0	1	0	0	0	0	0	0	0	0	1	6	1	0	1	2	**12**
Downy Woodpecker	16	91	107	16	50	14	26	20	14	2	58	211	119	30	28	8	**810**
Hairy Woodpecker	12	17	37	17	49	27	11	7	3	1	13	80	24	12	6	3	**319**
Northern Flicker	2	0	3	2	0	0	1	0	1	0	1	28	7	6	0	2	**53**
Pileated Woodpecker	2	0	2	0	16	14	1	2	0	0	0	3	0	0	0	0	**40**
Northern Shrike	5	0	0	4	1	1	2	1	0	1	0	3	2	CW	0	0	**20**
Blue Jay	96	132	158	66	130	43	114	17	19	7	50	331	37	28	38	8	**1274**
American Crow	146	450	186	703	801	124	472	159	69	126	315	847	276	62	89	67	**4892**
Common Raven	1	0	5	5	34	5	2	1	0	0	0	0	0	0	0	0	**53**
Horned Lark	3	70	56	47	1	0	78	0	4	42	476	**655**	0	0	24	75	**1531**
Black-capped Chickadee	121	230	295	164	476	225	275	130	59	82	596	1048	577	135	92	44	**4549**
Tufted Titmouse	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	**1**
Red-breasted Nuthatch	1	12	11	2	52	32	12	11	6	0	12	14	14	2	2	3	**186**
White-breasted Nuthatch	12	69	107	14	55	32	25	11	17	9	24	214	101	31	16	9	**746**
Brown Creeper	0	2	1	1	5	1	0	0	0	0	1	10	1	CW	0	1	**23**
Golden-crowned Kinglet	3	1	0	0	13	1	10	3	0	1	6	**19**	7	1	4	0	**69**
Eastern Bluebird	10	11	6	1	0	2	0	1	0	0	0	35	36	7	0	0	**109**
Hermit Thrush	0	0	0	0	0	0	0	0	0	1	0	1	2	1	0	0	**5**
American Robin	13	131	1	5	0	2	3	0	1	12	6	79	554	109	17	35	**968**
European Starling	719	866	185	421	368	19	1256	439	648	180	2331	1038	1030	293	122	2201	**12116**
Cedar Waxwing	18	43	16	30	1	0	98	10	13	224	331	341	180	50	33	14	**1402**
American Tree Sparrow	361	191	21	101	33	4	79	21	97	40	521	490	192	47	126	74	**2398**
Fox Sparrow	0	2	0	0	0	0	0	1	0	1	1	5	3	1	5	1	**20**
Song Sparrow	0	4	43	1	0	0	0	0	2	0	4	15	10	4	3	1	**87**
White-throated Sparrow	0	12	2	0	2	1	3	0	0	1	1	11	32	7	1	0	**73**
Dark-eyed Junco	187	449	357	193	329	98	294	73	112	98	658	1703	660	116	156	190	**5673**
Lapland Longspur	0	0	6	0	0	0	10	0	12	23	289	151	0	0	42	0	**533**
Snow Bunting	116	237	149	73	429	32	271	0	45	54	435	207	0	0	0	301	**2349**
Northern Cardinal	30	148	194	77	95	33	38	45	21	30	85	427	308	109	44	19	**1703**
Red-winged Blackbird	0	2	0	0	0	0	0	0	0	0	0	0	0	1	0	2	**5**
Brown-headed Cowbird	0	2	0	0	0	0	0	0	0	3	3	1	1	0	0	CW	**10**
Purple Finch	47	20	56	20	39	19	73	3	0	0	1	53	4	2	0	1	**338**
House Finch	39	814	154	91	77	2	224	117	88	167	201	552	602	78	86	23	**3315**
Common Redpoll	28	18	4	1	32	7	0	0	0	0	0	0	0	0	0	0	**90**
Pine Siskin	19	40	41	27	212	237	104	137	1	1	15	13	46	0	0	5	**898**
American Goldfinch	198	580	463	367	567	141	354	176	31	225	109	621	619	129	80	61	**4721**
Evening Grosbeak	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	**1**
House Sparrow	179	1374	524	103	110	0	518	98	55	83	1866	1136	1341	111	178	301	**7977**
Total Species	**50**	**65**	**51**	**49**	**58**	**46**	**61**	**52**	**47**	**51**	**58**	**73**	**83**	**51**	**57**	**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 16 or more counts.

Species	Pesh-tigo 59	Sey-mour 60	Apple-ton 61	Osh-kosh 62	Fond du Lac 63	Stock-bridge 64	Woodland Dunes NW 65	Woodland Dunes SW 66	Ply-mouth 67	Kettle Moraine 68	Hart-ford 69	Ocono-mowoc 70	Wau-kesha 71	Pal-myra 72	Bur-lington 73	Lake Geneva 74	**Region Totals**
Canada Goose	0	0	8929	267	4	420	4	0	39	495	946	3991	1021	2787	1998	8056	**28957**
American Black Duck	0	0	23	28	1	0	0	0	0	0	17	18	1	CW	7	52	**147**
Mallard	26	4	2445	1768	70	0	36	6	25	0	129	390	259	53	894	4318	**10423**
Greater Scaup	1	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	**3**
Bufflehead	0	0	1	2	0	0	0	0	0	0	0	0	0	0	0	**704**	**707**
Common Goldeneye	18	0	261	90	0	0	0	0	0	0	47	0	1	1	0	456	**874**
Hooded Merganser	2	0	7	2	0	0	0	0	0	0	0	2	0	0	0	46	**59**
Common Merganser	2	0	359	7	1	0	0	0	0	0	5	0	3	0	0	**1574**	**1951**
Ring-necked Pheasant	4	0	2	12	2	6	1	4	8	20	3	7	0	2	0	0	**71**
Ruffed Grouse	1	1	0	0	0	0	0	1	0	2	0	0	0	0	0	0	**5**
Wild Turkey	203	167	2	9	51	16	116	26	67	70	317	229	62	61	45	0	**1441**
Great Blue Heron	0	0	0	0	0	0	2	0	0	0	1	CW	0	2	1	0	**6**
Bald Eagle	5	2	20	9	0	0	0	0	0	0	1	0	0	1	1	12	**51**
Northern Harrier	1	0	0	4	2	1	0	0	0	0	2	2	4	1	3	0	**20**
Sharp-shinned Hawk	3	0	4	0	0	CW	0	0	2	2	2	1	1	3	1	3	**22**
Cooper's Hawk	0	4	17	12	3	2	0	0	3	4	6	9	9	1	5	0	**75**
Red-tailed Hawk	16	41	65	24	14	25	4	3	20	54	25	37	34	50	32	11	**455**
Rough-legged Hawk	11	9	6	4	1	0	0	0	CW	2	CW	2	2	7	2	0	**46**
American Kestrel	2	12	7	7	3	8	3	1	3	5	9	17	2	9	3	0	**91**
American Coot	0	0	0	1	1	0	0	0	0	0	2	0	0	5	1	**2058**	**2068**
Ring-billed Gull	0	0	11	39	0	14	0	0	0	1	20	53	2	0	2	23	**165**
Herring Gull	0	0	196	934	3	121	350	19	0	2	154	4	0	0	13	2146	**3942**
Rock Pigeon	446	482	871	580	119	446	30	105	280	233	488	851	56	323	213	68	**5591**
Mourning Dove	115	802	**1024**	662	182	118	53	71	120	291	469	714	180	461	178	96	**5536**
Eastern Screech-Owl	0	0	2	CW	3	0	0	0	0	5	4	1	1	6	3	0	**25**
Great Horned Owl	0	3	8	10	9	2	2	2	CW	8	9	2	6	**49**	5	1	**116**
Barred Owl	0	1	1	1	0	0	0	0	0	1	3	1	0	5	0	0	**13**
Belted Kingfisher	0	0	2	0	0	0	1	0	0	1	2	1	1	2	4	0	**14**
Red-headed Woocpecker	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	**1**
Red-bellied Woodpecker	10	11	65	23	13	12	15	2	15	15	33	31	15	75	12	25	**372**
Yellow-bellied Sapsucker	0	0	0	0	0	0	0	1	1	1	0	0	2	1	2	0	**8**
Downy Woodpecker	24	50	100	58	12	31	11	6	13	54	88	67	39	92	27	24	**696**
Hairy Woodpecker	12	12	25	12	11	7	10	1	5	9	21	12	25	25	5	3	**195**
Northern Flicker	2	5	6	3	5	0	3	0	2	4	26	7	0	13	0	3	**79**
Pileated Woodpecker	2	2	0	0	0	0	1	0	0	CW	1	0	0	1	0	0	**7**
Northern Shrike	1	4	4	1	0	1	0	0	0	4	4	3	3	3	1	1	**30**
Blue Jay	91	74	152	92	33	58	24	14	129	172	157	197	116	245	107	67	**1728**
American Crow	285	137	557	224	87	116	62	64	372	600	665	560	322	897	493	254	**5695**
Common Raven	16	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**17**
Horned Lark	38	91	120	57	27	433	0	11	99	162	2	6	1	14	240	220	**1521**
Black-capped Chickadee	294	142	335	180	72	73	48	9	69	363	528	373	169	412	83	78	**3228**
Tufted Titmouse	0	0	1	1	0	0	0	0	0	0	0	7	4	9	0	0	**22**
Red-breasted Nuthatch	9	2	21	7	1	0	1	0	3	37	11	11	12	9	0	5	**129**
White-breasted Nuthatch	23	28	92	52	14	24	15	4	13	64	77	103	28	115	30	26	**708**
Brown Creeper	1	2	5	3	0	0	1	0	0	5	2	3	0	12	0	0	**34**
Golden-crowned Kinglet	0	1	3	3	0	1	0	0	1	7	4	1	1	11	2	0	**35**
Eastern Bluebird	10	14	3	0	0	1	0	12	0	12	40	24	10	14	16	4	**160**
Hermit Thrush	0	0	1	1	0	0	0	0	0	0	2	0	3	5	0	0	**12**
American Robin	20	37	544	76	9	0	6	0	4	12	68	45	127	47	103	0	**1098**
European Starling	626	2580	2199	1602	555	1570	33	20	933	293	1150	1088	274	2399	472	434	**16228**
Cedar Waxwing	67	15	131	159	2	2	9	0	27	22	135	290	76	173	4	0	**1112**
American Tree Sparrow	72	327	246	125	220	355	29	69	136	918	357	243	43	534	498	341	**4513**
Fox Sparrow	0	0	2	1	0	2	0	0	0	0	1	0	1	3	6	0	**16**
Song Sparrow	0	0	0	1	0	0	2	0	2	2	2	0	3	6	18	13	**49**
White-throated Sparrow	0	0	10	3	0	0	0	0	0	2	4	0	0	5	6	6	**36**
Dark-eyed Junco	192	505	530	387	90	345	65	55	595	1223	731	669	229	796	471	570	**7453**
Lapland Longspur	4	21	51	28	150	30	0	1	53	352	0	0	1	0	300	164	**1155**
Snow Bunting	12	573	60	18	100	337	0	0	50	68	0	0	0	0	12	CW	**1230**
Northern Cardinal	15	42	317	106	40	102	24	5	90	158	188	165	109	189	76	140	**1766**
Red-winged Blackbird	0	0	0	0	0	0	0	0	1	0	1	0	1	0	10	0	**13**
Brown-headed Cowbird	0	0	0	0	0	1	0	0	0	0	0	0	0	2	11	0	**14**
Purple Finch	69	16	13	6	2	0	3	0	0	10	13	100	1	52	0	4	**289**
House Finch	65	137	587	302	24	186	15	29	91	70	424	235	96	161	103	28	**2553**
Common Redpoll	0	0	0	0	3	0	0	1	0	0	0	4	0	0	0	0	**8**
Pine Siskin	76	22	21	3	15	0	0	0	0	7	46	12	4	11	0	0	**217**
American Goldfinch	353	129	322	159	75	67	7	39	247	317	389	328	134	151	105	64	**2886**
Evening Grosbeak	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**3**
House Sparrow	207	677	1066	1259	151	717	40	54	314	676	571	931	56	356	184	257	**7516**
Total Species	**46**	**43**	**66**	**67**	**44**	**36**	**36**	**28**	**38**	**43**	**61**	**49**	**51**	**66**	**56**	**58**	

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 16 or more counts.

Species	Rosendale 75	Green Lake 76	Montello 77	Pardeeville 78	Randoph 79	Horicon Marsh 80	Hustisford 81	Columbus 82	Poynette 83	Madison 84	Waterloo 85	Fort Atkinson 86	Cooksville 87	Beloit 88	Brodhead 89	**Region Totals**
Canada Goose	1	**50851**	1010	15	59	50	2125	127	2600	4753	126	5	1962	1709	26	**65419**
American Black Duck	0	0	8	0	0	0	0	4	9	8	0	0	5	8	1	**43**
Mallard	0	103	385	6	0	2	2	331	501	1439	178	82	841	1100	4	**4974**
Greater Scaup	0	6	0	0	0	0	0	0	0	0	0	0	0	0	0	**6**
Bufflehead	0	2	0	0	0	0	0	0	0	117	0	0	0	0	0	**119**
Common Goldeneye	0	106	0	0	0	0	0	0	231	230	0	0	6	137	0	**710**
Hooded Merganser	0	4	1	2	0	0	0	0	0	**58**	0	0	CW	CW	0	**65**
Common Merganser	0	377	0	0	0	0	0	0	65	888	0	0	CW	1	0	**1331**
Ring-necked Pheasant	20	2	2	5	5	15	6	75	**186**	21	11	5	1	33	4	**391**
Ruffed Grouse	0	4	1	0	0	0	0	0	1	0	0	0	0	0	0	**6**
Wild Turkey	94	168	224	**756**	0	130	53	121	53	158	53	136	91	163	222	**2422**
Great Blue Heron	0	0	1	0	0	0	0	0	0	2	0	1	**4**	1	1	**10**
Bald Eagle	2	8	3	6	0	2	2	0	17	25	0	0	0	3	0	**68**
Northern Harrier	1	2	1	2	2	**18**	3	0	1	0	1	1	1	2	0	**35**
Sharp-shinned Hawk	4	0	5	2	0	0	1	4	2	**11**	0	5	2	2	0	**38**
Cooper's Hawk	2	2	1	2	3	6	4	4	8	**20**	7	6	2	4	5	**76**
Red-tailed Hawk	51	39	23	44	34	44	63	45	42	**103**	21	22	40	44	14	**629**
Rough-legged Hawk	4	20	9	6	1	17	1	0	10	3	1	1	1	0	1	**75**
American Kestrel	8	4	2	4	19	13	11	10	13	4	1	9	13	13	4	**128**
American Coot	0	85	0	0	0	0	0	0	0	1462	0	0	0	0	0	**1547**
Ring-billed Gull	0	2	0	0	14	0	0	0	0	128	0	1	3	2	0	**150**
Herring Gull	0	113	0	0	2	40	0	0	4	657	1	0	2	0	0	**819**
Rock Pigeon	647	163	482	257	1297	630	765	1034	459	539	550	306	160	413	130	**7832**
Mourning Dove	491	60	386	403	201	325	480	468	589	757	789	385	606	364	164	**6468**
Eastern Screech-owl	1	1	0	0	4	7	5	2	6	**27**	3	2	11	5	0	**74**
Great Horned Owl	5	26	4	4	7	13	4	8	3	17	6	8	14	4	0	**123**
Barred Owl	0	8	5	1	0	2	0	2	2	3	0	0	2	1	1	**27**
Belted Kingfisher	0	3	3	3	0	0	0	1	5	5	1	2	4	2	2	**31**
Red-headed Woodpecker	0	1	4	2	1	0	0	0	1	0	0	2	CW	1	5	**17**
Red-bellied Woodpecker	26	43	30	54	22	9	24	26	59	**170**	44	30	13	35	21	**606**
Yellow-bellied Sapsucker	0	0	0	1	0	0	1	0	0	**8**	3	1	1	0	1	**16**
Downy Woodpecker	50	56	51	72	33	48	45	63	110	**232**	76	61	29	42	22	**990**
Hairy Woodpecker	6	15	21	23	8	7	7	7	32	**87**	14	14	11	9	13	**274**
Northern Flicker	12	9	27	10	2	3	11	10	**29**	25	7	3	8	4	7	**167**
Pileated Woodpecker	0	3	9	4	1	0	0	0	7	0	0	0	0	0	0	**24**
Northern Shrike	2	3	7	4	3	0	1	0	2	5	1	0	CW	0	1	**29**
Blue Jay	204	149	233	278	153	66	99	189	257	278	162	108	89	126	101	**2492**
American Crow	369	271	414	329	517	156	222	258	1210	1095	533	233	244	523	77	**6451**
Common Raven	0	2	11	0	0	0	0	0	0	0	0	0	0	0	0	**13**
Horned Lark	173	CW	9	6	38	106	270	283	31	10	581	0	299	348	147	**2128**
Black-capped Chickadee	99	222	215	248	47	182	181	142	488	**1167**	244	248	81	176	107	**3847**
Tufted Titmouse	0	1	3	14	0	0	0	1	68	14	12	6	1	12	11	**143**
Red-breasted Nuthatch	1	8	19	0	1	3	2	1	21	16	6	8	0	2	0	**88**
White-breasted Nuthatch	38	81	54	74	60	64	70	51	139	**281**	116	61	30	45	28	**1192**
Brown Creeper	0	4	2	1	3	3	4	5	21	**33**	2	5	1	1	2	**87**
Golden-crowned Kinglet	0	0	CW	1	0	2	3	2	15	17	10	6	CW	0	0	**56**
Eastern Bluebird	2	30	10	26	3	0	0	1	36	16	6	8	3	8	0	**149**
Hermit Thursh	0	0	0	0	0	0	0	0	1	**7**	1	0	2	1	0	**12**
American Robin	11	35	39	139	8	11	54	40	**1955**	442	26	11	3	26	0	**2800**
European Starling	515	240	847	904	**4162**	1936	1358	3484	2341	3291	1044	799	599	931	1388	**23839**
Cedar Waxwing	9	153	61	221	0	4	0	15	**840**	139	5	10	0	0	36	**1493**
American Tree Sparrow	1037	153	125	689	629	529	610	**1421**	736	849	1012	124	248	348	542	**9052**
Fox Sparrow	0	1	1	0	0	0	0	1	1	8	0	0	2	**12**	0	**26**
Song Sparrow	0	1	0	1	1	0	1	4	8	**53**	5	15	6	16	10	**121**
White-throated Sparrow	3	1	1	1	1	0	0	0	2	**57**	6	1	1	4	0	**78**
Dark-eyed Junco	1070	276	1052	1731	989	524	791	1283	1310	1455	1424	216	373	762	563	**13819**
Lapland Longspur	179	0	0	0	200	0	33	308	5	21	250	0	25	116	**573**	**1710**
Snow Bunting	184	4	96	0	6	43	30	156	1	0	122	0	0	98	3	**743**
Northern Cardinal	115	89	64	197	83	80	99	148	180	**564**	177	127	105	301	124	**2453**
Red-winged Blackbird	20	0	0	0	0	8	42	**335**	0	35	20	0	45	1	0	**506**
Brown-headed Cowbird	0	0	0	5	0	55	**104**	0	2	0	0	CW	5	0	0	**171**
Purple Finch	1	46	48	71	7	9	3	0	70	5	9	8	3	8	0	**288**
House Finch	179	61	217	201	151	110	186	122	394	**1214**	162	205	134	166	24	**3526**
Common Redpoll	0	0	0	0	0	0	0	0	2	5	0	0	0	0	0	**7**
Pine Siskin	0	5	19	7	0	0	0	1	17	33	0	5	0	0	0	**87**
American Goldfinch	256	113	239	329	106	210	250	209	433	**917**	302	264	118	158	152	**4056**
Evening Grosbeak	0	4	0	0	0	0	0	0	26	0	0	0	0	0	0	**30**
House Sparrow	944	80	144	364	1329	665	1164	**2129**	546	1647	823	269	270	699	481	**11554**
Total Species	**42**	**65**	**61**	**54**	**41**	**43**	**44**	**48**	**78**	**83**	**50**	**50**	**51**	**56**	**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 8. Number of each species in southwestern Wisconsin found on 16 or more counts.

Species	Blanchard-ville 90	Mount Horeb 91	Baraboo 92	Sauk City 93	Clyde 94	Richland Center 95	Kickapoo Valley 96	La Farge 97	Bridge-port 98	Cass-ville 99	**Region Totals**	**Number of Counts**	**No. of Individ-uals**	**Percent Change**
Canada Goose	32	1	480	2946	14	93	0	0	102	3	**3671**	**74**	**150,048**	**-49%**
American Black Duck	0	0	0	14	0	0	0	0	8	1	**23**	**46**	**585**	**-47%**
Mallard	15	6	495	660	10	20	1	0	328	48	**1583**	**76**	**36,386**	**-16%**
Greater Scaup	0	0	0	0	0	0	0	0	0	0	**0**	**16**	**12,123**	**+21%**
Bufflehead	0	0	0	22	0	0	0	0	0	0	**22**	**20**	**2,150**	**+1%**
Common Goldeneye	0	0	48	70	0	2	0	0	0	2	**122**	**43**	**10,287**	**+9%**
Hooded Merganser	0	0	0	0	0	0	0	0	0	0	**0**	**21**	**184**	**-6%**
Common Merganser	0	0	19	374	0	1	0	0	CW	0	**394**	**34**	**5,961**	**-24%**
Ring-necked Pheasant	19	69	1	4	11	8	3	4	3	7	**129**	**73**	**909**	**+109%**
Ruffed Grouse	0	5	0	0	0	0	0	0	CW	0	**5**	**39**	**130**	**-62%**
Wild Turkey	139	268	62	130	74	304	44	76	95	6	**1198**	**88**	**12,077**	**+56%**
Great Blue Heron	1	1	0	1	0	1	0	0	0	0	**4**	**16**	**24**	**-46%**
Bald Eagle	10	3	28	113	7	30	3	1	166	**240**	**601**	**75**	**1,418**	**+40%**
Northern Harrier	1	1	0	2	0	5	0	0	2	1	**12**	**46**	**115**	**-39%**
Sharp-shinned Hawk	0	3	CW	3	0	2	1	0	1	0	**10**	**59**	**137**	**+44%**
Cooper's Hawk	3	10	2	7	0	2	1	1	8	0	**34**	**70**	**312**	**+60%**
Red-tailed Hawk	44	80	37	82	26	100	31	36	59	24	**519**	**88**	**2,547**	**+1%**
Rough-legged Hawk	4	7	10	20	3	17	4	0	22	27	**114**	**75**	**504**	**-11%**
American Kestrel	8	15	3	16	6	14	11	3	7	**46**	**129**	**75**	**487**	**-34%**
American Coot	0	0	0	1	0	0	0	0	2	8	**14**	**17**	**3721**	**-28%**
Ring-billed Gull	0	0	0	33	0	0	0	0	CW	0	**33**	**30**	**1,558**	**-87%**
Herring Gull	0	0	0	80	0	0	0	0	0	0	**80**	**38**	**11,415**	**-29%**
Rock Pigeon	133	579	217	579	260	914	246	103	577	449	**4057**	**94**	**36,778**	**+14%**
Mourning Dove	173	305	163	290	156	299	77	33	206	129	**1831**	**97**	**24,953**	**+39%**
Eastern Screech Owl	3	1	5	1	0	1	0	1	7	1	**20**	**38**	**162**	**-18%**
Great Horned Owl	1	8	3	11	11	2	7	1	1	2	**47**	**78**	**417**	**+7%**
Barred Owl	0	3	2	3	1	5	2	1	6	1	**24**	**43**	**104**	**+18%**
Belted Kingfisher	0	1	2	2	3	3	3	0	**7**	3	**24**	**49**	**104**	**+6%**
Red-headed Woodpecker	4	**6**	1	0	4	2	2	2	3	0	**24**	**23**	**55**	**-33%**
Red-bellied Woodpecker	73	107	55	76	64	84	23	19	85	28	**614**	**91**	**2,380**	**+44%**
Yellow-bellied Sapsucker	0	1	1	2	1	3	0	0	2	0	**10**	**28**	**50**	**+233%**
Downy Woodpecker	69	156	104	119	39	119	29	14	96	34	**779**	**99**	**4,758**	**+2%**
Hairy Woodpecker	31	50	19	38	12	23	1	3	21	11	**209**	**99**	**1,745**	**+3%**
Northern Flicker	3	7	10	12	9	5	0	0	7	2	**55**	**60**	**394**	**+154%**
Pileated Woodpecker	1	16	10	**19**	9	6	1	2	15	4	**83**	**63**	**333**	**+31%**
Northern Shrike	0	1	2	1	0	1	CW	0	1	1	**7**	**72**	**215**	**-4%**
Blue Jay	279	412	327	267	126	**483**	102	74	234	90	**2394**	**99**	**12,810**	**+32%**
American Crow	351	798	527	819	205	**2041**	303	310	682	277	**6313**	**99**	**36,593**	**-4%**
Common Raven	0	0	0	0	0	0	0	0	0	0	**0**	**44**	**798**	**-2%**
Horned Lark	276	104	10	0	0	124	30	5	299	24	**872**	**69**	**6,703**	**+122%**
Black-capped Chickadee	211	583	518	427	140	523	116	76	239	88	**2921**	**99**	**27,352**	**+3%**
Tufted Titmouse	12	**121**	58	31	10	98	4	4	60	20	**418**	**38**	**665**	**+68%**
Red-breasted Nuthatch	0	5	29	6	0	4	0	0	5	0	**49**	**84**	**1,766**	**+32%**
White-breasted Nuthatch	97	211	119	160	90	114	21	13	104	30	**959**	**99**	**5,353**	**+10%**
Brown Creeper	5	5	8	5	8	4	1	0	8	3	**47**	**67**	**261**	**-3%**
Golden-crowned Kinglet	8	CW	5	3	0	4	0	0	3	0	**23**	**51**	**254**	**+10%**
Eastern Bluebird	7	39	39	**76**	24	49	12	CW	24	10	**280**	**54**	**779**	**+785%**
Hermit Thursh	0	0	1	0	1	0	0	0	0	0	**2**	**19**	**34**	**+162%**
American Robin	1	49	33	67	0	6	0	0	3	0	**159**	**71**	**6,719**	**+125%**
European Starling	190	2090	1185	1737	653	1965	368	84	578	1079	**9929**	**94**	**78,938**	**+1%**
Cedar Waxwing	0	12	270	98	80	6	2	18	47	0	**533**	**70**	**6,834**	**+68%**
American Tree Sparrow	622	852	300	256	289	423	56	70	1003	92	**3963**	**90**	**24,812**	**+37%**
Fox Sparrow	0	0	0	CW	1	1	0	0	0	0	**2**	**25**	**64**	**+392%**
Song Sparrow	25	8	1	3	2	3	0	0	49	13	**104**	**48**	**385**	**+28%**
White-throated Sparrow	3	1	0	4	0	4	0	0	4	0	**16**	**44**	**222**	**+10%**
Dark-eyed Junco	1010	1440	1033	639	230	**1902**	324	208	1144	304	**8234**	**94**	**43,942**	**+35%**
Lapland Longspur	43	0	0	0	0	0	CW	0	254	0	**297**	**39**	**4,224**	**+115%**
Snow Bunting	56	0	0	0	0	0	CW	0	54	0	**110**	**63**	**8,122**	**-3%**
Northern Cardinal	283	402	171	173	43	339	48	62	336	79	**1936**	**94**	**9,424**	**+22%**
Red-winged Blackbird	1	0	0	116	0	0	0	0	0	4	**121**	**23**	**869**	**-41%**
Brown-headed Cowbird	0	0	0	0	0	0	0	0	6	0	**6**	**17**	**217**	**-64%**
Purple Finch	19	68	97	98	18	44	3	35	73	8	**463**	**85**	**3,606**	**+170%**
House Finch	63	119	169	273	0	130	30	1	221	93	**1099**	**87**	**12,723**	**+49%**
Common Redpoll	0	0	1	0	0	6	0	1	0	0	**8**	**35**	**724**	**-76%**
Pine Siskin	2	12	2	1	0	4	0	0	CW	0	**21**	**70**	**5,460**	**+161%**
American Goldfinch	206	813	427	462	156	663	66	46	310	175	**3324**	**99**	**24,301**	**+49%**
Evening Grosbeak	0	0	0	0	0	0	0	0	0	0	**0**	**23**	**752**	**-35%**
House Sparrow	832	668	287	491	158	1020	225	97	2123	1154	**7055**	**91**	**44,818**	**-6%**
Total Species	**50**	**52**	**56**	**63**	**39**	**58**	**36**	**34**	**65**	**50**				

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 15 or fewer counts.

Species	Number of Counts	Number of Birds	Count and Number
Gr. White-fronted Goose	1	1	Hudson 1
Snow Goose	4	5	(Green Bay), **Lake Geneva 2**, Madison 1, Milwaukee 1, Sheboygan 1
Cackling Goose	7	79	Appleton 15, (Green Lake), Lake Geneva 6, **Madison 43**, Montello 6, Oshkosh 2, Palmyra 6, Poynette 1
Mute Swan	15	113	Burlington 7, Ephraim 7, Green Lake 3, Hartford 2, Kenosha 2, Lake Geneva 15, **Madison 28**, Milwaukee 3, Montello 2, Oconomowoc 4, Palmyra 26, Pensaukee 2, Racine 9, Sturgeon Bay 2, Wisconsin Rapids 1
Trumpeter Swan	9	349	Bridgeport 1, Cassville 15, Fremont 7, **Hudson 300**, Manitowish Waters 10, (New Richmond), Shawano 6, Solon Springs 6, Stevens Point 2, (Waupaca), Wis. Rapids 2
Tundra Swan	8	752	Baraboo 2, Bridgeport 35, Green Lake 8, **Madison 647**, Nelson 1, Oshkosh 11, Pensaukee 46, Sturgeon Bay 2
Wood Duck	9	17	Brodhead 1, Grantsburg 1, Madison 1, Milwaukee 1, Montello 3, Oshkosh 1, Palmyra 1, **Racine 6**, Waukesha 2
Gadwall	14	314	Cooksville 19, Green Lake 50, Hartford 27, Hudson 2, Lake Geneva 34, **Madison 126**, Milwaukee 23, Montello 1, New Richmond 9, Oconomowoc 10, Palmyra 3, Poynette 6, Shiocton 1, Woodland Dunes SE 3
American Wigeon	4	7	**Lake Geneva 2**, **Madison 2**, Oshkosh 1, **Sheboygan 2**
Northern Shoveler	3	168	**Madison 157**, Sauk City 8, Shawano 3
Northern Pintail	4	10	Beloit 1, **Lake Geneva 4**, **Poynette 4**, Sheboygan 1
Green-winged Teal	3	6	**Hales Corners 3**, Sauk City 1, Trempealeau 2
Canvasback	14	143	Baraboo 3, (Bridgeport), Cassville 2, Cedar Grove 1, Fond du Lac 1, Fort Atkinson 2, (Green Lake), Hartford 2, Kenosha 3, La Crosse 2, Lake Geneva 56, **Madison 66**, Milwaukee 1, Poynette 2, Riveredge 1, Trempealeau 1
Redhead	14	320	Bridgeport 1, Cedar Grove 3, Ephraim 1, Green Bay 5, Green Lake 5, Hales Corners 16, Kenosha 1, Kewaunee 1, Lake Geneva 2, **Milwaukee 273**, Riveredge 2, Sturgeon Bay 7, Trempealeau 2, Woodland Dunes SE 1
Ring-necked Duck	4	26	**Lake Geneva 20**, Madison 3, Milwaukee 1, (Oshkosh), Riveredge 2
Lesser Scaup	12	362	Appleton 1, Bridgeport 3, Green Bay 5, Green Lake 4, Hartford 6, Kewaunee 2, **Lake Geneva 202**, Madison 36, Milwaukee 83, Oshkosh 3, Poynette 1, Racine 4, Woodland Dunes NE 12
Harlequin Duck	1	2	Milwaukee 2
Surf Scoter	1	1	Milwaukee 1
White-winged Scoter	2	2	Milwaukee 1, Racine 1
Black Scoter	1	2	(Madison), Milwaukee 2
Long-tailed Duck	6	7841	Cedar Grove 170, Hales Corners 3, Milwaukee 7, Racine 3, Sturgeon Bay 8, **Woodland Dunes NE 7650**
Barrow's Goldeneye	1	1	Milwaukee 1
Red-breasted Merganser	12	518	Cedar Grove 152, Green Bay 2, Hudson 9, Kewaunee 40, Lake Geneva 6, **Milwaukee 197**, Racine 66, Riveredge 3, Sheboygan 5, Sturgeon Bay 36, Wisconsin Rapids 1, Woodland Dunes NE 1
Ruddy Duck	9	66	Appleton 1, Green Lake 3, Kenosha 3, **Lake Geneva 42**, Madison 6, Milwaukee 2, Palmyra 2, Racine 6, Waukesha 1
Gray Partridge	6	57	Brussels 9, Cassville 13, **Green Bay 14**, (Kenosha), New Franken 2, Poynette 7, Woodland Dunes NE 12
Sharp-tailed Grouse	2	14	Gilman 7, Grantsburg 7
Greater Prairie-Chicken	2	33	**Adams 21**, Spencer 12
Northern Bobwhite	5	64	Brodhead 13, Cedar Grove 1, Gilman 20, New Franken 7, **Pardeeville 23**, (Waupaca)
Red-throated Loon	1	2	Cedar Grove 2
Common Loon	2	2	(Kenosha), Madison 1, Trempealeau 1
Pied-billed Grebe	1	2	Lake Geneva 2
American White Pelican	1	4	Green Bay 4
Double-crested Cormorant	7	52	Appleton 2, Ephraim 6, Fond du Lac 1, **Green Bay 39**, Milwaukee 2, Oshkosh 1, Trempealeau 1
Northern Goshawk	12	14	(Adams), Bridgeport 1, Cedar Grove 1, (Gilman), Gurney 1, Hudson 1, La Farge 1, Lakewood 1, Medford 1, **Nelson 2**, **New Franken 2**, Owen 1, Shawano 1, Solon Springs 1, (Spruce), (Stevens Point), (Waterloo)
Red-shouldered Hawk	15	20	Bridgeport 1, Green Bay 1, Kenosha 1, Kewaunee 1, La Crosse 1, Milwaukee 1, Montello 1, New Richmond 1, Pardeeville 2, Pensaukee 1, **Poynette 3**, Riveredge 1, Sauk City 2, Trempealeau 1, Wautoma 2
Golden Eagle	10	15	Blanchardville 1, **Bridgeport 2**, **Cassville 2**, **Grantsburg 2**, Gurney 1, (Kickapoo Valley), Meadow Valley 1, **Nelson 2**, **Phelps 2**, Sauk City 1, Spencer 1
Merlin	10	12	**Ashland 3**, Brodhead 1, Brussels 1, Burlington 1, Durand 1, Kewaunee 1, Norske 1, Pensaukee 1, Seymour 1, Wautoma 1, (Wis. Rapids)
Gyrfalcon	2	2	Ashland 1, Bayfield 1
Peregrine Falcon	7	7	(Appleton), Cedar Grove 1, Green Bay 1, (Hales Corners), (Kenosha), Kewaunee 1, Milwaukee 1, Racine 1, Sheboygan 1, Woodland Dunes SE 1
Virginia Rail	3	6	Madison 1, Palmyra 2, **Poynette 3**
Killdeer	2	3	Columbus 1, **La Crosse 2**
Wilson's Snipe	15	32	Blanchardville 2, **Bridgeport 6**, Brodhead 2, Hartford 1, La Farge 2, Madison 4, Milwaukee 1, Montello 2, Mount Horeb 2, New Richmond 2, Palmyra 3, Pensuakee 1, Poynette 2, Richland Center 1, (Trempealeau), Woodland Dunes SE 1
Thayer's Gull	3	5	**Lake Geneva 2**, Madison 1, **Milwaukee 2**
Iceland Gull	3	3	Lake Geneva 1, Milwaukee 1, Woodland Dunes NE 1
Lesser Black-backed Gull	5	8	Green Bay 1, Kewaunee 1, **Lake Geneva 4**, Madison 1, Milwaukee 1, (Racine)
Glaucous Gull	8	35	Bayfield 1, Hales Corners 1, Kewaunee 6, Lake Geneva 1, Milwaukee 2, Oshkosh 1, Sheboygan 1, **Woodland Dunes NE 22**
Great Black-backed Gull	6	12	Bayfield 1, Kewaunee 3, Sheboygan 1, **Woodland Dunes NE 4**, Woodland Dunes NE 2, Woodland Dunes SE 1

(continued)

Table 9. (*continued*).

Species	Number of Counts	Number of Birds	Count and Number
Eurasian Collared-Dove	3	16	**Bridgeport 9**, Hales Corners 6, Pardeeville 1
Snowy Owl	11	13	Appleton 1, Ashland 1, Burlington 1, Cedar Grove 1, (Kenosha), Milwaukee 1, (New Franken), Oshkosh 1, Owen 1, Poynette 1, **Racine 2**, **Seymour 2**, Spencer 1
Long-eared Owl	10	21	Cassville 1, Cedar Grove 2, Fond du Lac 1, Green Lake 1, Madison 1, Montello 1, Poynette 2, Riveredge 1, Spencer 1, **Waukesha 10**
Short-eared Owl	12	21	(Adams), Appleton 1, **Burlington 5**, Cassville 1, Madison 1, Meadow Valley 1, Oshkosh 2, Palmyra 2, Poynette 1, Riveredge 1, Rosendale 1, (Shawano), Spencer 1, Stockbridge 4
Northern Saw-whet Owl	9	22	Baraboo 3, Clyde 1, Kewaunee 1, Milwaukee 1, Montello 2, **Palmyra 9**, Pardeeville 1, Riveredge 3, (Sauk City), Wautoma 1
Black-backed Woodpecker	0	0	(Manitowish Waters)
Eastern Phoebe	0	0	(Pardeeville)
Gray Jay	9	36	Cable 2, Clam Lake 6, **Fifield 7**, Florence 1, Manitowish Waters 3, Phelps 3, Rhinelander 2, Solon Springs 6, Three Lakes 6
Boreal Chickadee	1	2	Phelps 2
Carolina Wren	15	22	Baraboo 3, (Beloit), Brodhead 1, Brussels 1, Fort Atkinson 1, **Madison 5**, Mount Horeb 2, Oshkosh 1, Pardeeville 1, Racine 1, Riveredge 1, Sauk City 1, Stevens Point 1, Sturgeon Bay 1, Wis. Rapids 1, Woodland Dunes SE 1
Winter Wren	13	18	Blanchardville 1, Bridgeport 1, Fort Atkinson 1, (Green Bay), (Hales Corners), Hartford 1, **Madison 3**, Milwaukee 1, Oshkosh 1, **Palmyra 3**, Poynette 1, Riveredge 1, Shawano 1, Trempealeau 2, Woodland Dunes SE 1
Townsend's Solitaire	2	3	Baraboo 1, **Lake Geneva 2**
Varied Thrush	4	4	(Appleton), (Bayfield), (Green Bay), Holcomb 1, Lakewood 1, Madison 1, Meadow Valley 1
Gray Catbird	3	3	Appleton 1, Oshkosh 1, Sturgeon Bay 1
Northern Mockingbird	1	1	Peshtigo 1
Brown Thrasher	2	2	Burlington 1, (Palmyra), (Spencer), Stevens Point 1
American Pipit	0	0	(Kenosha)
Bohemian Waxwing	10	329	Bayfield 17, Fifield 70, **Florence 120**, Gilman 7, Gurney 15, (Hartford), Holcombe 45, Manitowish Waters 33, Montello 20, (Peshtigo), Poynette 1, Waupaca 1
Yellow-rumped Warbler	12	18	Appleton 1, Baraboo 2, (Beloit), Bridgeport 1, **Burlington 4**, Hales Corners 1, Hartford 1, Madison 1, Milwaukee 3, New Richmond 1, Richland Center 1, Sauk City 1, Waterloo 1
Eastern Towhee	3	3	Beloit 1, Shiocton 1, Woodland Dunes NE 1
towhee species	1	1	Baraboo 1
Chipping Sparrow	2	2	Adams 1, Sauk City 1
Field Sparrow	4	6	**Bridgeport 2**, Montello 1, Shiocton 1, **Trempealeau 2**
Vesper Sparrow	1	1	Sturgeon Bay 1
Savannah Sparrow	4	4	Fremont 1, Hustisford 1, Milwaukee 1, Palmyra 1
Swamp Sparrow	13	48	Burlington 2, **Kenosha 12**, Madison 9, Milwaukee 2, Mount Horeb 1, New Franken 1, Oshkosh 1, Palmyra 2, Poynette 8, Racine 5, Riveredge 1, Sauk City 3, Waterloo 1
Harris's Sparrow	1	1	Gurney 1
White-crowned Sparrow	10	18	(Beloit), Blanchardville 1, (Bridgeport), Brodhead 1, Burlington 1, Green Lake 1, Hales Corners 1, New Franken 1, Poynette 1, **Racine 9**, Richland Center 1, Woodland Dunes NE 1
Rose-breasted Grosbeak	2	2	Appleton 1, Cable 1
Eastern Meadowlark	4	15	Appleton 1, Beloit 2, **Cassville 11**, Willard 1
meadowlark species	6	21	Arpin 1, Cassville 2, Columbus 1, Pardeeville 1, **Richland Center 15**, Stevens Point 1
Rusty Blackbird	6	12	Blanchardville 1, Fort Atkinson 2, New Richmond 1, Poynette 3, **Rosendale 4** , Shawano 1, (Trempealeau)
Brewer's Blackbird	5	265	Beloit 1, Columbus 1, Fremont 3, Horicon Marsh 60, **Waterloo 200**
Common Grackle	14	91	Appleton 6, (Bridgeport), Brodhead 5, **Columbus 35**, Fort Atkinson 1, Green Bay 4, Horicon Marsh 1, (Hustisford), Kenosha 1, Manitowish Waters 1, New Franken 3, Palmyra 2, Poynette 1, Richland Center 15, Stevens Point 1, Wisconsin Rapids 15
Pine Grosbeak	15	315	Ashland 9, Bayfield 8, Cable 12, Fifield 11, Florence 17, Gilman 1, Gurney 18, **Manitowish Waters 77**, New Franken 2, Phelps 60, Plymouth 6, Rhinelander 61, Solon Springs 28, Spencer 1, Three Lakes 4
Red Crossbill	7	46	(Bayfield), **Clam Lake 16**, Florence 11, Lakewood 4, Phelps 4, Plymouth 1, Solon Springs 3, Three Lakes 7
White-winged Crossbill	4	59	Cedar Grove 1, **Clam Lake 54**, Bridgeport 3, Phelps 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.

Poynette was joined this year by individuals from Madison and Palmyra. For the first time since 1992 (and only the second time since 1989), there was no report of Sandhill Cranes. This is perhaps due to the early onset of winter. As is typical, the only shorebirds reported were Killdeer and Wilson's Snipe.

Gulls—Both the Ring-billed Gull and the Herring Gull were found in less than average numbers. The count of ring-billed was particularly poor. The total of 1,558 individuals was 87% below the 10-year average. This is the lowest total of individuals since 1985 and the lowest total of individuals per party hour since 1980. Gulls were nearly absent from inland counts and found only in small numbers along Lake Michigan. The less common gulls (Thayer's, Iceland, Glaucous, and Great Black-backed) were reported in nearly normal numbers. A record 8 Lesser Black-backed Gulls over 5 count was reported. Unlike other less common gulls, the Lesser Black-backed seems as likely to appear on inland counts as on a Lake Michigan count. Four Lesser Black-backed Gulls were documented from Lake Geneva. With its absence from this year's count, there has been a total of 1 count day Bonaparte's Gull over the past three count years. The Bonaparte's was once the third most common gull on the Wisconsin counts.

Doves—Both the Rock Pigeon and the Mourning Dove had strong counts. More Rock Pigeons were found per field party hour than any year except 1995. The Mourning Dove set record highs for total individuals (24,953) as well as for individuals found per field party hour. The Eurasian Collared-Dove is becoming an established species, with 16 birds reported over 3 counts.

Owls—Owls were found in numbers near their averages. Thirteen Snowy Owls were found over 11 counts. This is the best showing for the Snowy since 2001 (when 20 were found over 12 counts). Other northern species, such as the Northern Hawk Owl and the Great Gray Owl, were not reported. The Northern Saw-whet Owl for the fifth consecutive year had strong numbers (22 over 9 counts). Palmyra located 9 saw-whets, which is a single circle record.

Kingfishers—With 104 individuals over 49 counts, the Belted Kingfisher was found in average numbers.

Woodpeckers—While Downy and Hairy Woodpeckers continue to have stable numbers, the winter population of Red-bellied Woodpeckers continues to expand. The 2005 totals of 2,380 individuals over 91 counts are both record high and 44% above the 10-year average. The Pileated Woodpecker also placed well with numbers 31% above average. Both the Yellow-bellied Sapsucker and the Northern Flicker had record-shattering highs. The yellow-bellied set records for both individuals and counts (50 over 28 counts). The previous highs were set in 2003 (29 individuals over 15 counts). Similar numbers can be given for the Northern Flicker. The 394 individuals over 60 counts are both records. The total of 394 approaches double the previous high of 212 set in 2002. As is the custom, the Red-headed Woodpecker is the exception to great woodpecker numbers. Although improved from its record lows of 2004, the 2005 total (55 individuals over 23 counts) is 33% below a fast-sinking 10-year average.

Shrikes through Ravens—After a 2004 showing that was the weakest since 1979 and 36% below its 10-year average, the Blue Jay returned in 2005 with near record high numbers and 32% above its average. Both the American Crow and the Common Raven were found in normal numbers.

Larks—Aside from the phenomenal 2000 Count (with 10,764 Horned Larks), no count year approaches the lark numbers of 2005 (6,703 larks over a record high 69 circles). Other than the 2000 and the 2005 counts, the highest total of larks for a count year is 2,848 (set in 1999). The numbers for both 2000 and 2005 were padded by a statewide snow cover.

Chickadees, Titmouse, Nuthatches and Creepers—Although the Black-capped Chickadee was reported in average numbers, the Boreal Chickadee (as with many of Wisconsin's boreal species) fared less well. Phelps was the only circle reporting the Boreal. While Wisconsin's resident boreal species have shown poorly in recent count years, their counterparts (marginal southern species) have expanded their range. An example is the Tufted Titmouse. Previous to 1989, the titmouse was seldom found in triple digit numbers. In the years 1969 though 1988, its total count exceeded 100 individuals only in 1975 (with 108 being reported). Starting with 1989, its total count never fell below 124 individuals and, nearly each year, its numbers and range have increased. The 2005 Count was no exception to the pattern. The 665 Tufted Titmice reported over 38 counts are both record highs. The total of 665 individuals is a huge 68% above the 10-year average. Red-breasted Nuthatches were reported in nearly record-high numbers. But, unlike the 2004 Count, when this nuthatch was spread across the entire state (appearing on a record 95 of 96 counts), their numbers were more confined to the Northern Region. Of the 1,766 red-breasteds tabulated, 876 (or 50% of the total) came from the Northern Region. Clam Lake led the state with an impressive 177 such nuthatches.

Wrens and Kinglets—Another southern species that is presently increasing its numbers and range in Wisconsin is the Carolina Wren. The 2005 totals (22 over 15 counts) are both record highs by wide margins. The previous highs were 16 over 11 counts set in 1998. The Winter Wren likewise made a strong showing. Its totals (18 over 13 counts) are surpassed only by 2002 (30 over 17 counts) and 2004 (28 over 12 counts). For the third time in the last 6 count years, no Ruby-crowned Kinglet was encountered.

Thrushes—Although thrush species have been found in recent years in record high numbers, these recent record-setting years show minor numbers when compared with the huge totals of 2005. Never in the history of the WSO CBCs has there been a thrush year to compare with 2005. Some of this increase might be due to our continued mild winters; some of it might be due to the increasing abundance of buckthorn as a winter food source. The winter of 2005–2006 had a fantastic bounty of native and invasive fruits from among which these species could pick and choose. Wild grapes were especially plentiful. It has been noted that the bluebird nest box program in the state had record success in 2005 and that the impressive totals of bluebirds might be attributed to this program. One hopes the latter is the case

and that future winter landscapes will be brightened by this colorful bird.

In 2005, Eastern Bluebirds were found on 54 of 99 counts. This is 55% of the counts. Nothing similar to this has ever happened in the 67-year history of the WSO CBCs. The best previous year was 2003 when bluebirds were found on 20 of 100 counts (or 20% of the total). In the previous 66-year history of the CBCs, a total of 53 different count circles had historical records of bluebirds. The 2005 total of 54 counts reporting bluebirds is greater than the total of all counts reporting bluebirds over the previous 66 years. In the previous 66 years, a grand total of 1,082 Eastern Bluebirds had been tabulated (an historical average of slightly more than 16 birds per year). The 2005 count produced 779 Eastern Bluebirds. The previous statewide high of bluebirds had been 197 (set in 2003). The 2005 total of bluebirds comprises 42% of all the bluebirds ever found over 67 years of CBC history. Previous to 2005, the single circle high count of bluebirds had been 41 (set by Sauk City in 2003). In 2005, that single circle high was broken by both Sauk City (76) and Richland Center (49).

As it is with bluebirds, so was it with Hermit Thrushes. Never before has there been such an abundance of them. The 34 Hermit Thrushes reported over 19 counts are record highs by wide margins. The previous high for counts was 9 (set in 2003); the previous high for individuals was 27 (set in 2002). Only 4 previous count years had hermit totals better than 10. The American Robin joined other thrushes in a record setting year. The 71 circles reporting robins is record high; the 6,719 individuals reported are out done only by the fantastic count of 1998 (when 7,751 robins were found). In 2005, the American Robin was 125% above its 10-year average. Townsend's Solitaires were found at Baraboo and Lake Geneva. The total of 3 Solitaires over 2 counts match previous state highs. The Varied Thrush was found on 4 counts. The only year to produce more such thrushes was 1969 (6 over 5 counts).

Catbirds through Waxwings—Gray Catbirds were found at Appleton, Oshkosh, and Sturgeon Bay. A Northern Mockingbird was documented for Peshtigo and Brown Thrashers were noted at Burlington and Stevens Point. In tandem with the American Robin, the Cedar Waxwing had its 7th consecutive impressive count. This waxwing appeared on 70 counts, matching the record high set in 2002. The total of 6,834 individuals is second only to the 7,119 in 2002. Cedar Waxwing numbers were 68% above the 10-year average.

Warblers—The only warbler for 2005 was the Yellow-rumped, with 18 individuals over 12 counts. The Yellow-rumped Warbler has been reported every count year since 1972.

Towhees and Sparrows—Eastern Towhees were found at Beloit, Shiocton, and Woodland Dunes NE. This towhee has appeared each count year back to 1961. Unlike the 2004 count, when there was little snow and few sparrows, the 2005 count had a statewide cover of snow and record numbers of sparrows. Of the more common sparrows, the American Tree Sparrow was 37% above its 10-year average, the Song Sparrow 28% above average and the Dark-eyed Junco 35% above average. While the Song Sparrow set a record for number of counts (48), the junco was found in record

numbers of individuals and was second only to 2000 in the number of individuals found per field party hour. A Vesper Sparrow was documented for Sturgeon Bay. Savannah Sparrows were documented from Fremont, Hustisford, Milwaukee, and Palmyra. The Fox Sparrow easily outstripped all past count numbers. The Fox Sparrow was reported from 25 counts, which is better than double the former high of 10 counts set in 2001 and 2002. The total of 64 individuals is better than double the previous high. Only twice before have more than 20 Fox Sparrow been found in a count year. Those two years are 1989 (25) and 1999 (23). The White-throated Sparrow also showed in record numbers, with 222 reported over 44 counts. The 44 counts are record high, while the 222 individuals are third only to the 358 of 1997 and the 299 of 2002. In a similar fashion, the White-crowned Sparrow was reported on a record number of counts (10) and was bested in total individuals only by the count years of 2001, 2002, and 2003. A Harris's Sparrow was documented from Gurney.

Longspurs through Grosbeaks—As with many open-field species, Lapland Longspurs were found in record numbers and were an impressive 115% above their 10-year average. The 39 circles reporting longspurs were second only to the 45 of 2000. Snow Buntings also made a strong showing, being noticed in 63 circles. The only year with a better total of circles reporting buntings was 2000 with 67. Not meaning to sound like a broken record but the Northern Cardinal was also found in record-breaking numbers that were 22% above its 10-year average. Rose-breasted Grosbeaks were documented with excellent photographs from two counts—Appleton and Cable.

Blackbirds—Unlike many other groupings, blackbirds fared poorly. Of the more common blackbirds, the Red-winged Blackbird was 41% below its 10-year average, the Common Grackle 56% below average, and the Brown-headed Cowbird 64% below average. The cowbird had its lowest totals since 1997. Helped by 200 individuals from Waterloo and another 60 from Horicon Marsh, the 2005 total of 265 Brewer's Blackbirds was bested only by the spectacular find of 1,277 in 2001. Meadowlarks (36 over 10 counts) did well when compared to recent years.

Finches—Although the less common species in this grouping (such as the Pine Grosbeak, the two crossbills, and the Evening Grosbeak) were found in less than normal numbers, the more common species were found in record-breaking totals. The Purple Finch was found statewide, appearing within 85 of 99 circles. The only year with better coverage was 1983, when this finch was found on 82 of 86 counts. The total of 3,606 individuals was a huge 170% above the 10-year average. In only three other count years have more than 2,000 Purple Finch been reported. Those years are 1992 (2,009), 1994 (2,398) and 1998 (2,689). With 12,723 individuals over 87 counts, the House Finch was record high in both categories. The previous high had been 10,881 set in 2003. The Pine Siskin appeared in numbers 161% above its 10-year average. The only years to show more siskins than the current 5,460 are 1980 (7,887), 1987 (10,407), and 1989 (15,001). The American Goldfinch has now appeared in record-breaking numbers

for two consecutive counts. In 2004, the 21,498 goldfinch reported were record high and 41% above the 10-year average. In 2005, the 24,301 goldfinch reported were record high and 49% above the 10-year average. It was a curious year for the Common Redpoll. It is the pattern for this redpoll to be common in odd-numbered count years and scare in even-numbered count years. In 2003 (an odd-numbered count year), the redpoll was common (as it should be). In 2004 (an even-numbered count year), when redpoll numbers should have been low, it had high numbers not seen in many years. The only previous experience with redpolls being common two counts in succession (and with a normal pattern of common and odd before those two count years) was on the 1985 and 1986 counts (both with high redpoll numbers). The next two counts (1987 and 1988) had low redpoll numbers. The same pattern is showing this time. In 2005 (which should be a strong year), the redpoll was reported in weak numbers. If this pattern continues, the 2006 count should also show weak redpoll numbers. As can be expected when Common Redpoll numbers are low, there were no reports of Hoary Redpolls. This is the first odd-numbered count year since 1989 in which a Hoary has not been reported.

House Sparrow—While the House Sparrow remains one of the most abundant birds on the count, its numbers continue to dwindle year after year. The average of 10.8 House Sparrows per field party hour in 2005 is one of the lowest on record. Previous to 1991, no count year produced less than 17 House Sparrows per party hour. Since 1991, no count has gone over 15 individuals per party hour. Previous to 1976, no count year showed less than 20 House Sparrows per party hour. Many years the average was in the high 20s. Judging by count numbers alone, the House Sparrow may have lost half its population density over the past 30 years.

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 top of this article.

Adams (34); Jct. Hwys. 8th Drive and Beechnut Rd. (3 miles E. of Hwy. 13 and Beechnut), Adams Co.; Darwin Tiede, 2809 Schaefer Cir., Appleton, WI 54915; 920. 997. 9418; ctiede@new.rr.com. **Appleton** (61); Jct. Hwys. 47 and 125, Outagamie Co.; John Shillinglaw, 1952 Palisades Dr., Appleton, WI 54915; 920. 731. 4222; jashlaw@aol.com. **Arpin** (31); ½ mi. N of Jct. Hwy. C and Oak Rd., Wood Co.; Dennis Seevers, 5969 Butternut Rd., Arpin, WI 54410; 715. 569. 4260; rockcut@tznet.com. **Ashland** (3); Jct. Hwy. 2 and Sanborn Ave., Ashland; Dick Verch, 906 Ellis Ave., Ashland, WI 54806; 715. 682. 5453; dverch@charter.net. **Baraboo** (92); Jct. City View Rd. and Hwy. A, Baraboo; Scott Swengel, 909 Birch St., Baraboo, WI 53913; 608. 356. 9543; swengel-a.s.@earthlink.net. **Bayfield** (2); T 50 N, R 5 W, S-22; Albert Roy, Jr., 906 Water

St., Ashland, WI 54806; 715. 682. 5334. **Beloit** (88); 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** (27); 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** (90); 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; willard@fieldmuseum.org. **Bridgeport** (98); Hwy. 18 bridge over Wisconsin R.; Dennis Kirschbaum, 1505 E. Parrish St., Prairie du Chien, WI 53821; 608. 326. 2718; kad9801@mhtc.net. **Brodhead** (89); Jct. of Golf Course Rd. and Sugar River Trail, Green Co.; Quentin Yoerger, 6831 N. Francis Dr., Evansville, WI 53536; 608. 882. 6078; qyoerger@dhfs.state.wi.us. **Brussels** (46); 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** (73); Jct. Hwy. A and Crossway Rd., Racine Co.; John Bielefeldt, Box 283, Rochester, WI 53167; 262. 514. 2376; ternblack@yahoo.com. **Cable** (5); Jct. Hwys. M and D, Bayfield Co.; Cully Shelton, Cable Natural History Museum, P.O. Box 416, Cable, WI 54821; 715. 798. 3890; cully@cablemuseum.org. **Caroline** (40); 2 miles W of Caroline; Janet Hewitt, E1074 Paulson Rd., Iola, WI 54945; 715. 445. 2489. **Cassville** (99); Jct. Garden Prairie and Muskellunge Rds., Grant Co.; David Sikorski, 449 N. 39th St., Milwaukee, WI 53208; 414. 379. 9650; akela317@aol.com. **Cedar Grove** (53); Jct. Hwy. G and Palmer Rd., Sheboygan Co.; Tom Uttech, 4305 Hwy. O, Saukville, WI 53080; 262. 675. 6482; tmuttech@prodigy.net. **Chippewa Falls** (20); Jct. Hwys. 178 and S, Chippewa Co.; Charles A. Kemper, 727 Maple St., Chippewa Falls, WI 54729; 715. 723. 3815; cak@bluebuzz.net. **Clam Lake** (6); 7 miles SE of Clam Lake; Keith Merkel, 11722 Robin Rd., Marshfield, WI 54449; 715. 384. 2383; keith.merkel@wick-mail.com. **Clyde** (94); 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** (82); 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** (87); Cooksville, Rock Co.; David and Anna Marie Huset, 242 W. Church St., Evansville, WI 53536; 608. 882. 5648; amdhuset@eishome.com. **Durand** (19); Jct. Hwys. 25 and DD 3 miles N of Durand, Dunn Co.; Charles A. Kemper, 727 Maple St., Chippewa Falls, WI 54729; 715. 723. 3815; cak@bluebuzz.net. **Ephraim** (48); Hwy. A 3 miles S of Jct. with Hwy. 42, Door Co.; Karen Newbern, P.O. Box 152, Baileys Harbor, WI 54202; 920. 839. 2802; karen@ridgesanctuary.org. **Fifield** (7); Fifield Post Office; Thomas Nicholls, W7283 Walnut St. P.O. Box 63, Fifield, WI 54524; 715. 762. 3076; nicho002@umn.edu. **Florence** (12); just NE of center of Section 19, Town of Commonwealth, Florence Co.; Kay Kavanagh, 801 Lakeview Dr., Niagara, WI 54151; 715. 589. 2299; kkav@uplogon.com. **Fond du Lac** (63); 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** (86); Jct. Hwy. K and Hackbarth Ave., Jefferson Co.; Richard Wanie, W5920 Lee Dr., Fort Atkinson, WI 53538; 920. 563. 6274; crwanie@compufort.com. **Fremont** (37); 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** (22); 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** (15); 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** (44); Jct. Allouez and S. Webster Aves.; John Jacobs, 2373 Libal St., Green Bay, WI 54301; 920. 432. 2438; Jacobs-rs@yahoo.com. **Green Lake** (76); 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** (4); Hwy. 169 in Gurney; Joan Elias, 11140 W. Edwards Rd., Saxon, WI 54559; 715. 893. 2358; joan-elias@nps.gov. **Hales Corners** (56); 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** (69); Jct. Hwys. 60 and 83 in Hartford; Bob Domagalski, W140 N8508 Lilly Rd., Menomonee Falls, WI 53051; 262. 251. 6259; rcd@execpc.com. **Hayward** (too few party hours); boat landing at Phipps near Hwy. 63, Sawyer Co.; Cully Shelton, Cable Natural History Museum, P.O. Box 416, Cable, WI 54821; 715. 798. 3890; cully@cablemuseum.org. **Herbster** (too few party hours to be valid in 2005); Hwy. 13, 1 mile W of Herbster; Phyllis Johnson, P.O. Box 249, Cornucopia, WI 54827; 715. 774. 3600; phyllisjohnson@mailstation.com. **Holcombe** (21); Chippewa-Rusk county line, 1 mile E of Hwy. 27; Charles A. Kemper, 727 Maple St., Chippewa Falls, WI 54729; 715. 723. 3815; cak@bluebuzz.net. **Horicon Marsh** (80); Jct. Main Ditch and Main Dike in Refuge; Bill Volkert, DNR, N7725 Hwy. 28, Horicon, WI 53032; 920. 387. 7877; brchwood@thesurf.com. **Hudson** (17); Afton, MN; Joseph Merchak, 1723 Laurel Ave., Hudson, WI 54016; 715. 531. 0542; jmerchak@ci.inver-grove-heights.mn.us. **Hustisford** (81); Jct. Hwys. CJ and M, just east of Clyman; Bob Domagalski, W140 N8508 Lilly Rd., Menomonee Falls, WI 53051; 262. 251. 6259; rcd@execpc.com. **Kenosha** (58); Jct. Hwys. 158 and 104th Ave. (Kenosha Co. only); Ron Hoffmann, Box 886, Kenosha, WI 53141; 262 654. 5854. **Kettle Moraine** (68); 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** (49); Jct. Hwys. 42 and D, Kewaunee Co.; William Mueller, 1242 S. 45 St., Milwaukee, WI 53214; 414. 643. 7279; iltlawas@earthlink.net. **Kickapoo Valley** (96); Jct. Hwys. T and 131, Monroe Co.; Eric Epstein, 22505 Kensington Rd., Norwalk, WI 54648; 608. 823. 7837; tickcity@centurytel.net. **La Crosse** (29); La Crosse Courthouse; Rick Kinzie, 55787 Kinzie Rd., Gays Mills, WI 54631; 608. 734. 3136; huey@mwt.net. **La Farge** (97); La Farge, Vernon County; Cathy Pierce, E14214 County Road D, La Farge, WI 54639; 608.625.2084;

cathy.pierce@organicvalley.com. **Lake Geneva** (74); Interlaken Lodge, Hwy. 50 (approx. 2 M east of Jct. with Hwy 67); Nancy Kullman, 812 Geneva St., Lake Geneva, WI 53147; 262. 245. 1179; nkbk@charter.net. **Lakewood** (13); Jct. of Co. T and Star Lake Rd.; Jerry Smith, 6865 Fredrickson Rd., Lena, WI 54139; 920. 829. 6353; kajers@ez-net.com. **Madison** (84); State Capitol; Cheri Carbon, 2714 Harvard Dr., Madison, WI 53705; 608. 233. 0024; cbcarbon@wisc.edu . **Manitowish Waters** (8); Jct. Hwys. 51 and W, Vilas Co.; John Bates, 4245 Hwy. 47, Mercer, WI 54547; 715. 476. 2828; Manitowish@centurytel.net. **Meadow Valley** (33); Jct. Jackson, Juneau and Wood cos.; Andy Paulios, 4622 Yahara Dr., McFarland, WI 53558; 608. 838. 1133; andypaulios@dnr.state.wi.us. **Medford** (23); 2.5 miles NE of Whittlesey, Taylor Co.; Susanne Adams, 850 N. 8th St., Medford, WI 54451; 715. 748. 4875, ext. 36; smadams@fs.fed.us. **Merrill** (not enough field hours in 2005); Jct. South End Rd. and Hwy. 107, Lincoln Co.; Sherry Frazier, W4990 Fowler Dr., Merrill, WI 54452; 715. 536. 7969; racin64@whoever.com. **Milwaukee** (55); Jct. Port Washington Rd. and Hampton Ave., Glendale; Marilyn Bontly, 901 E. Fairy Chasm Rd., Bayside, WI 53217; 414. 228. 0314; mbontly@wi.rr.com. **Montello** (77); Harrisville, Marquette Co.; Daryl Christensen, P.O. Box 182, Montello, WI 53949; 608. 296. 3068; gr8fish@palacenet.net. **Mosinee** (count cancel not taken in 2005); 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** (91); Jct. Hwys. 78 and Bus. 18/151, Mount Horeb; Kenneth Wood, 3971 Forshaug Rd., Black Earth, WI 53515; 608. 767. 3343; kwwood@wisc.edu. **Nelson** (18); 1 mile S of Jct. Hwys. I and D; Charles A. Kemper, 727 Maple St., Chippewa Falls, WI 54729; 715. 723. 3815; cak@bluebuzz.net. **New Franken** (45); Jct. Hwys. P and SS, Brown County; Ed Houston, 2818 Sugarbush Ct., Green Bay, WI 54301; 920. 339. 3273; ezehouston@aol.com. **New Richmond** (16); 2 miles E of Boardman, St. Croix Co.; Joseph Merchak, 1723 Laurel Ave., Hudson, WI 54016; 715. 531. 0542; jmerchake@ci.inver-grove-heights.mn.us. **Norske** (39); 1 mile E of Jct. Hwy P and Rustad Rd., Waupaca Co.; Janet Avis Hewitt, E1047 Paulson Rd., Iola, WI 54945; 715. 445. 2489. **Oconomowoc** (70); Hwy 67, 2 miles N of Oconomowoc; Marlyn Winter, 323 Lawn St. #7, Hartland, WI 53029; 262. 367. 6819; birdymom44@aol.com. **Oshkosh** (62); Jct. Hwys. 21 and 41 in Oshkosh; Thomas Ziebell, 1638 White Swan Dr., Oshkosh, WI 54901; 920. 235. 0326; cziebell@new.rr.com. **Owen** (24); Hwy. D 2.5 miles N of Hwy. 29, Clark Co.; Jon Zellmer, 808 West Blodgett St., Marshfield, WI 54449; 715. 384. 8849; zee@commplusis.net. **Palmyra** (72); 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** (78); 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@jvlnet.com. **Pensaukee** (43); Pensaukee; Thomas Erdman, 4094 Hwy. S, Rte. 2, Oconto, WI

54153; 920. 465. 2713; erdmant@uwgb.edu. **Peshtigo** (59); Harmony Corners, Marinette Co.; Jerry Smith, 6865 Fredrickson Rd., Lena, WI 54139; 920. 829. 6353; kajers@ez-net.com. **Phelps** (9); 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** (67); Jct. Hwys. 23 and C, Sheboygan Co.; Robert Brigham, 851 Chaplin Ct., Plymouth, WI 53073; 920. 892. 7716, rbrigham@wi.rr.com. **Poynette** (83); Jct. Hwys. 51 and CS; Mark and Sue Martin, Goose Pond Sanctuary, W7468 Prairie Lane, Arlington, WI 53911; 608. 635. 4160; goosep@chorus.net. **Racine** (57); 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** (79); 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. **Rhinelander** (11); Rhinelander; Vanessa Haese-Lehman, 333 E. Rives St., Rhinelander, WI 54501; 715. 369. 3708; vhaeselehman@printpack.com. **Richland Center** (95); 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** (54); 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** (75); 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** (93); 2.5 miles SE of Witwen, Sauk Co.; Karl and Dorothy Legler, 429 Franklin St., Sauk City, WI 53583; 608. 643. 4926; karlndot@chorus.net. **Seymour** (60); Jct. Hwy. C and Culbertson Rd., Outagamie Co.; Daryl Tessen, 3118 N. Oneida, Appleton, WI 54911; 920. 735. 9903; bhaunts@core.com. **Shawano** (41); 3 miles N of Lunds, Shawano Co.; Larry Riedinger, Box 11, Caroline, WI 54928; 715. 754. 2995; lgkriedinger@yahoo.com. **Sheboygan** (52); Jct. 10th St. and Erie Ave., Sheboygan; Scott Baughman, 3043 Rolling Meadows, Sheboygan, WI 53083; 920. 459. 9845; baughman@milwpc.com. **Shiocton** (42); 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, 4622 Yahara Dr., McFarland, WI 53558; 608. 264. 8528; andypaulios@dnr.state.wi.us. **Spencer** (25); Jct. Hwys. F and 153, Marathon Co.; Janice Luepke, B-894 Eau Pleine Rd., Spencer, WI 54479; 715. 659. 3910; luepke@pcpros.net. **Spruce** (14); 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** (35); Old Main Bldg., U.W.-Stevens Point; Nancy Stevenson, 1890 Red Pine Ln., Stevens Point, WI 54481; 715. 341. 0084; gypsysgma@yahoo.com. **Stockbridge** (64); 3 miles SE of Stockbridge; Carroll Rudy, W3866 Hwy. H, Chilton, WI 53014; 920. 849. 9021; mcrudy@dotnet.com. **Sturgeon Bay** (47); Jct. Hwys. 57 and P, Door Co.; Charlotte Lukes, 3962 Hillside Rd.,

Egg Harbor, WI 54209; 920. 823. 2478; lukes@dcwis.com. **Three Lakes** (10); 6 miles E of Three Lakes; Bill Reardon, 1700 Open Acres Ln., Eagle River, WI 54521; 715. 479. 8055; breardon@nnex.net. **Trempealeau** (28); Jct. Hwy. K and Fremont St., Trempealeau; Al Wernecke, 23787 Trail View Lane, Trempealeau, WI 54661; 608. 534. 6330; ajja701@triwest.net. **Waterloo** (85); 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** (71); Jct. Hwy. D and Brookhill Rd., Waukesha Co.; Walter E. Hahn, 213 W. Newhall Ave., Waukesha, WI 53186; 262. 547. 1004. **Waupaca** (38); Jct. Hwy. 49 & Smokey Valley Rd, Waupaca Co.; Daryl Tessen, 3118 N. Oneida St., Appleton, WI 54911; 920. 735. 9903; bhaunts@core.com. **Wausau** (30); Jct. Grand Ave. and Thomas St., Wausau; Jim Pellitteri, 9203 Riverbirch St., Rothschild, WI 54474; 715. 359. 9708; jjpellitteri@co.marathon.wi.us. **Wautoma** (36); Mount Morris, Waushara Co.; Chip Hutler, W8733 State Rd. 21, Wautoma, WI 54982; 920. 787. 2479; mecan@network2010.net. **Willard** (26); 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** (32); Wisconsin Rapids Airport; Darwin Tiede, 2809 Schaefer Circle, Appleton, WI 54915; 920. 997. 9418; ctiede@new.rr.com. **Woodland Dunes NE** (50); Mishicot; **NW** (65); Menchalville; **SE** (51); 2 mi. S of Newtonburg; **SW** (66); 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.

Blue-gray Gnatcatcher photographed by John Van Den Brandt.

Preening Great Egret as seen by John Van Den Brandt.

Re-Expansion of the Tufted Titmouse as Measured by Wisconsin Christmas Bird Counts

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The Tufted Titmouse appeared to be expanding rapidly based on data from Christmas Bird Counts (CBCs) in Wisconsin throughout the 1960s. But after 1968, the populations began decreasing and hit their lowest point in 1979. Why?

The Tufted Titmouse *(Parus bicolor)* was a bird unknown in Wisconsin before 1900. It moved slowly throughout the state until the 1920s and then began to rapidly expand in numbers and areas of the state (Robbins 1991). While the titmouse has been recorded in approximately 90% of Wisconsin's counties, it has been located primarily in the Driftless Area of southwest Wisconsin, with another population in Chippewa County. CBC data from 1960–2004 show that the Tufted Titmouse was found on counts as far north as Brule, Antigo, Ephraim, and Rhinelander. When compared against the rest of the state, these few reports are the extreme exceptions and certainly not the rule.

Methods

Each year, Christmas Bird Counts (CBC) are held during a three-week period from December into January. A point is chosen on a map–usually the center of a town or an intersection—then a circle is drawn 7.5 miles from the center point. The circle encompasses 162.5 square miles. A compiler draws together a group of counters and each is assigned an area, all of which need to be counted on the same day. The total miles, total party hours, and every bird identified are tabulated at the end of the day. Preferably, the same center point is used from year to year to gather a consistent count of that area's population from year to year.

I have used data from CBCs between 1960 and 2004 to chart the population of Tufted Titmice in Wisconsin. The information that I used was published in *The Passenger Pigeon* (Winkler 1960, Bauers 1961–1965, Hilsenhoff 1965–2000, Domagalski 2000–2005).

The maps that I have used are based

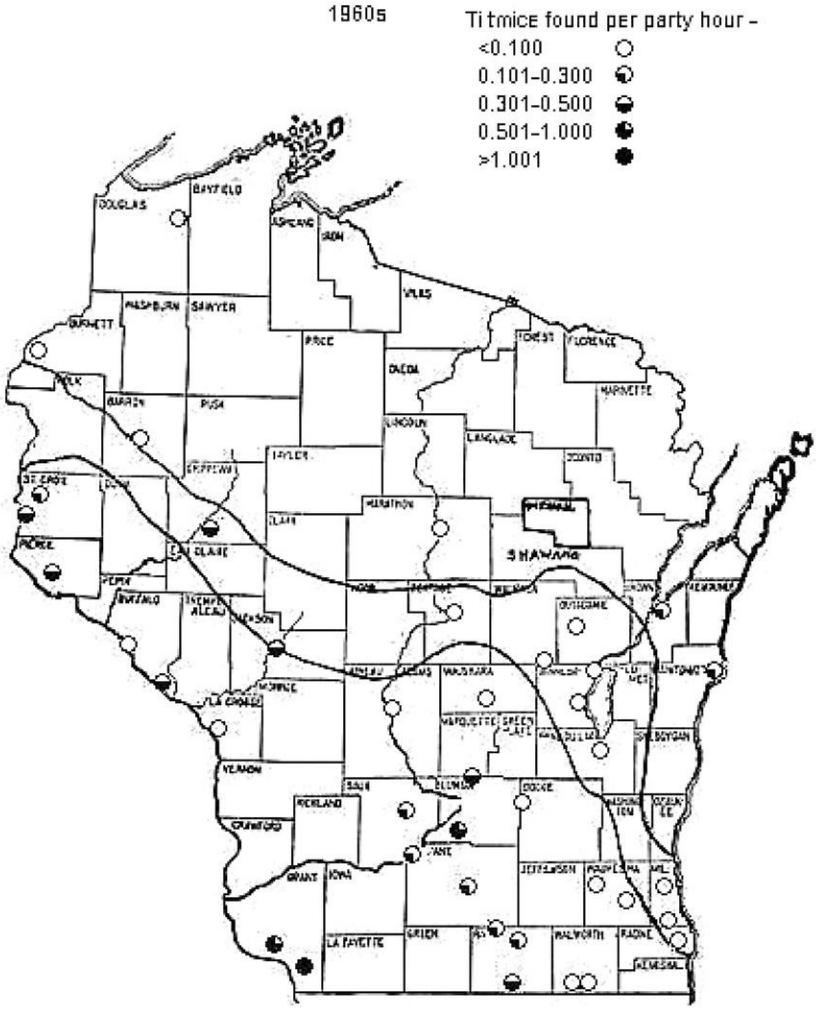

Figure 1. Density of Tufted Titmice in Wisconsin as reported on Christmas Bird Counts—1960s.

on the Tension Zone (Curtis 1959). South and west of the Tension Zone lie southern hardwoods, while north and east are mainly northern hardwoods. I have also continued where Howard Young (1967) left off with his research *"The Tufted Titmouse—An analysis of Christmas Bird Counts"* and attempted to duplicate his methods. I have broken the data down decade by decade. The years for each group are 1960–1969, 1970–1979, 1980–1989, 1990–1999, and 2000–2004.

Results

Figures 1–5 show the location of CBCs that documented a titmouse sighting in each decade or fraction thereof (2000–2004). If a single titmouse was found on a count, a circle will be displayed for that CBC. Each

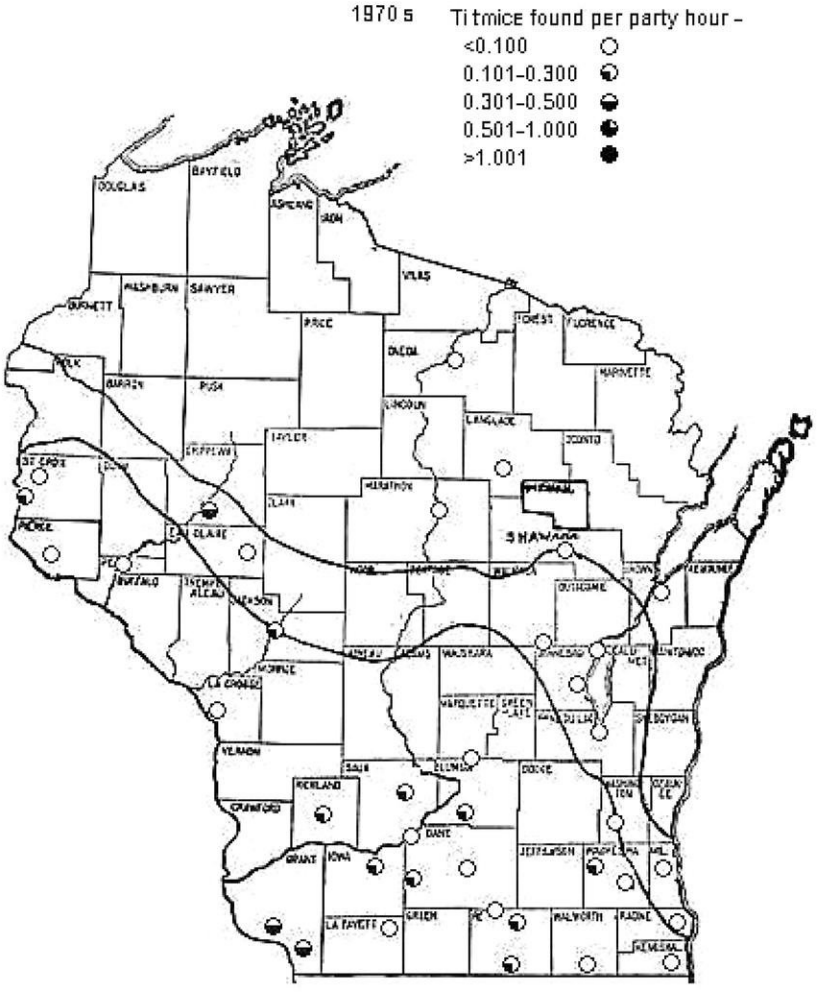

Figure 2. Density of Tufted Titmice in Wisconsin as reported on Christmas Bird Counts—1970s.

count that had a titmouse was listed, and then the total party hours were counted. The total number of titmice was then divided against the total party hours for the decade for each count to give the result shown on the maps. I set a cutoff point where data are not representative enough for these purposes. For the 1960s, I used 30 total hours as the cutoff point, but for all other decades, 50 hours were used. This was necessary because accurate hours for 1965–66, and 1969 were not available.

In the count periods (1960–2004), there were 3,375 counts conducted, recording 7,105 titmice. North and east of the Tension Zone, 31 counts out of 1,289 recorded a titmouse for a count percentage of 2.3%. In the Tension Zone, there were 119 counts out of 698 with a titmouse in 17% of the

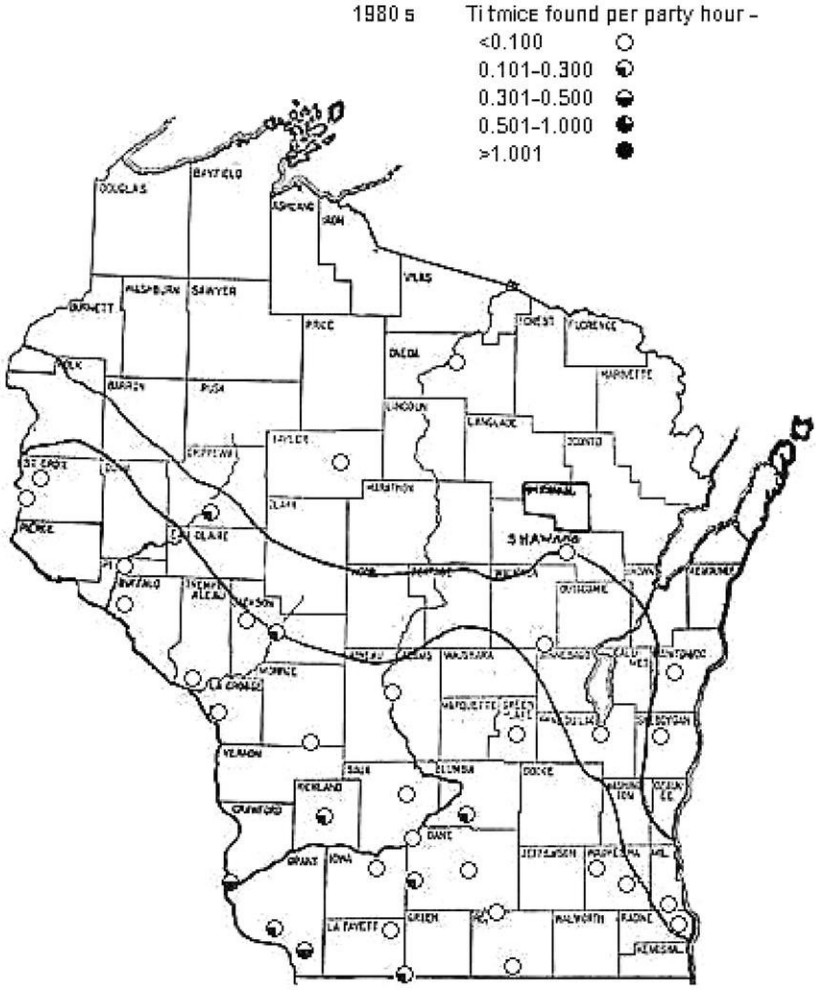

Figure 3. Density of Tufted Titmice in Wisconsin as reported on Christmas Bird Counts—1980s.

counts. If Chippewa Falls is removed from this total, 75 counts recorded titmice out of 653 for a count percentage of 11.5%. Green Bay recorded 25 titmice in 1972, but after discussion with Bob Domagalski, I concluded there is no documentation for such a strange and improbable event, so this record has been discarded. Green Bay also counted 12 in 1960, but this total was included. South and west of the Tension Zone, 1,388 counts had titmice recorded on 664 of them, for a count percentage of 47.8%.

Out of the 7,105 titmice counted in the count period, there were 71 counted on the 31 counts north and east of the Tension Zone. Disregarding Chippewa Falls, there were 164 titmice counted on the 84 counts within

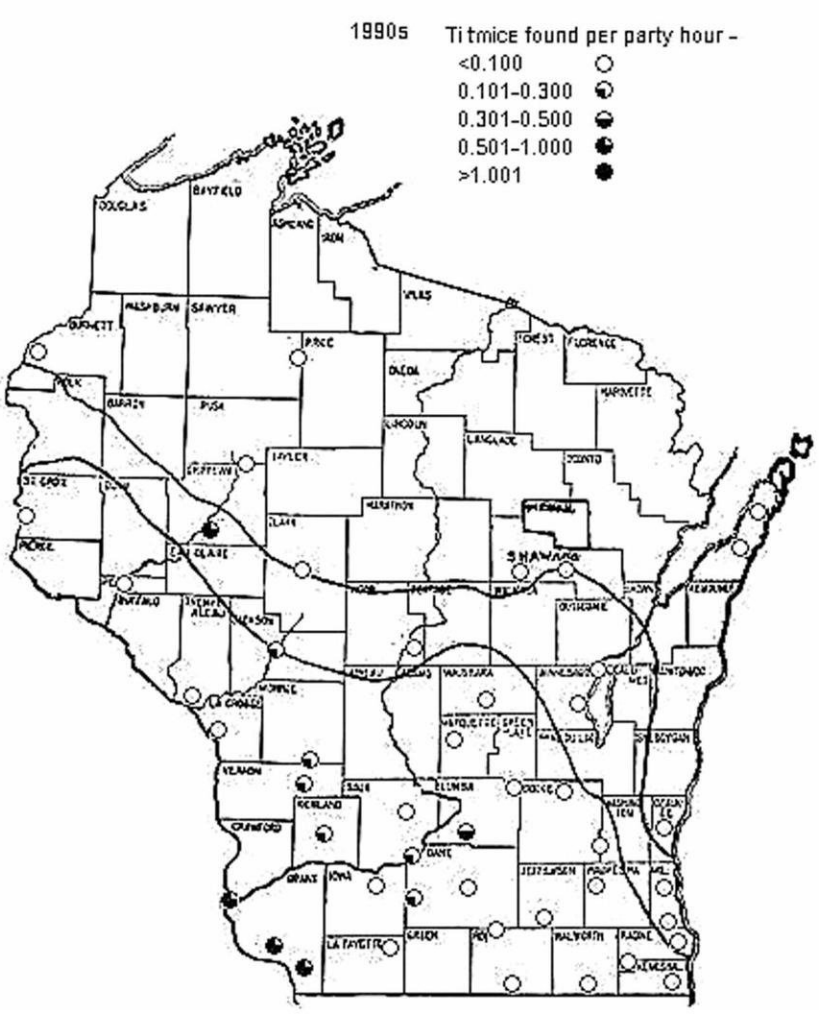

Figure 4. Density of Tufted Titmice in Wisconsin as reported on Christmas Bird Counts—1990s.

the Tension Zone. That leaves 86.9% of all titmice counted south and west of the Tension Zone.

The highest individual counts prior to 2001 had fewer than 50 individuals except for Bridgeport (58 in 1993, 79 in 1998 [unpublished; personal communication from Dennis Kirschbaum, the current keeper of the Bridgeport records], and 65 in 1999); Mt. Horeb (56 in 2000); and Poynette (55 in 1999). Since 2001, there have been five counts with over 100 Titmice: Mt. Horeb (102 in 2001, 107 in 2002, 111 in 2003, and 121 in 2004) and Bridgeport (107 in 2001).

The highest per hour average for a count in any decade has been Cornelia in the 1960s with a 1.378 and Bridgeport with 1.474 in 2000–2004.

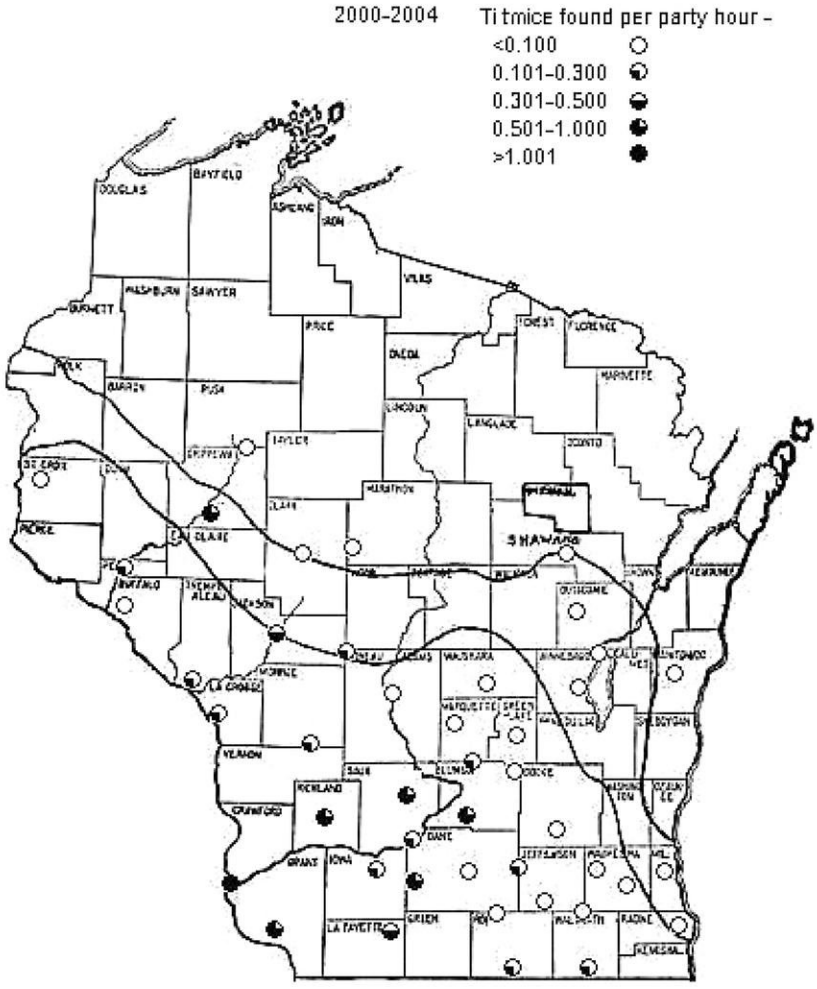

Figure 5. Density of Tufted Titmice in Wisconsin as reported on Christmas Bird Counts—2000–2004.

Other excellent per decade count averages are shown in Table 1.

Tufted Titmouse numbers peaked in the 1960s with high per hour averages in 1961 (0.1542) and 1968 (0.1427) and with individuals being found on 37% and 41.7% of all counts conducted respectively. The numbers then began a slow descent before hitting bottom in 1979 with a 0.0106 per hour average and having been found on only 10.5% of all counts. Numbers staggered through the 1980s before the start of a resurgence in 1989. Since then, the titmouse has rebounded almost to the same levels found in 1968. Figure 6 shows the per hour average from 1960–2004. Figure 7 shows the percentage of counts in which the titmouse was found. Table 2 shows the

Table 1.

Years and place	Titmice per hour of observer effort	Years and place	Titmice per hour of observer effort
1960–1969		**2000–2004**	
Beetown	0.621	Baraboo	0.577
Lodi	0.516	Cassville	0.881
		Chippewa Falls	0.837
1990–1999		Mount Horeb	0.831
Platteville	0.598	Poynette	0.704
Bridgeport	0.794	Richland	0.552
Cassville	0.638		
Chippewa Falls	0.702		

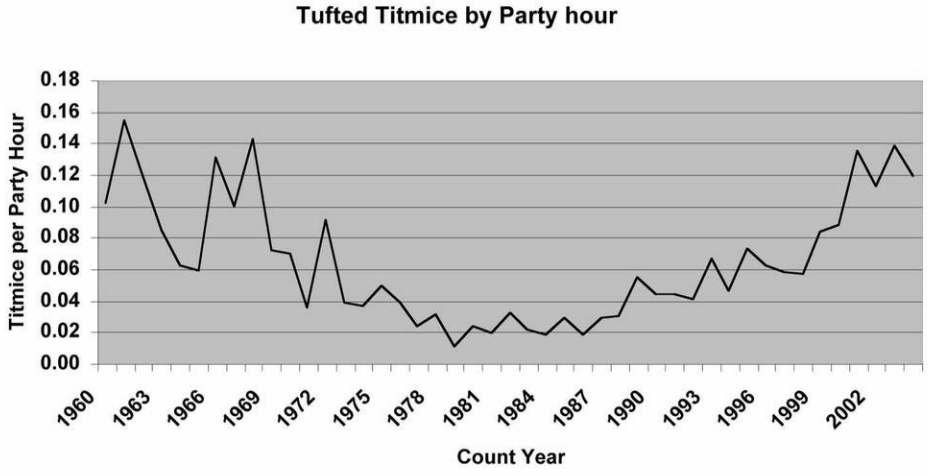

Figure 6.

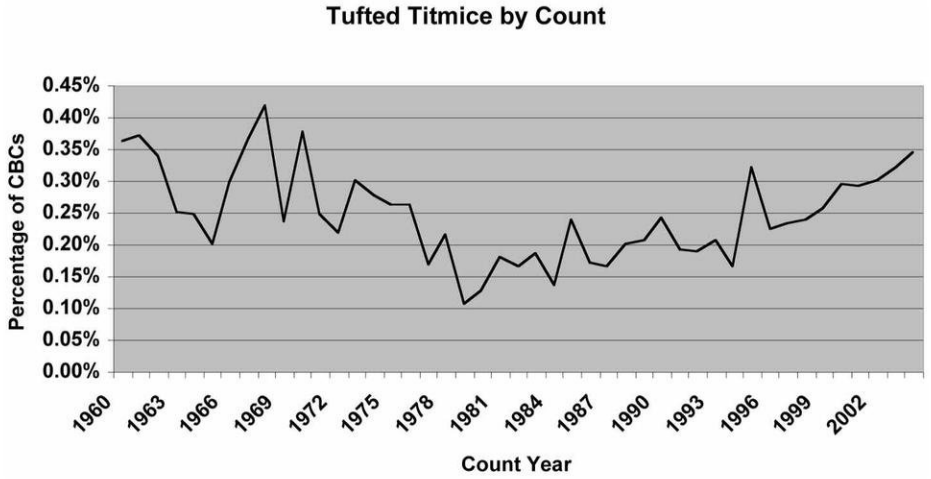

Figure 7.

Table 2.

Decade	Titmice/Hour
2000-2004	0.1197
1990-1999	0.0537
1980-1989	0.0284
1970-1979	0.0320
1960-1969	0.1064

Table 3.

Decade	Count Percent
2000–2004	31.0
1990–1999	22.6
1980–1989	17.7
1970–1979	23.8
1960–1969	30.3

Table 4. Data for Chippewa Falls CBCs

Decade	Average/Count	Titmice/Hour
2000–2004	28.8	0.8372
1990–1999	21.0	0.7023
1980–1989	9.9	0.2938
1970–1979	9.8	0.3764
1960–1969	6.9	0.2974

average titmouse per hour by decade for all Wisconsin CBCs. Table 3 shows the percentage of CBCs by decade that recorded a titmouse.

Chippewa Falls has consistently recorded some of the highest totals of titmice found for Wisconsin CBCs. In the 45-year period, titmice were recorded on 44 of 45 counts with the missed year represented by a count week find in 1979. Table 4 shows the per hour average on Chippewa Falls CBCs.

Discussion

There is no question that the range of the Titmouse expanded throughout the 1960s but then crashed by 1979. The question is why? I thought perhaps it was climatological at first, but after reviewing the climate records from Southwest Wisconsin and Madison, I can find no correlation. The winters of 1970–1971 and 1977–1978 were severe with snowfalls exceeding 60 inches and over 30 days below 0°F. However, the titmouse numbers for 1978 were higher than 1977 counts. 1970–1971 was a fairly cold snowy winter, but the numbers in 1972 were up 62% from the previous year.

I then thought that perhaps the weather during breeding season was colder or wetter, but again, there was no direct link. Even if a spring were cool and had above average rainfall, the following winter's CBC would not follow any pattern. 1973 was a very wet spring for Southwest Wisconsin with 17 inches of precipitation compared to a normal of 9 inches, and the CBC that winter had a significant decrease, but the 1990s had above-average precipitation in '91, '93, '95, '98, and '99 with no significant decreases for titmice in the following CBC. 1993 and 1995 actually had very good increases on those years' CBCs.

Confused now, I checked the Audubon CBC website and was as-

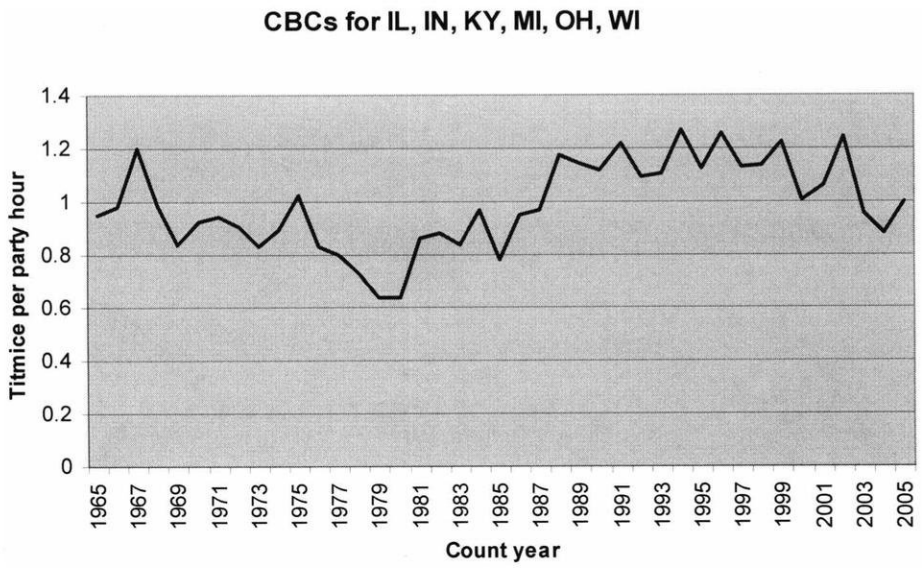

Figure 8.

tounded by the results. The Midwest showed a similar pattern to Wisconsin's. Figure 8 is a composite of the CBCs conducted between 1965 and 2004 for Illinois, Indiana, Kentucky, Michigan, Ohio, and Wisconsin. The graph is generated on the website when one enters the parameters.

In Wisconsin, St. Croix and Pierce Counties in the central-western part of the state had a nice population as shown in Hudson and New Richmond. In the 1960s, Hudson reported titmice on 10 of 10 counts for an hour per party average of 0.351, and New Richmond reported titmice on 5 of 9 for a 0.119 average. In the 1970s, Hudson reported the species on 8 of 10 counts for a 0.11 average and New Richmond reported it on 3 of 10 counts with 3 individuals. Since 1980, these 2 counts have reported titmice on 6 out of 32 counts with 8 individual birds. From 1974–1998 Minneapolis has expanded from 2 million to 3 million residents. Their land use has increased from 393,000 acres to 623,000 acres in the same time span. Could this rapid urbanization have a direct impact on the titmouse population just across the river? I do not know if the increased feeder potential would offset the loss of habitat. Minneapolis' forest cover decreased from 17% to 15% during that period (US EPA). Perhaps the growth pushed the titmouse into the Chippewa Falls area?

I also looked into exotic species impacting the populations of Tufted Titmice, which are cavity nesters. House Sparrow *(Passer domesticus)* numbers in Wisconsin averaged about 40 birds per party hour until 1975. They then dropped to about 25 until 1990, and have been at about 15 birds per hour until 2004. European Starling *(Sturnus vulgaris)* numbers averaged around 15 until 1969. They then jumped to around 50 per hour until 1984 before dropping back to around 20 per hour,

which has remained somewhat constant through 2004. Could the starling have out-competed the titmouse for nesting? There was a massive starling roost in Milwaukee from 1970–1984 that probably biases Audubon's results high, but that would have no effect on the titmouse population in southwest Wisconsin. It does not appear that the starlings' statewide numbers increased outside of Milwaukee, and Madison's CBC results show that the starling count was higher in the 1960s at 25 birds per hour than the period 1975–1987 which showed 17 birds per hour.

I cannot say with any certainty what caused the Tufted Titmouse population decline and subsequent expansions. It appears that this event was not restricted to Wisconsin alone. From the data generated on Audubon's CBC, the region west of the Appalachian Mountains and north of Tennessee experienced a similar decline with the low point coming in 1978–1980. East of this area, there was a jump in numbers during this period with a significant decline in 1985 before rebounding; perhaps there was a massive influx from the west into new territory? By 2002, all regions, with the exception of the plains states, reported very high numbers once again.

Acknowledgments

Many thanks to Bob Domagalski for his tireless efforts to keep the state's historical records straight and for always being willing to answer any question. Also thanks to John Jacobs of Green Bay, Charles Kemper of Chippewa Falls, and Dennis Kirschbaum of Bridgeport for answering questions I had about their respective CBCs. And MANY thanks to those that have kept such good records over the years, making it easy for the rest of us to look through their data in a simple manner.

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Wisconsin State Climatology Office; http://www.aos.wisc.edu/%7Esco/

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Red-shouldered Hawk by John Van Den Brandt.

An Estimate of the Number of Autumn Stopover Migrants in the South Kettle Moraine in 2005

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Survival and lifetime reproductive success of migratory birds depend not only on the availability of serviceable habitats on breeding and wintering grounds but also on the spatial distribution, kinds, amounts, and qualities of stopover habitats encountered en route during migrations (Hutto 1998, Moore 2000). Population trends and conservation strategies for migratory birds will thus also depend in part on recognizing, documenting, and protecting the values of stopover habitats, be they large or small in public or private ownerships (Weise 1971, Hutto 2000, Mabey and Watts 2000, Mehlman et al. 2005).

Methods for estimating the numbers of avian migrants or the relative abundance of individual species among migrant birds, with Wisconsin examples, may include:

- mist-netting or other trapping and banding of grounded migrants (Mueller and Berger 1967, Nicholls et al. 2001) or passing migrants such as raptors (Mueller et al. 2004);
- salvage of passing migrants killed at transmission towers (Kemper 1996) or other obstacles (Kumlien 1888);
- direct diurnal observation and counts of grounded or passing migrants (Hilsenhoff 2002, Mueller et al. 2006);
- remote monitoring of relative abundance (via acoustic signatures) and numbers of passing nocturnal migrants emitting flight calls (Evans 2005);
- remote radar sensing of the approximate numbers and spatial patterns of arrival and departure in passing migrants (Idzikowski 2005).

Each of these techniques has its own advantages and limitations in assessing numbers or relative abundance among migrant birds. Netting and banding methods, for instance, avoid the problems of double-counting and observer distraction, and presumably capture inconspicuous vs. more conspicuous species with equal efficiency during peaks vs. ebbs of migration, unlike direct visual and aural detections (Mueller and Berger 1967). However,

mist-netting can only capture an uncertain fraction of the grounded migrants moving along local pathways in the spaces that face the nets. In practice, nets are often placed at subcanopy levels in wooded or semi-wooded habitats, so that captures of grounded migrants are likely to be biased against species of other habitats, higher foraging levels, and (depending on nets' mesh size) larger or smaller birds (Mueller and Berger 1967, Mueller et al. 2004).

Other techniques for counting migrants have other shortcomings, as with radar, which may estimate the overall numbers of passing birds on a wide migrational front while giving no data on species' relative abundance. Mueller and Berger (1967) and Weise (1971), without foreknowledge of recent technologies in remote sensing, suggested that complementary counting methods are needed in evaluating numbers and relative abundance of migrants. Their perceptions are still valid, but applications of the current complement of methods in Wisconsin have yielded few multi-species inventories of grounded migrants (waterfowl excepted) in site-specific stopover habitats. Comparisons among individual stopover sites and their potential values for migrant birds are consequently difficult. There appear to be no estimates from Wisconsin on the total seasonal numbers of grounded passerines and other migrant "songbirds" within areally defined sites. In late August through mid November 2005, I used near-daily counts along fixed-width transects in a provisional attempt to estimate the overall numbers of grounded songbird migrants at stopovers within the Southern Unit (hereafter SU) of the Kettle Moraine State Forest in southeastern Wisconsin.

Study Area

The SU currently includes about 9000 ha of state-owned lands in Waukesha, Walworth, and Jefferson Cos. As the biggest contiguous public landholding in the seven counties of southeastern Wisconsin, it holds about 25% of the region's total area of all parklands in state, county, municipal, school district, or other public ownerships (SEWRPC 1997). Prominent habitats include oak forests, conifer plantations, shrublands, and old-field grasslands on upland sites; prairies and other wet meadows, shallow marshes, and shrub-sapling swamps on lowland sites; and extensive edges or mixes among those habitats (Bielefeldt 2005). By virtue of habitat heterogeneity and sheer size (Mehlman et al. 2005) in combination with state ownership, the SU may at present and in future be a major stopover site for migrant birds in a southeastern Wisconsin landscape dominated by row-crop agriculture and, increasingly, by urban land uses.

Methods

I counted all birds seen or heard aground, including unidentified birds, on 69 single-observer, single-visit, fixed width transects on public lands in the SU, 28 August–12 November 2005. Excepting 8 days with persistent rain or strong winds, I used daily counts between sunrise and 1000 hrs CST and separate single-visit transect routes to avoid predispositions toward weather conditions or survey sites perceived to be more productive of num-

bers of grounded migrants. Transect routes were not randomly selected but I attempted and achieved coverage in proportion to the availability [in brackets] of major habitats in the SU (Bielefeldt 2005): 21% oak forest and plantation interior [20%], 67% woodland edges and shrublands [65%], and 12% upland and lowland meadows [13%]. The remaining 2% of available habitats was mostly open waters and deep marshes not amenable to transect counts.

The 69 individual transects were 0.32 to 2.07 km in length ($\bar{x}$ = 1.00 km) and totaled 69 km. I chose a perpendicular lateral counting boundary of 36 m on both sides of the transect's centerline and thus a fixed width of 72 m for several logistical reasons, including repeated practice at visual estimates of distance (easily paced in questionable cases) within this lateral range. I know the bounds of my mid-frequency hearing impairment in detecting weaker avian call notes within this range, which is also a suitable mutual limit for visual detections and identifications in habitats of varying vegetational densities. Daily survey areas thus ranged from 2.3 to 14.9 ha and totaled almost exactly 500 ha. Rate of travel along transect varied with the number of birds encountered but averaged about 0.5 km/hr.

I tallied each detection by species when possible or as unidentified birds (22% of total detections), and by mode of initial visual or aural detection. Overflying birds were excluded, so that results are explicitly restricted to "grounded" stopover migrants rather than birds passing overhead. I did use "pishing" sounds at intermittent times and distances to aid detectability (see below) and identifiability but took care to use birds' proclivity to respond, immediacy of response, observed approach, and other behaviors in excluding all birds that might have been attracted from lateral distances > 36 m. All birds responding to "pishing" lures were classed as visual detections on the premise that they would otherwise have gone undetected by aural means. I employed spatially separate single-visit transects as a primary way to minimize double-counting. In other precautions against double-counting, I traveled more quickly to outpace or laterally deflect flocks moving directly ahead of the observer, omitted re-encounters of flocks of similar species composition, and avoided use of "pishing" lures when repetitive detections seemed likely.

Although it appears to exhibit irregular migrations or irruptions in Wisconsin (Mueller and Berger 1972), the Black-capped Chickadee was classed as a resident bird in the SU, as were 10 other species (Downy, Hairy, Red-bellied, and Pileated Woodpeckers, White-breasted Nuthatch, Northern Cardinal, American Crow, European Starling, House Finch, and Wild Turkey). These 11 resident species, mostly (78%) chickadees and cardinals, made up 16% of total individual birds detected on transect counts; they are excluded from further analyses. All other species were treated as migrants, including all unidentified birds that were probably, for the most part, Yellow-rumped and other warblers, White-throated and other sparrows, American Goldfinches, and miscellaneous thrushes, flycatchers, etc.

Estimates of the *relative* numbers of grounded migrants between the SU and other stopover sites may not need to consider the detectability or

turnover times of grounded migrants insofar as counting methods and seasonal counting spans are comparable between sites and convertible to birds per unit area. However, approximations of *total* numbers of grounded migrants at a site (or unit area), as proposed here for the SU, will require attempts to evaluate typical stopover times and detectabilities.

Despite methodological uncertainties (Carlisle et al. 2005) site-specific stopover times among migrants have usually been estimated as the mean minimum span (in days) between initial capture and last local recapture of banded individuals in a given species or set of species. By this measure, the median of the mean minimum stopover times for 13 species in autumn migration was 4.3 days along the Minnesota/Wisconsin boundary of the St. Croix River Valley (Winker et al. 1992a, 1992b), with a range of 1.6–9.0 days in the means for individual species. Elsewhere in the same fashion, medians (and ranges) for autumn migrants were 3.1 (1.6–4.8) for 33 species in Maine (Morris et al. 1994, Morris et al. 1996), 3.9–4.2 (1.3–10.2) for 16 species in Idaho (Carlisle et al. 2005), 3.6–4.7 for age classes of 2 species in Alabama (Woodrey and Moore 1997), and 4.5–4.7 among years for 1 species in Maine (Cherry 1982). These few studies seem to agree that median local stopover times for autumn migrants, when considered collectively, are on the order of 4 days. I accepted 4 days as an estimated stopover time within the SU and therefore calculated that I encountered a new set of migrants about 19 times, on average, during 77 days of fieldwork.

For autumn migrants, unlike breeding birds (e.g., Emlen 1984), there appear to be no indices of detectability in direct visual and aural counts. I constructed a tentative detectability estimate for total migrants (not individual species) in my single-observer counts by first assuming that birds initially detected by aural means (10.5% of total migrants) involved a complete tally of all birds giving unprompted vocal cues to detection within these narrow transects. For remaining birds in which initial detections were visual and/or prompted by "pishing" lures, I recognized several limitations on direct single-observer counts. Double-observer methods applied to direct counts have suggested that single observers are less efficient than complementary observers, even in the breeding season when many species are aurally conspicuous (Hutto and Mosconi 1981, Nichols et al. 2000). Inefficiencies in single-observer counts may be greater in non-breeding seasons. One observer is able to scan only one-half of a counting area at any moment. The need to identify and count observed birds may also distract an observer, focus attention on an even smaller field of detection, and override opportunities for other detections, especially when large numbers of migrants are present. In addition, some inconspicuous species are seldom detected in direct observations even though they are relatively common (e.g., Philadelphia Vireo) or abundant (e.g., Swainson's Thrush) as autumn migrants in Wisconsin among tower kills (Kemper 1996) or netting captures (Mueller and Berger 1967).

Undercounting is here lessened, in part, by including unidentified migrants. Use of "pishing" lures compensated, imperfectly, for some deficiencies in detection. However, attempts to

avoid double-counting, as noted above, did diminish detectability via lures and other means on portions of some transects. From the preceding considerations and long field experience with limits and aids to detectability in diverse habitats and seasons, I speculate that direct observations recorded about 50% of the autumn migrants present within the bounds of transect counts in 2005. In estimating total number of grounded migrants in the SU in autumn 2005, I therefore multiplied raw counts by factors of 18 for areal coverage, 19 for stopover time, and 2 for detectability. Raw counts are given in Table 1 for those who might choose to apply other estimates of stopover time and detectability.

I was primarily interested in estimating the overall seasonal numbers of grounded migrants in the SU in autumn 2005, and not in compiling species lists. Interpretations of species richness, sometimes thought to be a useful item in comparing the possible values of stopover sites (e.g., Blake 1986), are also complicated by the uneven areal samples of my 69 counts. I extracted 36 counts of similar extent (7–9 ha) and subdivided them into three 12-unit counts of similar calendar span (23–26 days) and total counting areas (92–98 ha). I used these equal sets of 12 counts during 29 August–20 September, 21 September–13 October and 18 October–12 November to evaluate relative species richness among grounded migrants in the SU in early, mid, and late autumn.

Results and Discussion

Excluding 645 birds of 11 species presumed to be resident, I detected 3437 grounded migrants by direct visual and aural means on 69 fixed-transect counts totaling 500 ha in the SU, 28 August–12 November 2005 (Table 1). Total migrants include 770 birds (22%) not identifiable at species or generic levels.

Adjustments of the raw count for areal coverage, stopover time, and detectability suggest a minimal estimate of 2.35 million grounded migrants at stopover sites on 9000 ha of public lands within the SU in autumn 2005. This estimate excludes waterfowl and deep-marsh birds in areally minor habitats. It also excludes migrants seen overhead rather than aground, some of which (e.g., American Robin) were otherwise "captured" and counted in occasional observations of grounded flocks within transects, while others known to stop in the SU (e.g., Broad-winged Hawk) were not. With the possible exception of blackbirds, for which no large roosts or streams of presumably roosting birds were seen in the SU in autumn 2005, the number of grounded migrants missed or under-sampled in these ways may have been relatively small in comparison to my estimate of total migrants.

The late August to mid-November span of these counts was probably a more important limit on my estimate of total autumn migrants in the SU. That counting period failed to incorporate nearly all early migrants (e.g., swallows, Eastern Kingbird, Warbling Vireo, Yellow Warbler, Baltimore Oriole) and late migrants (e.g., American Tree Sparrow), so that the overall number of grounded autumn migrants in the SU in 2005 including earlier and later migrants would perhaps be on the order of 2.5 million birds.

In raw counts, mean number of

Table 1. Raw counts of grounded migrants on transects (n = 69) in the SU, 28 August-12 November 2005

Species	Numbers	Species	Numbers
American Robin	330	White-crowned Sparrow	8
Dark-eyed Junco	267	Blue-gray Gnatcatcher	7
Cedar Waxwing	233	Eastern Phoebe	7
White-throated Sparrow	176	Hooded Warbler	7
American Goldfinch	156	Northern Flicker	7
Common Grackle	139	Ruby-throated Hummingbird	7
Common Yellowthroat	105	Bay-breasted Warbler	6
Yellow-rumped Warbler	94	Blackburnian Warbler	6
Blue Jay	88	Chestnut-sided Warbler	6
Song Sparrow	88	Eastern Wood-Pewee	6
House Wren	59	Yellow-bellied Sapsucker	6
Eastern Towhee	54	Tufted Titmouse	5
Gray Catbird	53	Blue-headed Vireo	4
Tennessee Warbler	48	Blue-winged Warbler	4
Eastern Bluebird	47	*Dendroica* spp.	4
Ruby-crowned Kinglet	46	Lincoln's Sparrow	4
Field Sparrow	41	Nashville Warbler	4
American Redstart	39	Philadelphia Vireo	4
Red-eyed Vireo	39	Scarlet Tanager	4
Golden-crowned Kinglet	37	Brown Thrasher	3
Magnolia Warbler	36	Cooper's Hawk	3
Agelaius/Euphagus spp.	30	Marsh Wren	3
Ovenbird	28	Northern Waterthrush	3
Red-winged Blackbird	26	Yellow-throated Vireo	3
Rusty Blackbird	26	Belted Kingfisher	2
Swamp Sparrow	26	Cape May Warbler	2
Mourning Dove	23	Orange-crowned Warbler	2
Fox Sparrow	22	Pine Warbler	2
Hermit Thrush	22	Red-headed Woodpecker	2
Black-throated Green Warbler	21	American Tree Sparrow	1
Catharus spp.	16	Black-throated Blue Warbler	1
Sedge Wren	15	Canada Warbler	1
Red-breasted Nuthatch	13	*Coccyzus* spp.	1
Black-and-white Warbler	11	Connecticut Warbler	1
Empidonax spp.	11	Golden-winged Warbler	1
Rose-breasted Grosbeak	10	Least Bittern	1
Blackpoll Warbler	9	Olive-sided Flycatcher	1
Palm Warbler	9	Purple Finch	1
Swainson's Thrush	9	Virginia Rail	1
Brown Creeper	8	Unidentified	770
Chipping Sparrow	8	**Total**	**3437**
Indigo Bunting	8		

grounded migrants on spatially separate transects was 6.9 birds/ha. There were marked and unsurprising day-to-day variations in raw counts (range 0.6–31.7 birds/ha), perhaps because of differences in habitat coverage and migrants' habitat use as well as actual changes in the numbers of grounded birds. However, in three equal 23-count sets of similar areal extent (159–187 ha), raw totals of grounded migrants detected per ha were 6.1, 8.3, and 6.2 respectively, in early (28 August–19 September), mid- (20 September–14 October), and late autumn (15 October–12 November).

Raw tallies of grounded migrants thus showed little variation over the course of early to late autumn passage, despite a late autumn decline in species richness and a seasonally changing composition of migrant species.

On 69 counts totaling 500 ha, 28 August–12 November 2005, I detected 68 species of grounded migrants including two genera (*Coccyzus*, *Empidonax*) in which individual species were not identifiable. On three 12-count sets of similar areal extent (92–98 ha) and temporal span, I found 48, 44, and 21 species—excluding overhead migrants—during 29 August–20 September, 21 September–13 October, and 18 October–12 November, respectively. As expected, species richness among grounded migrants declined in late autumn, but richness was relatively stable in early and mid-autumn even though these two 12-count periods shared only 31 of the 61 species detected on 24 counts in combined periods. Both mean and median species richnesses on individual counts on a 7–9 ha scale within these 12-count sets were 14 (range 3–25), 12 (8–23), and 7 (3–12) in early, mid-, and late autumn, respectively.

I am not aware of any comparable counts of grounded migrants by direct observation on areally circumscribed stopover sites elsewhere in Wisconsin. There is thus no opportunity to weigh the estimated magnitude of autumn migration in the SU against migrant numbers at other stopover sites in the state. However, five autumn mist-netting studies in and near Wisconsin, 1958–92, do suggest statewide similarities—and one possible disparity—in numbers of migrant landbirds. Each of these five studies ran 3–6 years, accumulated 15–86 thousand net-hours of daylight effort on ca. 100–370 netting dates, employed nets of similar mesh size, and sampled a mix of upland or lowland forests and shrublands. Number of captures (excluding recaptures) was 0.09–0.14 per net-hour in Wisconsin in Milwaukee Co. (Weise 1971), Burnett Co. (Weisbrod et al. 1993), and Price Co. (Nicholls et al. 2001), and in the St. Croix River Valley immediately opposite Wisconsin in eastern Minnesota (Winker et al. 1992a).

The exception to those four similar capture rates of 0.09–0.14 birds per net-hour involved 0.40 birds per net-hour at Cedar Grove, Sheboygan Co. (Mueller and Berger 1967). For 85 years (Mueller et al. 2003), Wisconsin ornithologists have surmised that Cedar Grove and other parts of the state's Lake Michigan shoreline constitute a barrier, "leading line," and hence major pathway and/or stopover site for raptors and other passing or grounded migrants. Netting results at Cedar Grove vs. other Wisconsin sites seem to support this proposition, but it is obviously desirable to have more data on migrant numbers at additional stopover sites throughout the state.

Preconceptions about the possible value of stopover sites may be unwarranted. There are anecdotal reports (Blake 1986, pers. obs.) and some netting evidence (Weisbrod et al. 1993), for example, that closed-canopy forests may hold fewer grounded migrants than equivalent areas of woodland edges and shrublands. Farm hedgerows and other small patches of woodland or shrubland habitats in agricultural or urban landscapes may at times attract substantial numbers of migrants. Number of migrants is not necessarily an adequate guide to the

quality or benefits of stopover sites, but direct observations and counts do provide one way to assess the potential values of local, regional, and statewide stopover sites and habitats for migrant birds. An estimate of 2.5 million grounded birds in the SU in the course of autumn migration in 2005 may seem impressive, yet comparative counts are wanting. Practiced observers could readily obtain such counts by same or similar methods on small sites, samples of larger sites, and diverse habitats if they ensure that the counting sites have a clear areal definition that yields number of migrants per unit area.

As mentioned earlier, direct observations have shortcomings in detecting some species and evaluating relative abundance among migrant species. Nevertheless, a list of the six warbler species most commonly netted at Cedar Grove in mid-August to mid-November in 1958–63 (Mueller and Berger 1967) shares five species with the six warblers most often detected in direct counts in the SU in late August–mid November 2005: Common Yellowthroat, Yellow-rumped Warbler, Tennessee Warbler, American Redstart, Magnolia Warbler, and Ovenbird in descending order of raw counts in the SU. Replacement of Northern Waterthrush on the Cedar Grove list by Common Yellowthroat in SU may be due to differences in habitat coverage. The six leading warbler species accounted for 13.2% of total captures (n = 35,584) at Cedar Grove and 10.2% of all migrants (n = 3437) or, in parallel with Cedar Grove, 13.1% of identifiable migrants (n = 2667) in the SU. Direct counts in the SU (Table 1), in accord with netting results and comments in Mueller and Berger (1967), agree that Gray Catbird, Eastern Towhee, Hermit Thrush, Fox Sparrow, and both kinglets along with other species (e.g., House Wren) are common autumn migrants in southeastern Wisconsin. With due allowances for detectability, direct counts appear to be a useful complement to other measures of relative abundance among species on state or local scales.

Acknowledgments

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John Bielefeldt, a semi-retired naturalist, is one of southeastern Wisconsin's most active ornithologists and a frequent contributor to this journal. He received WSO's Silver Passenger Pigeon Award in 1988 in recognition of his many contributions to the Wisconsin Society for Ornithology.

Singing Yellow-breasted Chat seen by Ryan Brady.

The Autumn of 2005 at Cedar Grove

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The autumn of 2005 was the 56th year of continuous operation of the Cedar Grove Ornithological Station. We arrived on 15 August and departed after 22 November. We watched for migrants from dawn to dusk on each of the 100 days, and counted or estimated their numbers. We attempted to trap all hawks. We also operated a 136m long line of 61mm (stretched mesh) mist nets with 72m of them extending to a height of 8m. These large mesh nets captured small birds only rarely. Probably more than 100 warblers escaped through the nets for every one captured. Beginning on

Table 1. Numbers of diurnal raptors observed and the percent trapped

	Observed			% trapped		
Year	2005	2004	Average 1995–2004	2005	2004	Average 1995–2004
Turkey Vulture	115	112	156	0	0	0
Black Vulture	0	0	0.1	—	—	—
Mississippi Kite	0	1	0.1	—	0	0
Northern Harrier	103	87	189	1	4.6	3.4
Sharp-shinned Hawk	1101	1177	2515	16.9	19.9	17.6
Cooper's Hawk	152	157	173	36.2	33.8	36.9
Northern Goshawk	1	15	11	100	73.3	68.2
Harris's Hawk	0	0	0	—	—	—
Red-shouldered Hawk	13	9	31	0	0	5.5
Broad-winged Hawk	30	45	883	0	—	—
Swainson's Hawk	1	0	0	0	—	0
Red-tailed Hawk	611	743	926	20.1	14	15.2
Rough-legged Hawk	14	32	38	0	0	1.8
Golden Eagle	0	1	0.8	—	100	12.5
Bald Eagle	14	13	14	0	0	0.7
Osprey	55	28	64	0	0	0
Merlin	213	224	464	18.9	13.4	16.8
American Kestrel	31	46	99	6.5	0	6.6
Peregrine Falcon	62	41	75	17.7	31.7	22.3
Short-eared Owl	0	1	1.2	—	0	0
Unidentified	25	50	60	0	0	0
Total	**2542**	**2782**	**5371**	**16.5**	**16.2**	**14.3**
Total*	2342	2743	4268	17.9	16.4	17.9

*Less vultures, Broad-winged Hawks, and Ospreys

28 September, we left the mist nets up at night to capture owls.

After a very poor year in 2004 (Mueller et al. 2005), this year was even worse. We saw significantly fewer Northern Goshawks, Red-tailed Hawks, and Rough-legged Hawks, but significantly more Peregrine Falcons and Osprey. Significantly fewer Turkey Vultures, Northern Harriers, Sharp-shinned Hawks, goshawks, Red-shouldered Hawks, Broad-winged Hawks, red-tails, rough-legs, Merlins, and American Kestrels were seen in 2004 than in the average for the previous 10 years (Table 1).

We trapped and banded only 419 hawks, a sum exceeded by every year since 1974. We saw only 2,542 hawks, our worst year since 1981. Hawk migrations at Cedar Grove are greatly influenced by weather. Westerly winds after a cold front produce good numbers of hawks, northerly or easterly winds bring very few hawks (Mueller and Berger 1961, 1967). A large proportion of the hawks seen each fall migrate between about 15 September and 20 October (Mueller et al. 1997); good weather during that period results in a good season, and bad weather, a poor one. There was little good weather in 2005.

Significantly fewer Saw-whet and Long-eared Owls were netted in 2005 than in 2004 or in the average for the previous ten years (Table 2). We trapped a beautiful dilute (very pale) Saw-whet Owl on the night of 4–5 November (Figures 1 and 2).

Table 2. Numbers of owls netted

Species	2005	2004	Average: 1995–2004
Long-eared Owl	1	20	13.2
Short-eared Owl	0	0	0.1
Great Horned Owl	0	2	0.7
Barred Owl	0	0	0.1
Boreal Owl	0	0	0.1
N. Saw-whet Owl	44	103	127
Eastern Screech-Owl	4	3	1.8
Totals	**49**	**128**	**142.7**

Table 3. Numbers of non-raptorial birds netted

Species	2005	2004	2003	2002
Yellow-bellied Sapsucker	10	5	3	21
Northern Flicker	22	19	13	47
Eastern Wood-Pewee	3	2	2	11
Eastern Phoebe	9	7	11	21
Red-eyed Vireo	9	19	16	30
Blue Jay	21	26	15	26
Brown Creeper	30	11	10	36
Golden-crowned Kinglet	10	20	5	21
Ruby-crowned Kinglet	10	20	7	20
Swainson's Thrush	372	414	181	167
Gray-cheeked Thrush	43	65	25	29
Hermit Thrush	85	90	105	166
Palm Warbler	7	5	11	6
Yellow-rumped Warbler	40	18	32	66
American Redstart	4	5	5	17
White-throated Sparrow	23	23	32	92
Fox Sparrow	53	27	52	34
Dark-eyed Junco	232	94	53	151
Pine Siskin	0	30	4	1
American Goldfinch	22	49	15	14
Totals all species	**1208**	**1243**	**820**	**1211**

Overall, the number of non-raptorial birds netted was average. There were significant increases in the numbers of Brown Creepers, Yellow-rumped Warblers, Fox Sparrows, and Dark-eyed Juncos, but a decline in both species of kinglets and Gray-cheeked Thrushes (Table 3). Notable captures included a beautiful adult male Blue-winged Warbler on 17 September, two Indigo Buntings on 6 October, a total of 7 Cape May Warblers, and our first Brewer's Blackbird during the night of 6–7 November.

The number of non-raptorial birds seen migrating was down significantly from 2004, 2003, and 2002 (Table 4). Significantly fewer individuals were seen in 11 of the 16 species (or groups of species listed in Table 4) in 2005

Table 4. Numbers of non-raptorial migrants observed

Species	2005	2004	2003	2002
Double-crested Cormorant	1713	2747	2419	2193
Great Blue Heron	13	27	27	13
Tundra Swan	149	35	446	1105
Canada Goose	7075	3861	12,515	6490
Sandhill Crane	255	107	470	46
Common Nighthawk	312	222	598	1008
Chimney Swift	365	426	947	897
Red-headed Woodpecker	4	9	4	24
Northern Flicker	475	843	974	1078
Blue Jay	1239	2223	1555	1486
Purple Martin	9	38	5	45
Swallow sp.	609	8340	2682	2222
American Robin	1704	3707	4021	1508
Cedar Waxwing	8247	14,522	19,743	14,182
Blackbirds sp.	1492	2285	3277	2287
Small Finches	125	3135	2267	38
All non-raptorial migrants	**29,401**	**51,500**	**55,600**	**39,500**

than in 2004. The greatest decrease was shown in small finches (goldfinches, siskins, and redpolls). Pine Siskins were heard on only two occasions. Significant increases occurred only in Canada Geese, Tundra Swan, Sandhill Crane, and Common Nighthawk, and there were significantly fewer of the latter three species than in 2003. There was no change in Red-headed Woodpeckers. The only notable observation was of two Mute Swans flying south on 8 October.

The number of migrants observed and netted is undoubtedly influenced by wind and other weather conditions, and the trends from year to year do not necessarily reflect populations. However, we are beginning to wonder whether or not some of the declines may be real, perhaps caused by West Nile virus, avian influenza, or poor breeding seasons.

The Muellers, Dan Berger, and John Bowers were present at the station essentially every day and the Kaspars were there on 22 days. Tom Meyer, Julie Gibson, and Bill Cowart helped on more than a few days.

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The Cedar Grove Ornithological Station is a non-profit organization incorporated under Chapter 131 of the Wisconsin Statutes, and it relies heavily on public donations for continued operation. All personnel are unpaid volunteers. We thank all the WSO members who have contributed to the station.

Figure 1. Diluted Northern Saw-whet Owl shown with normal colored saw-whet at Cedar Grove Ornithological Station, 5 November 2005.

Figure 2. A dilute or pale Northern Saw-whet Owl was netted and banded on 5 November 2005 at the Cedar Grove Ornithological Station in Sheboygan County.

Blue-headed Vireo by John Van Den Brandt.

50 Years Ago in *The Passenger Pigeon*

As I write this, the 12 March Milwaukee Lakefront WSO field trip is right around the corner. Here is the account for WSO's 27 February 1956, Lake Michigan shore trip. "The forty-five members and guests taking part in the trip were treated to some exceptional ornithological rarities. The group assembled at the Smith Brothers' parking lot at Port Washington, and it was not long before everyone was studying the Harlequin Duck that had been spending its second winter in the harbor area. An added treat was provided by the presence of a Glaucous Gull.

"Moving south after this auspicious beginning, the group stopped at Brown Deer Park in northern Milwaukee County. Both Red and White-winged Crossbills were found; everyone had prolonged looks at these rare northern visitors, and at some Pine Grosbeaks as well. Ducks in Milwaukee Harbor were not as plentiful as they have been some winters, but everyone enjoyed seeing the Snow Goose and Blue Goose, that were spending the winter in the Juneau Park Lagoon."

This issue also contained an account of the 8 April 1956, field trip to Lake Winnebago near Oshkosh to look at swans. "A caravan of 78 bird enthusiasts" observed large numbers of "Whistling" Swans on the Lake and on Lake Butte des Morts and on smaller ponds and flooded fields. Early shorebirds sighted nearby were Wilson's Snipe, both yellowlegs, Pectoral Sandpipers, and a few early Least Sandpipers. "Of interest to many were the Loons at Neenah."

Excerpt from Vol. 18(2), 1956 by WSO Historian Noel J. Cutright, 3352 Knollwood Road, West Bend, WI 53095. h. 262 .675. 2443, w. 262. 268. 3617, noel.cutright@we-energies.com.

Common Nighthawk at rest by Gary Krogman.

Aggression of American Coots Towards Muskrat

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During the afternoon of 10 October 2005 in Millers Bay, Oshkosh, Winnebago County, I observed a variety of waterfowl on Millers Bay. Three large rafts of American Coots (*Fulica americana*) were feeding on the bay; each raft contained approximately 50 birds, and smaller flocks of coots also fed on the water. Other species, in substantially fewer numbers were also on the water, most notably the few Mallards (*Anas platyrhynchos*), Gadwalls (*Anas strepera*), and American Wigeons (*Anas americana*) that fed intermixed with the coots. The wigeons and Gadwalls often stole food from the coots, as is a fairly common interaction between those species (McKnight and Hepp 1998; LeSchack and Hepp 1985; Ryan 1981).

As I observed the waterfowl, I noticed a muskrat (*Ondatra zibethicus*) swimming toward the shoreline, at about 13:30. It appeared to have pond weed of some variety in its mouth. The plant material extended behind it as it swam. While it was still about 30 meters from the shore, two coots, which had been swimming nearby, began swimming behind it (Figure 1). The coots made a few foraging motions in the water, as though they were feeding on the pond weed the muskrat was transporting, or organisms within the pond weed. The coots accompanied the muskrat the entire distance to the shoreline, until they were hidden from my view by rocks along the edge of Millers Bay.

This behavior probably constitutes an example of aggression by the coots towards the muskrat. The two coots exhibited patrolling, a low level aggressive behavior of coots (Gullion 1952). Aggressive interactions of coots towards muskrats have been recorded in the past (Ryder 1959), but often with a higher level of response from the coots, in the form of the churning behavior (Ryder 1959). The behavior that I observed was patrolling, as the coots simply accompanied the muskrat to the shore of the bay.

The observation at hand might also constitute an example of kleptoparasitism (parasitism by theft) in which the coots were stealing a food resource from the muskrat. There are records of commensal feeding between these two species, with the muskrat serving

Figure 1. Two American Coots (*Fulica americana*) swim behind a Muskrat (*Ondantra zibethicus*), which has plant material trailing behind it. The behavior seems to constitute patrolling by the coots, a mild form of aggression by that species.

as beater (Wick and Penttila 1957), but this is the first possible example of kleptoparasitism between the two species.

In subsequent visits to Millers Bay, I observed a muskrat four times with coots still present on the water. I noticed no interaction between the coots and the muskrat on those occasions, probably because the muskrat stayed in shoreline habitat. It is unlikely that the coots would not have used the muskrat as a continuing food source had kleptoparasitism been the primary purpose of the coots' activity. Therefore, the initial interaction between the two species probably constitutes mild aggression, with feeding as a secondary benefit of the behavior. This appears to be the first observation of American Coot aggression towards muskrats in the non-breeding season.

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Ben Leese is completing his seminary studies at Trinity Lutheran Seminary in Columbus, Ohio, after serving an internship at St. John's Lutheran Church in Oshkosh, Wisconsin. His ornithological interests include feather comfort behavior, especially anting, and stopover ecology.

This Turkey Vulture resting in a tree was photographed by Gary Krogman.

Sora by Gary Krogman.

Notes on Some Interesting Birds from Washington Island, Door County, Wisconsin

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Located beyond the end of the road in northeastern Wisconsin, Door County's Washington Island is seldom the subject of reports by birders. In this note I discuss some personal observation from this area, including breeding notes on the Northern Shoveler (*Anas clypeata*) in Jackson Harbor; late breeding of the Winter Wren (*Troglodytes troglodytes*); and the eastward dispersion of American White Pelicans in summer to Washington and Rock Islands. I also include observations supporting the well-publicized population increase of Double-crested Cormorants (*Phalacrocorax auritus*), and of a huge congregation of these birds, mixed with numerous Ring-billed Gulls, (*Larus delawarensis*), and American White Pelicans (*Pelecanus erythrorhynchos*), all apparently preying on a school of fish.

Northern Shoveler

This belated report of breeding by the Northern Shoveler (17 June 1991) was of a rare event, and the same year I noticed a hen with young in a marsh south-west of Green Bay, Brown County. A hen and two half-grown young ducklings were swimming in shallows near the docks at Jackson Harbor, off shore from the nature preserve called the Washington Island "Ridges." Breeding seems a rare event for northeast Wisconsin, especially for Door County, and is unknown for the Island. No breeding shoveler has been seen here since. The record lies outside the breeding range given by Robbins (1991). The Northern Shoveler is not uncommon along the Peninsula during migrations, but its present status is unknown.

Winter Wren

The Winter Wren is not uncommon but seldom identified on the Door Peninsula or on Washington Island. Breeding records in northeast Wisconsin are generally rare (Wolf and Howe, 1990). This species usually breeds in early summer, up until late June. On Washington Island the male probably does not help incubate, for it sings its wonderful song incessantly morning to night. In June 2003, I found a nest in tangled grasses and cedar roots

near the shore at my home on Pedants Lane, at the north end of Washington Island. Fledged young were observed. The next year (2004) the wrens (at least two) were calling back and forth in the woods near the Lake in June, and one continued calling incessantly during the day-hours until 17 August 2004. Searching for the nest was not successful, but on 17 August the new family was foraging farther into the woods, 100 meters from the shore. This is a rare record of possible late breeding, and possibly it was a second brood. In 2005, there was no sign of Winter Wrens on Pedants Lane.

Double-crested Cormorants

Robbins (1991) in his monograph on Wisconsin birds mentioned double-crested cormorants as "uncommon migrants" and "uncommon summer residents" in Wisconsin. Based on surveys for 1960–1991, Door County is within their "summer range." However, annual counts declined by 1960 to only 3–5 birds per season except at a few breeding "rookeries." Since dead trees are frequently used by cormorants for nesting, artificial platforms were constructed experimentally at Mead Wildlife Area (Portage-Marathon Counties) and near Green Bay. Such efforts and federal and state protection led, by 1991, to "a moderate comeback." Some residents, who tend to hate them, estimate that today "over 150,000" are present in the vicinity of Washington Island, Door County.

Since 1999, cormorants in large numbers, even thousands, have gathered in late summer and early fall near Washington Island for migration, flying along my shoreline occasionally, in long continuous lines. By careful estimates counting along the lines of flying birds in autumn, several flocks numbered over 1,400 birds. It seemed by their flying in lines just above the water surface that a great deal of energy is saved by reduced air drag and use of free lift from the turbulent waves below their wing tips. Although nests have been observed for years on Pilot Island, near Northport, no large flocks had been seen in mid-summer until this 2005. Once from my deck looking down into clear water (in late July), I saw one cormorant swimming in the shallows, unaware I was looking down from above into the water. It was completely submerged like a river otter, darting to and fro among the cobbles on the bottom. It never emerged while I observed it working along 70 m of the beach. Arthropods, including numerous small crayfish, are in those shallows.

Earlier, 6 July 2005, Claudine Long and I observed a huge mixed flock of cormorants and Ring-billed Gulls only 10–50 m offshore (in shallow enough water to see the cobbles, which also showed up in photographs taken even at a greater distance down the beach). Six pelicans were also observed in this flock (see below). The water depth along shore varies to about 5 m, and offshore drops precipitously. The feeding frenzy probably was predation on a huge school of small fish, likely yellow perch (*Perca flavescens*), as this year (2005) countless small and some middle-sized perch schooled along the pilings at nearby Jackson Harbor. However, I never saw a bird with a fish in its beak, nor found any fishes cast up on shore, where I diligently searched. The water surface seemed almost

black with birds, and the air was filled with many white gulls circling overhead. Some were sitting on the water surface. The pelicans also usually sat on the water, often extending their black-tipped wings upward. In 25 years in this location, I have never seen before a large flock of cormorants in early summer near Washington Island.

After photographing the flocking birds, moving eastward along the beach, I cropped and arranged the photographs with overlapping views (with reference to a bare rock outcrop exposed on nearby Rock Island), and then taped a plastic transparency over two conjoined photographs. I marked every visible black cormorant and white gull. The six pelicans were counted directly, and were easily identifiable. Although some cormorants were constantly diving under water, and therefore not visible, and some far-off gulls may have been invisible against the sky, the counts for each species seemed fairly accurate. By cutting out a rectangle (10×4 mm) from one photograph congruent with that same area in the other photo, I counted 21 cormorants on one print and 23 on the other. The flock pattern on the water was mostly confined to an oval less than 100 meters in diameter, dense in the center. In a dense flock such as this one, it is easy to overestimate the numbers several fold. Altogether, 140 cormorants were counted, and perhaps a few were invisible underwater. The number of 115 gulls was counted (with at least 20 of them in flight). Adding pelicans, there was a minimum of 261 birds.

When the fish moved into deeper water and the frenzy ended, the cormorants formed into several short lines of birds heading back whence they had come (westward paralleling the shore). Most of the gulls gathered on the cobbled shore, facing the water, and they subsequently dispersed in all directions. The pelicans flew off together toward Rock Island, to the eastward.

American White Pelicans

The American White Pelican is reported in a local bird list ("Guide List of Washington Island Birds," anonymous, undated) as "always present, uncommon due to its small number." There were no pelicans present, to my knowledge, until three years ago, in mid-summer, when my wife Claudine saw three flying along our northern shore. [Claudine does not report sight records unconfirmed.] I surely would have heard of any pelicans before then on Washington Island as I knew the naturalists well who worked at the Washington Island Art and Nature Center. About the same time that Claudine noted the pelicans, ferry captains began to tell me about them occurring between the North Port ferry dock and Washington Island. The aforementioned pelicans in the feeding frenzy confirm their presence, and also provide the first record for Rock Island, Door County. The record also suggests that breeding and dispersal have occurred eastward from Brown County.

Although considered rare in summer (a century ago) in Oconto County (Schoenebeck, 1902) and in Brown County (Erdman and Jacobs, 1991), soon after the latter date pelicans were observed breeding in Brown County (Soulen,1997, 1999), and hundreds have been present during recent

years. Brown County is at the base of the Door Peninsula and at the mouth of the Fox River draining into Green Bay. Robbins (1991) had summarized data for Wisconsin, and also reported white pelicans as "rare spring and fall migrants" and "rare summer visitants." He reported only one record for Door County.

Apparently the pelicans were always more common in southern and western Wisconsin. Not only were they formerly rare in Door County, but none was ever reported in the numerous surveys of the Beaver Islands (Hatt et al., 1948; Wallace, 1977; Scharf, 1973; and Scharf and Jorae, 1980).

Acknowledgments

Dr. Terese Barta, Department of Biology, University of Wisconsin—Stevens Point, showed me how to make up the photographs and affix a plastic transparency over them to mark them with a fine magic marker, as she counts bacteria colonies in this fashion on agar plates. Dr. Robert Howe, Department of Natural Sciences, of the University of Wisconsin—Green Bay, read this note and provided helpful suggestions.

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Lessons from the Seasons: Fall—2005

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Remarkable in many respects was birding in the fall of 2005. Species found so far away from known travel patterns (Green Violet-ear and Cave Swallow) that their presence caused a buzz in the birding community. Whether a birder sought the solitude of experiencing nature alone or with the joyous company of organized field trips, birders reported exceptional migration numbers for many species. The WSO field trip to Superior in late September reported species much more reminiscent of pelagic trips than what's normally expected for the center of the continent. See the field season editor's comments for more details on the fall migration.

In addition to expanded life lists and the joy of birding, exceptional events enlightened our understanding bird movements. These events have nothing to do with violet-ears or Cave Swallows. They did not reflect on the movement of pelagic species, although that phenomenon is worthy of a future feature in this column. The first event was the outcome of the human decision to provide habitat, and the second was weather pattern related.

Water manipulation at Horicon, Rainbow Flowage, and Crex Meadows created exceptional shorebird habitat this fall. I personally did not experience the shorebirds numbers at Crex and Rainbow Flowage, and therefore my comments are most directly involved with the shorebird move at Horicon.

For decades, the shorebird conservation community gave little mention of the essential habitat in Wisconsin. Was this because the state lies outside critical migration corridor, or was it the lack of habitat? If the phenomenon at Horicon this past fall is any indicator, then I submit lack of habitat is the correct response. Mid-August at Horicon provided truly exceptional shorebird habitat. The refuge provided multiple areas with 4–6 inch water, 1–2 inch water, bare saturated mud, dry mud, and especially short grass areas. American Avocets, Marbled Godwits, and Buff-breasted Sandpipers brought birders in from all corners of the state. More important was the peak numbers recorded with as many as 6400 Pectoral Sandpipers, 1850 Lesser Yellowlegs, 220 Greater Yellowlegs, 50 Baird's Sandpipers and 27 Buff-breasted Sandpipers.

Only a few birders recorded these

huge numbers, which may lead to other birders questioning the numbers. The disparity may in part be the reason a person birds with many simply checking-off species, whereas others count and record numbers. I was there specifically to count the birds.

This endeavor requires continuous practice in the art of estimation. A good way to estimate is to break a large flock into portions. Get an exact count of 20, 50, or 100 birds then look at the density of the sky they fill, and complete the estimate by counting how many similar portions are in the flock. The process is relatively easy for slow-flying geese or cranes, but much more difficult for fast-flying, often turning shorebirds. The practice of estimation using corn kernels, rice, or jellybeans can help later on with estimating bird numbers. Simply toss a pile on a table, do a quick estimate, then use the portion method, and finally count the exact pile. After awhile your estimation skills improve dramatically.

Skills aside, a full accounting sometimes needs a catalyst. A Peregrine Falcon helped immensely with the estimate. On August 13 and 20, my first estimates for Pectoral Sandpipers were approaching 1000. On both days, after I had spent extensive time counting and estimating, a Peregrine Falcon flushed the shorebirds. In typical fashion, the shorebirds rose to get above and out-maneuver the raptor. When the birds flushed I found my estimate was drastically low. I followed the flocks even when I knew other birders were right behind me, because my purpose for birding those days was to count birds. I first had an estimate of the flock size, but then, I was trying my best to get an idea of composition. Listening for different shorebird calls, flight patterns, field marks and yes, gestalt, I finally came upon my estimates.

The second outstanding event of the fall of 2005 was the benign weather from early October through mid-November. Weather at this time of the year permits what Sam Robbins referred to as half-hardy species, to linger in fall or maybe even attempt to overwinter. Such was the case this fall. Field reporters submitted numerous late departure records. Many insectivorous species lingered late into the season. Magnolia, Blackburnian, Yellow, and Pine Warblers were found from various corners of the state. Warbling Vireos in November and Eastern Phoebe's throughout the period are the result of this weather pattern. More typical half-hardy species such as blackbirds, American Robins, Hermit Thrushes, Yellow-rumped Warblers, and Eastern Bluebirds were found on many Christmas Counts. The temptation to linger happened during this period, because the next five-week period was dramatically below normal.

Randy Hoffman is the new Bird Reports Coordinator for WSO. This is the first appearance of his new column, "Lessons from the Seasons," that will appear in each issue of The Pigeon just before the actual seasonal report. Randy will give WSO members his take on events from each season and suggest what we can learn from them.

The Fall Season: 2005

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The fall season of 2005 will be memorable for many reasons. The most far-reaching of these was that it was a wake-up call for just how vulnerable this country is when it comes to energy. The combination of hurricanes Katrina and Rita, at least briefly sent gasoline prices over $3.00 a gallon. To see $3.19⁹ on a sign at a gas station here in Bartlesville, Oklahoma, brought home the realization that driving in the future will be restricted and birding will be confined to places that are closer to home, except for less frequent trips to special birding places.

Information on birding in the future will be increasingly obtained from the internet. There are those of us who continue to like sending out information via the regular mail, but the future is definitely here to stay. Those who want their bird sightings to be preserved for the future must remember that all rare bird sightings must be fully documented and sent to the Records Committee for review. To not send the documentation will mean that sightings will be seen by those who view them on the internet, than they will be gone, as was the case of a Scissor-tailed Flycatcher seen at Horicon Marsh this past fall season.

Once again, the fall of 2005, like other fall seasons had its birding hotspots. Bong Recreational Area in Kenosha County had one of the largest flocks of Little Blue Herons ever seen in Wisconsin. Horicon Marsh was full of shorebirds, as it is in so many other fall seasons. Once again, Wisconsin Point had many rarities on the WSO weekend field trip in late September. Snowy Owls made an invasion into the state in late November. The south Metro Pier area in Milwaukee County was the place to be on 13 and 14 November and again a week later when many Cave Swallows appeared for a few days and then were gone as quickly as they had appeared.

August was a very warm month. It was also wet. There was a major tornado outbreak in the state on the 18th. The most noteable of these was the Viola-to-Stoughton supercell which did much damage in the Stoughton area before continuing on to Racine County. In Horicon Marsh, Tessen found 19 species of shorebirds on the 6th and S. Cutright found 18 species on the 17th. Tessen found 18 species of warblers at Heckrodt Wetland Preserve in Winnebago County on the 22nd, the Baumanns found 17 species of warblers at Bay beach in Brown County on the 23rd, and Bontly

found 18 species of warblers in Milwaukee County on the 29th.

September had mostly normal precipitation and near normal temperatures. The Smiths reported 2.95″ of rain in Oconto County, Hale reported 1.48″ of rain in Jefferson County, and Berner reported 7.37″ of rain in Portage County. Hale reported hearing migrants all night on the 7th and 8th of September. Tessen reported that warblers rapidly decreased after mid-September and Berner reported that warblers dwindled after the 20th. Tessen reported 16 species of shorebirds on the 3rd. Hoffman found 23 species of warblers in Columbia County on the 11th, McDowell found 20 species of warblers in Dane County on the 8th and Turk found 18 species of warblers at Picnic Point in Madison on 3 September.

Tessen reported below-normal precipitation and above-normal temperatures in October. In Oconto County, the Smiths reported 2.59″ of rainfall for the month and a high of 85 on the 4th and a low of 22 on the 28th. Hale reported that Rock Lake in Jefferson County was at or near a record low on the 31st. In Portage County, Berner reported rainfall of 1.02″ and a fallout of waterfowl in lakes around Stevens Point on the 22nd. He also reported that he has moved to California and that his very complete reports of Portage County birds would be ending. Hurricane Wilma, which was the last of the major hurricanes to strike this country in 2005, had a barometric pressure of 882 mb or 26.05 inches, the lowest barometric pressure ever recorded in the Atlantic Ocean. Its strength decreased before it reached the United States.

November was very warm early, then sharply colder, then variable at the end. Snow was reported on the 15th with 1″ in Arena, 1.5″ in Shawano, 3″ in Iowa County, and 6.5″ in Rhinelander. The Smiths reported 2″ on snow on the 23rd and Hale reported snow before and after Thanksgiving. The snow was mostly gone by the end of the month with warmer temperatures.

A total of 305 species was reported during the season. Many of these lingered or were seen by many observers during their brief stays. These included Harlequin Ducks in Douglas, Milwaukee, Racine, and Sheboygan Counties, a Barrow's Goldeneye in Ozaukee County, Spruce Grouse in Florence, Forest, Oneida, and Vilas Counties, Pacific Loons in Douglas and Ozaukee Counties, Eared Grebes in Sheboygan and Winnebago Counties, Western Grebes in Ashland, Door, and Portage Counties, Little Blue Herons in Kenosha and Winnebago Counties, King Rails in Burnett, Dodge, and Waukesha Counties, Piping Plovers in Manitowoc and Outagamie Counties, Whimbrels in Dodge and Milwaukee Counties, Red Phalaropes in Milwaukee County, Pomarine Jaeger in Douglas County, Long-tailed Jaeger in Douglas County, Laughling Gull in Douglas County, Mew Gull in Milwaukee County, Black-legged Kittiwake in Milwaukee County, Sabine's Gull in Douglas County, Arctic Tern in Douglas County, Northern Hawk Owl in Douglas County, Great Gray Owls in Bayfield County, Rufous/ *Selasphorous* sp. hummingbirds in Dane, Fond du Lac, and Milwaukee Counties, Green Violet-ears in Douglas and Sauk Counties, Black-backed Woodpeckers in Douglas and Vilas Counties, Loggerhead Shrikes in

This Green Violet-ear visited the feeders of Hank Kryger in Solon Springs, Douglas County in August and September 2005. This photo of the bird was taken by Tim Leahy.

Dodge and Portage Counties, White-eyed Vireo in Waukesha County, Cave Swallows in Milwaukee County, Townsend's Solitaires in Sauk County, Varied Thrushes in Ashland and Wood Counties, Northern Mockingbirds in Bayfield, Brown, and La Crosse Counties, Nelson's Sharp-tailed Sparrows in Burnett, Dane, Milwaukee, and Waukesha Counties, and Smith's Longspurs in Florence County.

Reports
(1 August–30 November 2005)

Greater White-fronted Goose—Reported by B. Martin in Dane County on 13 November.

Snow Goose—First reported by Ziebell in Winnebago County on 27 September. Ashman found 100 in Dane County on 12 November and Ziebell had 100 in Winnebago County on 17 November. Found at the end of the period in Dane, Iowa, and Winnebago Counties.

This Green Violet-ear was a visitor at a feeder at the home of Barbara Ott near Spring Green in Sauk County from 5-7 September 2005. Photo by Barbara Ott.

Ross's Goose—First reported by Sontag in Manitowoc County on 21 September. Last reported by Thiessen in Dane County on 30 November.

Canada Goose—Found throughout the state during the period. On 2 November 210,000 were reported in Horicon Marsh NWR.

Cackling Goose—First reported by Ziebell in Winnebago County on 17 September. Thiessen found 180 in Dane County on 22 November. Found at the end of the period in Dane and Winnebago Counties.

Mute Swan—Reported during the period in Ashland, Bayfield, Dane, Door, Racine, and Waukesha Counties. Ashman found 14 in Dane County on 24 November.

Trumpeter Swan—First reported by Tessen in Dodge County on 6 August. Bates found 20 at Powell Marsh in Vilas County on 5 November. Last reported by Hale in Jefferson County on 26 November.

Tundra Swan—First reported by R. and C. Lukes in Door County on 8 August. The Smiths found 450 in Oconto County on 13 November. Found in scattered areas throughout the state at the end of the period.

Wood Duck—Found throughout the state at the beginning of the period. Stutz saw 60 in Dodge County on 13 August. Last reported by Gustafson in Waukesha County on 28 November.

Gadwall—First reported by Frank in Dodge County on 20 August. Frank saw 90 in Milwaukee County on 23 November. Found at the end of the period in Dane, Waukesha, and Winnebago Counties.

American Wigeon—First reported by W. Mueller in Dodge County on 27 August. Knispel found 120 in Winnebago County on 17 September. Found at the end of the period in Dane, Door, and Winnebago Counties.

American Black Duck—Reported at the beginning of the period south to Milwaukee County. The Smiths found 50 in Oconto County on 22 November. Found throughout the state at the end of the period.

Mallard—Found throughout the state during the period. Paulios saw over 10,000 in Burnett County on 2 October.

Blue-winged Teal—Found throughout the state at the beginning of the period. Paulios reported up to 250 in Horicon Marsh from 21-25 August. Last reported by R. and C. Lukes in Door County on 17 November.

Northern Shoveler—Reported at the beginning of the period in Dodge County by Tessen. Frank found 203 in Dodge County on 31 August. Reported at the end of the period in Dane, Jefferson, Racine, Rock, and Waukesha Counties.

Northern Pintail—First reported by Motquin in Fond du Lac County on 20 August. Stutz found 80 in Dodge County on 15 October. Reported at the end of the period in Door, Iowa, and Winnebago Counties.

Green-winged Teal—Reported at the beginning of the period in Dane, Dodge, and Door Counties. Stutz saw 100 in Dodge County on 15 October. Found at the end of the period in Dane and Door Counties.

Canvasback—First reported by W. Mueller in Manitowoc County on 14 August. Lesher saw over 6000 in La Crosse County on 17 October. Found in scattered areas throughout the state at the end of the period.

Redhead—Reported at the beginning of the period in Dodge and Winnebago Counties. Berner saw 500 in Portage County on 22 October. Found at the end of the period north to Door County.

Ring-necked Duck—Reported at the beginning of the period in Ashland, Bayfield, and Douglas Counties. Stutz found 40 in Dane County on 27 October. Found at the end of the period in Dane and Waukesha Counties.

Greater Scaup—First reported on 21 September in Douglas County by R. Johnson and Tessen. Howe saw 325 in Racine County on 16 November. Found at the end of the period north to Door and Oconto Counties.

Lesser Scaup—First reported on 4 August in Ashland County by Brady. Berner found 2200 in Portage County on 22 October and Campbell found thousands in Marinette County on 7 November. Reported at the end of the period in scattered areas throughout the state.

Harlequin Duck—First reported by a fisherman on the Brule River in Douglas County on 15 October. Three were reported by numerous observers in Sheboygan County from 29 October to 8 November. Last reported in Milwaukee County on 25 November by Gustafson and Keyel.

Surf Scoter—First reported on 18 September in Douglas County by R. Johnson and Svingen. Fitzgerald saw 7 in Racine County on 23 November. Last reported by W. Mueller in Racine County on 26 November.

White-winged Scoter—First reported on 25 September in Douglas County by R. Johnson and Schultz. Fitzgerald saw 5 in Manitowoc County on 14 October. Last reported by Howe in Racine County on 30 November.

Black Scoter—First reported by the Baumanns in Douglas County on 24 September. Howe saw 23 in Racine County on 16 November. Last reported by the Baumanns in Door County on 26 November.

Long-tailed Duck—First reported by the R. and C. Lukes in Door County on 8 October. Stutz saw 500 in Milwaukee County on 20 November. Reported at the end of the period in Door County by R. and C. Lukes.

Bufflehead—First reported by Berner in Portage County on 15 October. Howe saw 360 in Racine County on 22 November. Found at the end of the period north to Door and Oconto Counties.

Common Goldeneye—Reported at the beginning of the period in Ashland, Bayfield, and Door Counties. Campbell saw thousands in Marinette County on 7 November. Found throughout the state at the end of the period.

Barrow's Goldeneye—Wood saw one in Ozaukee County on 25 November. See "By the Wayside."

Hooded Merganser—Reported at the beginning of the period south to Dodge County. Stutz saw 20 in Dane County on 19 November. Found at the end of the period north to Oconto County.

Common Merganser—Reported at the beginning of the period in Ashland, Bayfield, Door, and Florence Counties. Ziebell saw 1600

in Winnebago County on 18 November. Found in scattered areas throughout the state at the end of the period.

Red-breasted Merganser—Found at the beginning of the period in Ashland, Bayfield, and Door Counties. Tessen found hundreds in Manitowoc and Ozaukee Counties on 22 November. Reported at the end of the period in Milwaukee, Racine, Sheboygan, and Waukesha Counties.

Ruddy Duck—Found at the beginning of the period in Dane, Dodge, and Winnebago Counties. Berner saw 3300 in Portage County on 22 October. Reported at the end of the period north to Winnebago County.

Ring-necked Pheasant—Reported during the period north to Vilas County. In Dane County Stutz saw 5 on 8 October and Evanson saw 5 on 12 October.

Ruffed Grouse—Reported during the period south to Richland County. Kavanagh found 9 in Florence County on 8 September.

Spruce Grouse—Reported by the Baumanns in Vilas County on 19 September, by Kavanagh in Florence County on 26 September, by Evanson in Oneida County on 27 September, and by Lubahn in Forest County on 28 September.

Sharp-tailed Grouse—Reported in Burnett County on 8 August by Paulios, by the Baumanns on 19 September, and by Haseleu on 13 October. Lubahn saw 12 in Douglas County on 28 September.

Wild Turkey—Reported during the period north to Burnett, Vilas, Florence, and Marinette Counties. Stutz found 50 in Dane County on 27 October.

Northern Bobwhite—Reported during the period in Douglas and Ozaukee Counties.

Red-throated Loon—First reported by the Baumanns and Tessen in Douglas County on 22 September. Tessen saw 8 in Douglas County on 24 September. Last reported by R. Johnson in Douglas County on 15 November.

Pacific Loon—Reported by R. Johnson in Douglas County on 3 September and 15 November, and by Frank in Douglas County on 22 September and in Ozaukee County on 3 November. See "By the Wayside."

Common Loon—Reported at the beginning of the period south to Burnett and Washburn Counties. Berner saw 67 in Portage County on 23 October. Reported at the end of the period in Green Lake County by Schultz.

Pied-billed Grebe—Found throughout the state at the beginning of the period. Stutz saw 35 in Dane County on 19 November. Reported at the end of the period in Dane, Sauk, Waukesha, and Winnebago Counties.

Horned Grebe—First reported on 12 August in Oneida County by Brady and Verch. Tessen saw 175 in Manitowoc County on 9 October. Reported at the end of the period in Douglas, Racine, and Waukesha Counties.

Eared Grebe—Tessen found one in Sheboygan County on 22 November.

Red-necked Grebe—Reported at the beginning of the period in Winnebago County by Ziebell. Last reported by Paulios in Douglas County on 3 October.

Western Grebe—First reported on 23 September in Ashland County by Anich and Schultz. T. and C. Sykes found 5 in Door County on 9 October. Last reported on 30 October in Portage County by Berner and Hall.

American White Pelican—Reported at the beginning of the period in Door, Oconto, and Winnebago Counties. Ziebell saw 1264 in Winnebago County on 17 September. Last reported by Weyers in Brown County on 26 November.

Double-crested Cormorant—Found in scattered areas throughout the state at the beginning of the period. Knispel found 2398 in Winnebago County on 17 September. Found at the end of the period in Ashland, Bayfield, and Winnebago Counties.

American Bittern—Reported at the beginning of the period in Dodge and Winnebago Counties. Last reported by the Smiths in Oconto County on 20 October.

Least Bittern—Reported at the beginning of the period in Ashland and Waukesha Counties. Brady found 4 in Ashland County on 24 August. Last reported by Gustafson in Waukesha County on 21 September.

Great Blue Heron—Found throughout the state at the beginning of the period. Ziebell saw 61 in Winnebago County on 17 September.

Last reported by Yoerger in Green and Rock Counties on 27 November.

Great Egret—Reported at the beginning of the period in Door and Marinette Counties. Diehl saw 300 in Horicon Marsh on 6 August. Last reported by Sontag in Manitowoc County on 7 November.

Snowy Egret—First reported by Diehl and Tessen in Dodge County on 6 August. The Baumanns saw 7 in Brown County on 23 and 30 August. Last reported by Heikkinen in Dane County on 18 September.

Little Blue Heron—As many as 11-14 individuals were seen by many observers in Kenosha County from 1-20 August. Last reported by Schwartz in Kenosha County on 28 August.

Green Heron—Found throughout the state at the beginning of the period. Evanson saw 8 in Dane County on 1 August. Last reported by Strasser in Trempeleau County on 3 October.

Black-crowned Night-Heron—Reported at the beginning of the period north to Door and Oconto Counties. Ziebell saw 30 in Winnebago County on 14 August. Last reported by Ziebell in Winnebago County on 15 October.

Turkey Vulture—Found throughout the state at the beginning of the period. Romano saw 84 in Lafayette County on 7 September. Last reported by Gustafson in Milwaukee and Racine Counties on 22 November.

Osprey—Reported at the beginning of the period south to Dane, Milwaukee, and Sauk Counties. Six were seen at Cedar Grove Ornithological Station, Sheboygan County, on 2 September. Last reported by Knispel in Winnebago County on 20 November.

Bald Eagle—Reported at the beginning of the period south to Sauk County. The Smiths saw 6 in Oconto County on 23 October. Found in scattered areas throughout the state at the end of the period.

Northern Harrier—Reported at the beginning of the period south to Portage and Manitowoc Counties. Tessen saw 20 in Dodge County on 3 November. Reported at the end of the period north to Ashland and Bayfield Counties.

Sharp-shinned Hawk—Found at the beginning of the period in Ashland, Bayfield, Door, and Portage Counties. S. Cutright saw 709 in Ozaukee County on 15 October. Found in scattered areas throughout the state at the end of the period.

Cooper's Hawk—Found throughout the state at the beginning of the period. On 15 October 27 were seen at Cedar Grove Ornithological Station, Sheboygan County. Reported at the end of the period north to Door and Oconto Counties.

Northern Goshawk—First reported by S. Cutright in Ozaukee County on 6 October. Last reported by Brady in Ashland/Bayfield Counties on 25 November.

Red-shouldered Hawk—Reported at the beginning of the period in Iowa and Portage Counties. Three were seen at Cedar Grove Ornithological Station, Sheboygan County, on 17 November, which was the latest report.

Broad-winged Hawk—Reported at the beginning of the period south to Portage County. On 20 September 25 were seen at Cedar Grove Ornithological Station, Sheboygan County. Last reported by Ashman in Dane County on 4 November.

Red-tailed Hawk—Found throughout the state at the beginning of the period. S. Cutright saw 157 in Ozaukee County on 15 October. Reported at the end of the period north to Ashland and Bayfield Counties.

Rough-legged Hawk—First reported by Haseleu in Burnett County on 13 October. S. Cutright saw 10 in Ozaukee County on 15 October. Found throughout the state at the end of the period.

Golden Eagle—First reported by Tessen in Dodge County on 6 August. Last reported by A. Holschbach in Iowa County on 29 November.

American Kestrel—Found throughout the state at the beginning of the period. The Smiths saw 8 in Oconto County on 14 August and S. Cutright saw 8 in Ozaukee County on 15 October. Reported at the end of the period north to Oconto County.

Merlin—Reported at the beginning of the period in Ashland, Bayfield, Door, Douglas, and Florence Counties. S. Cutright saw 137 in Ozaukee County on 15 October. Reported at the end of the period in Door County by R. and C. Lukes.

Peregrine Falcon—Reported at the beginning of the period in La Crosse, Racine, and Sheboygan Counties. Sixteen were seen at

Cedar Grove Ornithological Station, Sheboygan County, on 28 September. Last reported by Howe in Racine County on 30 November.

King Rail—Reported by Hoffman in Dodge County on 14 August, by Schirmacher in Dodge County on 20 August, by the Baumanns in Burnett County on 19 September, and by Gustafson in Waukesha Count on 21 September.

Virginia Rail—Found in scattered areas throughout the state at the beginning of the period. Last reported by Gustafson in Waukesha County on 3 October.

Sora—Reported at the beginning of the period north to Outagamie County. The Webbs found 7 in Dodge County on 14 August and Heikkinen found 7 in Trempeleau County on 5 September. Last reported by Gustafson in Waukesha County on 18 October.

Common Moorhen—Reported at the beginning of the period in Dodge, Waukesha, and Winnebago Counties. The Webbs found 3 in Dodge County on 14 August. Last reported by Fitzgerald in Horicon Marsh on 16 October.

American Coot—Reported at the beginning of the period in Dane, Dodge, Manitowoc, and Winnebago Counties. Stutz saw 1800 in Dane County on 19 November. Found at the end of the period north to Sheboygan and Winnebago Counties.

Sandhill Crane—Reported at the beginning of the period north to Burnett and Florence Counties. Paulios saw over 1000 in Burnett County on 2 October and Mertins saw thousands at Necedah NWR on 2 October. Reported at the end of the period in Dane, Iowa, Walworth, and Winnebago Counties.

Whooping Crane—Besides the 20 young that were making practice flights at Necedah NWR on 1 October, reports came from Brown, Dane, Dodge, Jefferson, Juneau, and Waukesha Counties.

Black-bellied Plover—First reported by Brady in Oneida County on 5 August. Tessen saw 105 in Dodge County on 3 September. Last reported on 23 November in Milwaukee County by Fitzgerald and in Racine County by Howe and Prestby.

American Golden-Plover—First reported by Brady in Oneida County on 5 August. J. and A. Holschbach saw 85 in Oneida County on 26 August. Last reported by Tessen in Dodge County on 3 November.

Semipalmated Plover—Reported at the beginning of the period in Ashland, Bayfield, Dane, Douglas, and Milwaukee Counties. J. and A. Holschbach saw 34 in Oneida County on 27 August. Last reported by Fitzgerald in Manitowoc County on 13 October.

Piping Plover—Reported in Manitowoc County by J. Holschbach on 6 and 7 August and in Outagamie County by Tessen on 22 August.

Killdeer—Found throughout the state at the beginning of the period. Persico saw over 550 in Burnett County on 13 August. Found at the end of the period in Sheboygan County by the Brassers.

American Avocet—First reported on 4 August in La Crosse County by Calvetti and Lesher. Doeppers saw 4 in Dodge County on 26 August. Last reported by Bahls in Dodge County on 8 October.

Greater Yellowlegs—Reported at the beginning of the period in Dane, Dodge, Douglas, and Milwaukee Counties. Hoffman found 220 in Dodge County on 14 August. Last reported by Evanson in Dane County on 13 November.

Lesser Yellowlegs—Found in scattered areas throughout the state at the beginning of the period. Hoffman found 1850 in Dodge County on 20 August. Last reported by C. Martin in Dane County on 8 November.

Solitary Sandpiper—Found throughout the state at the beginning of the period. Stutz saw 10 in Dodge County on 13 August. Last reported on 2 October in Ozaukee County by Frank and in Rock County by Yoerger.

Willet—First reported by Prestby in Milwaukee County on 13 August. The Baumanns saw 6 in Brown County on 27 August. Last reported by Bontly in Milwaukee County on 13 September.

Spotted Sandpiper—Found throughout the state at the beginning of the period. Stutz found 20 in Dodge County on 13 August. Last reported by Howe in Racine County on 17 November.

Upland Sandpiper—Reported by Brady in Ashland/Bayfield Counties on 3 August.

Whimbrel—Reported by Hoffman in Dodge County on 14 August and by Idzikowski in Milwaukee County on 28 August.

Hudsonian Godwit—Hoffman saw 4 in Dodge County on 20 August.

Marbled Godwit—First reported by Gross in Kenosha County on 1 August. Paulios saw 42 in Burnett County on 8 August. Last reported by Brady in Ashland County on 3 September.

Ruddy Turnstone—First reported by Brady in Ashland County on 7 August. Stutz saw 6 in Douglas County on 24 September. Last reported by Paulios in Douglas County on 3 October.

Red Knot—Reported in Milwaukee County on 3 September by Mooney and W. Mueller and in Ozaukee County by Frank on 9 October.

Sanderling—Reported at the beginning of the period in Marinette County by Kavanagh. Frank saw 44 in Ozaukee County on 24 October. Last reported by Howe in Racine County on 16 November.

Semipalmated Sandpiper—Reported at the beginning of the period in Ashland, Bayfield, Dane, Douglas, and Milwaukee Counties. Paulios saw 250 in Burnett County on 8 August. Last reported by Fitzgerald in Manitowoc County on 13 October.

Least Sandpiper—Reported at the beginning of the period in scattered areas throughout the state. Paulios saw 300 in Burnett County on 8 August. Last reported by Thiessen in Dane County on 15 October.

White-rumped Sandpiper—First reported by Lubahn in Milwaukee County on 29 August. Last reported by Howe in Racine County on 20 November.

Baird's Sandpiper—First reported by R. Johnson in Douglas County on 4 August. Hoffman saw 68 in Dodge County on 20 August. Last reported by Tessen in Sheboygan County on 4 October.

Pectoral Sandpiper—Reported at the beginning of the period in Dane, Dodge, and Milwaukee Counties. Hoffman saw 6400 in Dodge County on 14 August. Last reported by Gustafson in Milwaukee County on 10 November.

Dunlin—First reported by Tessen in Douglas County on 23 September. Tessen saw 200 in Dodge County on 3 November. Last reported by the Brassers in Sheboygan County on 19 November.

Stilt Sandpiper—First reported by Prestby in Milwaukee County on 1 August. Tessen saw 15 in Outagamie County on 22 August. Last reported by Gustafson in Milwaukee County on 22 September.

Buff-breasted Sandpiper—First reported on 4 August in Douglas County by R. Johnson and in Waushara County by Motquin. Hoffman saw 27 in Dodge County on 20 August. Last reported on 23 September in Douglas County by the Baumanns, Frank, and Tessen.

Short-billed Dowitcher—First reported by Prestby in Milwaukee County on 1 August. Stutz found 40 in Dodge County on 13 August. Last reported by Romano in Lafayette County on 3 October.

Long-billed Dowitcher—First reported by Yoerger in Dane County on 18 September. Tessen saw 5 in Dodge County on 1 October. Last reported by Idzikowski in Milwaukee County on 13 November.

Wilson's Snipe—Reported at the beginning of the period south to Portage and Winnebago Counties. Romano found 48 in Lafayette County on 20 October. Reported at the end of the period in Dane and Milwaukee Counties.

American Woodcock—Reported at the beginning of the period in Door, Portage, Vilas, and Walworth Counties. The Smiths found 3 in Oconto County on 5 October. Last reported on 7 November in Milwaukee County by Bontly and in Racine County by Howe.

Wilson's Phalarope—First reported by Prestby in Milwaukee County on 1 August. S. Cutright saw 27 in Horicon Marsh on 17 August. Last reported by David in Kenosha County on 24 October.

Red-necked Phalarope—First reported by Tessen in Dodge County on 6 August. Tessen saw 10 in Dodge County on 13 August. Last reported by Wood in Ozaukee County on 23 October.

Red Phalarope—Reported in Milwaukee County by many observers from 19 to 25 October and from 19 to 23 November. See "By the Wayside."

Parasitic Jaeger—Reported in Douglas County by R. Johnson on 10 September, by Tessen on 22 and 24 September, by Prestby, Schultz, and Tessen on 25 September, and by Idzikowski in Milwaukee County on 23 September.

Pomarine Jaeger—R. Johnson saw one in Douglas County on 15 November. See "By the Wayside."

Long-tailed Jaeger—Hendrickson saw one in Douglas County on 18 November. See "By the Wayside."

Laughing Gull—R. Johnson saw one in Douglas County on 10 September.

Franklin's Gull—First reported by Brady in Oneida County on 5 August. Last reported in Milwaukee County on 23 November by Fitzgerald, Keyel, and Prestby.

Little Gull—First reported by R. Johnson in Douglas County on 29 August. Last reported by Korducki in Milwaukee County on 21 November.

Bonaparte's Gull—First reported by Brady in Ashland/Bayfield Counties on 4 August. Frank saw 76 in Milwaukee County on 10 November. Last reported by Prestby in Milwaukee County on 23 November.

Mew Gull—One was reported in Milwaukee County from 14 to 26 November by many observers. See "By the Wayside."

Ring-billed Gull—Found throughout the state during the period. Berner saw 1600 in Portage County on 29 October and the Baumanns saw thousands on Green Bay on 12 November.

Herring Gull—Found throughout the state during the period. W. Mueller saw over 7000 in Racine County on 26 November.

Thayer's Gull—First reported by Fitzgerald in Manitowoc County on 13 October. Last reported by W. Mueller in Racine County on 26 November.

Iceland Gull—Prestby found one in Douglas County on 12 November.

Lesser Black-backed Gull—First reported by Lubahn in Milwaukee County on 3 September. Last reported by W. Mueller in Racine County on 26 November.

Glaucous Gull—First reported by Motquin in Ashland County on 30 September. Svingen saw 4 in Douglas County on 19 November. Reported at the end of the period in Douglas County by R. Johnson.

Great Black-backed Gull—Reported at the beginning of the period in Door, Manitowoc, and Sheboygan Counties. Fitzgerald saw 4 in Manitowoc County on 14 October. Reported at the end of the period along Lake Michigan from Door to Racine Counties.

Black-legged Kittiwake—Gustafson saw one in Milwaukee County on 22 September. See "By the Wayside.'

Sabine's Gull—Up to 2 individuals were seen off Wisconsin Point in Douglas County by many observers from 10-28 September. See "By the Wayside."

Caspian Tern—Reported at the beginning of the period south to Milwaukee County. Idzikowski saw 183 in Milwaukee County on 12 August. Last reported by W. Mueller in Racine County on 9 October.

Common Tern—Reported at the beginning of the period in Ashland, Bayfield, Douglas, and Marinette Counties. The Smiths saw 56 in Oconto County on 13 November. Last reported by Gustafson in Racine County on 4 November.

Forster's Tern—Found at the beginning of the period in Dodge and Winnebago Counties. Tessen saw 20 in Douglas County on 21 September. Last reported by Stutz in Dane County on 8 October.

Arctic Tern—One was seen off Wisconsin Point in Douglas County by many observers on 24 September. See "By the Wayside."

Black Tern—Reported at the beginning of the period in Dane, Dodge, Outagamie, and Waukesha Counties. Stutz found 45 in Dodge County on 13 August. Last reported by Gustafson in Racine County on 27 August.

Rock Pigeon—Found throughout the state during the period. Stutz saw 80 in Dane County on 16 October.

Eurasian Collared-Dove—Reported during the period from Crawford, Fond du Lac, Milwaukee, Outagamie, and Waukesha Counties.

Mourning Dove—Found throughout the state during the period. Frank saw 351 in Ozaukee County on 9 October.

Black-billed Cuckoo—Reported at the beginning of the period in Manitowoc County by J.

Holschbach. Last reported by Yoerger in Rock County on 26 September.

Yellow-billed Cuckoo—Reported at the beginning of the period in Door and Milwaukee Counties. Romano found 5 in Lafayette County on 23 August. Last reported by Zehner in Milwaukee County on 16 October.

Eastern Screech-Owl—Reported during the period north to Door County. Stutz found 3 in Dane County on 14 October.

Great Horned Owl—Found throughout the state during the period. Howe found 4 in Walworth County on 15 October.

Snowy Owl—First reported by Brady in Ashland County on 18 November. Brady saw 4 in Ashland County on 28 November. A statewide invasion was underway by the end of the period.

Northern Hawk Owl—Grosshuesch found one in Douglas County on 23 November. See "By the Wayside."

Barred Owl—Found throughout the state during the period. Seegert found 4 in Marquette County on 22 October.

Great Gray Owl—At least 31 individuals were left over from the previous winter's invasion and were found throughout the period in Bayfield County.

Long-eared Owl—First reported by Paulios in Burnett County on 2 October. Reported at the end of the period in Manitowoc County by J. Holschbach.

Short-eared Owl—First reported by Sontag in Manitowoc County on 15 October. Moretti found 3 in Waukesha County on 28 November. Found at the end of the period in scattered areas throughout the state.

Northern Saw-whet Owl—First reported by Frank in Vilas County on 25 August. Last reported on 20 November in Milwaukee County by Gutschow and in Marinette County by A. Holschbach.

Common Nighthawk—Found in scattered areas throughout the state at the beginning of the period. Kuecherer saw over 1000 in Winnebago County on 28 August. Last reported by Yoerger in Green County on 5 October.

Whip-poor-will—Found at the beginning of the period in Florence, Portage, and Walworth Counties. Last reported by Kirschbaum in Crawford County on 7 October.

Chimney Swift—Found throughout the state at the beginning of the period. Duerksen saw 240 in Richland County on 8 August. Last reported by Bates in Vilas County on 6 November.

Green Violet-ear—Reported in Douglas County from 3 August to 5 September and in Sauk County from 4 to 9 September. See "By the Wayside."

Ruby-throated Hummingbird—Seen throughout the state at the beginning of the period. Daggert saw 30 in Iowa County on 12 August. Last reported by Bates coming to a feeder in Vilas County on 1 November.

Rufous Hummingbird—Reported in Milwaukee County on 16 September by Boos, on 4 October by Tessen, on 7 October by Gustafson and on 8 October by Bontly. Also reported on 30 October in Dane County by Stutz. See "By the Wayside."

Belted Kingfisher—Found throughout the state at the beginning of the period. Knispel found 5 in Winnebago County on 17 September. Reported at the end of the period north to Winnebago County.

Red-headed Woodpecker—Reported at the beginning of the period in Iowa, Milwaukee, Oconto, and Portage Counties. Berner found 8 in Portage County on 13 August. Last reported by Lesher in Grant County on 14 November.

Red-bellied Woodpecker—Reported during the period north to Ashland, Bayfield, Burnett, Florence, and Marinette Counties. Stutz found 5 in Dane County on 8 October.

Yellow-bellied Sapsucker—Reported at the beginning of the period south to Portage County. Kavanagh found 9 in Florence County on 8 September. Last reported by Evanson in Sauk County on 26 November.

Downy Woodpecker—Found throughout the state during the period. Knispel found 13 in Winnebago County on 17 September.

Hairy Woodpecker—Found throughout the state during the period. The Smiths found 8 in Oconto County on 14 August.

Black-backed Woodpecker—Reported by the Baumanns in Douglas County on 20 Septem-

ber and by the Spahns in Vilas County on 12 October.

Northern Flicker—Found throughout the state at the beginning of the period. Forty were seen at Cedar Grove Ornithological Station, Sheboygan County, on 17 September. Reported at the end of the period north to Oconto County.

Pileated Woodpecker—Found during the period south to Grant, Lafayette, and Walworth Counties. The Smiths found 3 in Oconto County on 14 August.

Olive-sided Flycatcher—Reported at the beginning of the period in Door County by R. and C. Lukes. Last reported by C. Martin in Dane County on 14 September.

Eastern Wood-Pewee—Found throughout the state at the beginning of the period. Stutz found 8 in Dane County on 10 September. Last reported by Romano in Lafayette County on 3 October.

Yellow-bellied Flycatcher—Reported at the beginning of the period in Douglas and Vilas Counties. Last reported by the Smiths in Oconto County on 11 September.

Acadian Flycatcher—Reported at the beginning of the period in Dane, Portage, and Waukesha Counties. Berner found 5 in Portage County on 1 and 5 August. Last reported by Romano in Lafayette County on 14 September.

Alder Flycatcher—Reported at the beginning of the period south to Waukesha County. The Spahns found 50 in Vilas County on 2 August. Last reported on 3 September at Cedar Grove Ornithological Station, Sheboygan County.

Willow Flycatcher—Reported at the beginning of the period north to Oconto County. Evanson found 4 in Dane County on 10 August. Last reported by Evanson in Dane County on 18 September.

Least Flycatcher—Reported at the beginning of the period south to Iowa County. Stutz found 4 in Dane County on 29 August. Last reported by Tessen in Ozaukee County on 9 October.

Eastern Phoebe—Found throughout the state at the beginning of the period. Stutz found 8 in Dane County on 21 August. Last reported on 25 November in Columbia County by the Schwalbes.

Great Crested Flycatcher—Found at the beginning of the period north to Florence County. Stutz found 5 in Dane County on 10 September. Last reported by Szymczak in Waukesha County on 26 September.

Eastern Kingbird—Found throughout the state at the beginning of the period. The Smiths saw 18 in Oconto County on 14 August. Last reported by Ziebell in Winnebago County on 18 September.

Loggerhead Shrike—Reported by Schaufenbuel in Portage County on 14 August and by Tustison in Dodge County on 1 September.

Northern Shrike—First reported by Brady in Bayfield County on 9 October. Brady saw 5 in Ashland County on 14 November. Found in scattered areas throughout the state at the end of the period.

White-eyed Vireo—Gustafson found one in Waukesha County on 5 and 7 September.

Bell's Vireo—Reported from the beginning of the period to 9 August in La Crosse County by Lesher and on 14 August at Horicon Marsh by the Webbs.

Yellow-throated Vireo—Found at the beginning of the period north to Marinette County. A. Holschbach found 4 in Iowa County on 10 September. Last reported by Thiessen in Dane County on 10 October.

Blue-headed Vireo—Reported at the beginning of the period in Douglas, Florence, Vilas, and Waukesha Counties. Berner found 3 in Portage County on 3 October and Ashman found 3 in Dane County on 9 October. Last reported by Bontly in Milwaukee County on 27 October.

Warbling Vireo—Found throughout the state at the beginning of the period. Stutz found 6 in Dane County on 11 September. Spalding found a very late individual in Dane County on 6 November.

Philadelphia Vireo—First reported by Tessen in Winnebago County on 22 August. The Baumanns found 3 in Brown County on 27 August and Tessen found 3 in Winnebago County on 9 September. Last reported by Ashman in Dane County on 10 October.

Red-eyed Vireo—Found throughout the state at the beginning of the period. Evanson found dozens in Monroe County on 5 Septem-

ber. Last reported by Ashman in Dane County on 29 October.

Gray Jay—Reported during the period in Forest, Iron, Oneida, and Vilas Counties. A. and J. Holschbach found 5 in Oneida County on 27 August.

Blue Jay—Found throughout the state during the period. Cedar Grove Ornithological Station (Sheboygan County) reported 140 on 27 September.

American Crow—Reported throughout the state during the period. Duerksen found 200 in Richland County on 17 November.

Common Raven—Reported during the period south to Monroe, Outagamie, and Waushara Counties. Tessen found 7 in Douglas County on 31 August.

Horned Lark—Reported at the beginning of the period north to Door County. A. Holschbach found 85 in Iowa County on 21 August. Found at the end of the period north to Manitowoc and Outagamie Counties.

Purple Martin—Found throughout the state at the beginning of the period. The Smiths saw 59 in Oconto County on 1 August and Campbell found 59 in Marinette County on 18 August. Last reported by Gustafson in Waukesha County on 21 September.

Tree Swallow—Reported throughout the state at the beginning of the period. Stutz found over 1000 in Dodge County on 13 August. Last reported by Romano in Lafayette County on 20 October.

Northern Rough-winged Swallow—Reported at the beginning of the period north to Marinette County. Stutz found 30 in Dane County on 15 September. Last reported by Romano in Lafayette County on 12 October.

Bank Swallow—Found in scattered areas throughout the state at the beginning of the period. Stutz found 5 in Dane County on 11 September. Last reported by Gustafson in Racine County on 21 September.

Cliff Swallow—Found throughout the state at the beginning of the period. Frank saw 65 in Ozaukee County on 4 August. Last reported by Gustafson in Waukesha County on 21 September.

Barn Swallow—Found throughout the state at the beginning of the period. Stutz saw 600 in Dodge County on 13 August. Last reported by Stutz in Dane County on 26 October.

Cave Swallow—This first state record was found along Lake Michigan in Milwaukee on 13 November. Up to 18 individuals were seen by many observers in Milwaukee on 13 and 14 November. Another individual showed up in Milwaukee from 19 to 21 November. See "By the Wayside."

Black-capped Chickadee—Found throughout the state during the period. The Smiths found 24 in Oconto County on 14 August.

Boreal Chickadee—Reported during the period in Forest, Oneida, and Vilas Counties. Jim Baughman found 5 in Vilas County on 9 September.

Tufted Titmouse—Reported during the period north to Barron and Washburn Counties. A. Holschbach found 7 in Iowa County on 10 September.

Red-breasted Nuthatch—Found at the beginning of the period south to Dane, Milwaukee, and Sauk Counties. The Spahns found over 100 in Forest County on 10 October. Found throughout the state at the end of the period.

White-breasted Nuthatch—Found throughout the state during the period. Stutz found 8 in Dane County on 5 September.

Brown Creeper—Reported at the beginning of the period south to Portage County. Ziebell found 6 in Winnebago County on 24 September. Found at the end of the period in Columbia, Dane, Milwaukee, and Winnebago Counties.

Carolina Wren—Reported during the period north to Door County. Evanson found 3 different individuals in Dane County on 3 and 4 October.

House Wren—Found throughout the state at the beginning of the period. The Smiths found 10 in Oconto County on 1 August. Last reported by Bruce in Winnebago County on 5 November.

Winter Wren—Reported at the beginning of the period south to Sauk County. Berner found 11 in Portage County on 3 October. Last reported by Bontly in Milwaukee County on 30 November.

Sedge Wren—Found at the beginning of the period north to Florence County. The

Smiths found 4 in Oconto County on 14 August. Last reported by the Smiths in Oconto County on 10 October.

Marsh Wren—Found in scattered areas throughout the state at the beginning of the period. Romano found lots of them in Lafayette County on 14 September. Last reported by Gustafson in Waukesha County on 1 November.

Golden-crowned Kinglet—Reported at the beginning of the period south to Portage County. Berner found 30 in Portage County on 3 October. Found at the end of the period north to Douglas and Florence Counties.

Ruby-crowned Kinglet—First reported by Ziebell in Winnebago County on 4 September. Ziebell found 20 in Winnebago County on 15 October. Last reported by Frank in Ozaukee County on 10 November.

Blue-gray Gnatcatcher—Reported at the beginning of the period north to Marinette County. A. Holschbach found 6 in Iowa County on 26 August and Stutz found 6 in Dane County on 27 August. Last reported by Frank in Ozaukee County on 15 October.

Eastern Bluebird—Found throughout the state at the beginning of the period. Kavanagh found 41 in Florence County on 8 September. Reported at the end of the period north to Door County.

Townsend's Solitaire—Up to 3 individuals were seen by many observers at Devil's Lake State Park in Sauk County from 23 October to 26 November.

Veery—Reported at the beginning of the period north to Vilas County. Tessen found 5 in Outagamie County on 23 August. Last reported by Ziebell in Winnebago County on 8 October.

Gray-cheeked Thrush—First reported by Thiessen in Dane County on 2 September. Cedar Grove Ornithological Station (Sheboygan County) reported 13 on 15 September. Last reported by Berner in Portage County on 14 October.

Swainson's Thrush—First reported in early August in Forest County by the Spahns. Cedar Grove Ornithological Station (Sheboygan County) reported 46 on 15 September. Last reported by R. and C. Lukes in Door County on 20 October.

Hermit Thrush—Reported at the beginning of the period south to Portage County. Ashman found 22 in Dane County on 9 October. Last reported by Gustafson in Waukesha County on 19 November.

Wood Thrush—Reported at the beginning of the period north to Door County. Last reported by R. and C. Lukes in Door County on 20 October.

American Robin—Found throughout the state at the beginning of the period. A. Holschbach found over 6200 in Iowa County on 23 October. Found in scattered areas throughout the state at the end of the period.

Varied Thrush—Reported by Brady in Ashland County from 25 to 30 November, by Verch in Ashland County on 26 November, and by Cornell and Rybski in Wood County on 30 November.

Gray Catbird—Found throughout the state at the beginning of the period. Knispel found 19 in Winnebago County on 17 September. Last reported by Ready in Dane County on 10 November.

Northern Mockingbird—Reported by Thornton in Bayfield County on 4 August, by Strasser in La Crosse County in early August, and by the Baumanns in Brown County on 31 August.

Brown Thrasher—Found throughout the state at the beginning of the period. Domagalski found 7 in Manitowoc County on 11 September. Last reported by Duerksen in Richland County on 16 October.

European Starling—Found throughout the state during the period. K. Johnson saw thousands in Milwaukee County on 29 October.

American Pipit—First reported by R. and C. Lukes in Door County on 2 September. Glueckert found 50 in Door County on 13 October. Last reported by Gustafson in Racine County on 22 November.

Cedar Waxwing—Found throughout the state at the beginning of the period. Cedar Grove Ornithological Station (Sheboygan County) reported 980 on 12 September. Reported at the end of the period north to Oconto County.

Bohemian Waxwing—First reported by Brady in Ashland County on 14 November. Brady found 80 in Ashland County on 29 November. Reported at the end of the period in Ashland and Douglas Counties.

Blue-winged Warbler—Reported at the beginning of the period in Dane, Iowa, Portage, and Walworth Counties. Last reported by A. Holschbach in Iowa County on 24 September.

Golden-winged Warbler—Reported at the beginning of the period in Florence County by Kavanagh. Thiessen found 10 in Dane County on 8 September. Last reported by Mooney in Milwaukee County on 16 October.

Brewster's Warbler—Reported by Ashman in Dane County on 14 August and by McDowell and Thiessen in Dane County on 8 September.

Tennessee Warbler—Reported at the beginning of the period in Ashland, Bayfield, Door, Florence, and Portage Counties. Tessen saw 150 in Winnebago County on 1 September. Last reported by Evanson in Dane County on 13 November.

Orange-crowned Warbler—First reported by Ziebell in Winnebago County on 3 September. Last reported by Riedinger in Ozaukee County on 6 November.

Nashville Warbler—Reported at the beginning of the period south to Portage County. Berner saw 20 in Portage County on 26 August. Last reported by Mooney in Milwaukee County on 16 October.

Northern Parula—Reported at the beginning of the period south to Portage County. Ashman found 3 in Dane County on 4 September and Tessen found 3 in Winnebago County on 9 September. Last reported by Glueckert in Door County on 7 October.

Yellow Warbler—Found throughout the state at the beginning of the period. Domagalski found 15 in Manitowoc County on 6 August. Last reported by Gustafson in Milwaukee County on 21 November.

Chestnut-sided Warbler—Reported at the beginning of the period south to Dane, Walworth, and Waukesha Counties. Thiessen found 25 in Dane County on 8 September. Last reported by Thiessen in Dane County on 10 October.

Magnolia Warbler—Reported at the beginning of the period in Door, Douglas, Florence, and Vilas Counties. Tessen saw 12 in Winnebago County on 6 September. Last reported by Domagalski in Manitowoc County on 5 November.

Cape May Warbler—Reported at the beginning of the period in Ashland, Bayfield, and Florence Counties. Tessen saw 10 in Winnebago County on 9 September. Last reported by Frank in Ozaukee County on 15 October.

Black-throated Blue Warbler—First reported by Kavanagh in Vilas County on 15 August. Hoffman found 7 in Columbia County on 11 September. Last reported by Bontly in Milwaukee County on 13 October.

Yellow-rumped Warbler—Reported at the beginning of the period south to Portage County. Paulios reported hundreds in Vilas County over Labor Day weekend, 3-5 September. Last reported by Ashman in Dane County on 26 November.

Black-throated Green Warbler—Reported at the beginning of the period south to Portage County. Tessen found 10 in Winnebago County on 9 September. Last reported at Cedar Grove Ornithological Station (Sheboygan County) on 18 October.

Blackburnian Warbler—Reported at the beginning of the period in Door, Douglas, and Portage Counties. Tessen found 5 in Winnebago County on 9 September. Last reported by R. Mueller in Outagamie County on 30 October.

Pine Warbler—Reported at the beginning of the period south to Walworth and Waukesha Counties. Kavanagh found 3 in Florence County on 8 September. Last reported by Heuer in Brown County on 26 November.

Palm Warbler—Reported at the beginning of the period in Douglas, Portage, and Vilas Counties. Stutz found 12 in Douglas County on 23 September. Last reported by Gustafson and Tessen in Milwaukee County on 14 November.

Bay-breasted Warbler—First reported by Kavanagh in Florence County on 14 August. Tessen found 10 in Winnebago County on 6 and 9 September. Last reported by Szymczak in Waukesha County on 9 October.

Blackpoll Warbler—First reported by the Baumanns in Brown County on 21 August. In Winnebago County, Tessen saw 6 on 6 September, and Knispel saw 6 on 17 September. Last reported by Glueckert in Door County on 13 October.

Cerulean Warbler—Reported by Howe in Walworth County on 3 August, by Lichter in Grant County on 27 August, by Evanson in Mon-

roe County on 5 September, and by Hoffman in Columbia County on 11 September.

Black-and-white Warbler—Reported at the beginning of the period south to Portage County. A. Holschbach saw 7 in Iowa County on 4 September. Last reported by Ashman in Dane County on 10 October.

American Redstart—Found throughout the state at the beginning of the period. Tessen saw over 50 in Winnebago County on 9 September. Last reported by Lichter in Monroe County on 11 October.

Prothonotary Warbler—A. Holschbach found one in Iowa County on 19 September.

Ovenbird—Found in scattered areas throughout the state at the beginning of the period. Askman found 8 in Dane County on 5 September. Last reported by Bontly and Vargo in Milwaukee County on 6 October.

Northern Waterthrush—Reported at the beginning of the period in Outagamie and Portage Counties. Tessen found 8 in Winnebago County on 5 September. Last reported by Ashman in Dane County on 9 October.

Louisiana Waterthrush—Reported by Romano in Lafayette County on 31 August and by Lichter in Monroe County on 11 September.

Kentucky Warbler—Reported by C. Martin in Dane County on 8 September and by Strasser in La Crosse County on 10 September.

Connecticut Warbler—First reported by Frank in Ozaukee County on 14 August. Last reported by Bontly in Milwaukee County on 6 October.

Mourning Warbler—Reported at the beginning of the period south of Manitowoc, Outagamie, and Portage Counties. Last reported by Tessen in Winnebago County on 9 September.

Common Yellowthroat—Found throughout the state at the beginning of the period. Stutz found 20 in Dane County on 11 September. Last reported on 20 November in Milwaukee County by Prestby and Stutz.

Hooded Warbler—Reported at the beginning of the period in Portage and Waukesha Counties. Last reported by Berner in Portage County on 30 September.

Wilson's Warbler—First reported for the period by Berner in Portage County on 17 August. Last reported by Gustafson in Racine County on 27 September.

Canada Warbler—Reported at the beginning of the period in Door and Vilas Counties. Tessen saw 7 in Winnebago County on 9 September. Last reported on 20 September in Door County by R. and C. Lukes, and in Milwaukee County by Bontly.

Scarlet Tanager—Reported at the beginning of the period north to Florence and Marinette Counties. Kavanagh found 8 in Florence County on 8 September. Last reported by Szymczak in Waukesha County on 9 October.

Eastern Towhee—Reported at the beginning of the period north to Marinette and Vilas Counties. A. Holschbach found 5 in Iowa County on 23 September. Last reported at Cedar Grove Ornithological Station (Sheboygan County) on 14 November.

American Tree Sparrow—First reported by Glueckert in Door County on 12 October. Ashman found 125 in Dane County on 20 November. Found at the end of the period north to Florence and Washburn Counties.

Chipping Sparrow—Found throughout the state at the beginning of the period. Berner saw 160 in Portage County on 1 October. Last reported by Romano in Iowa County on 18 November.

Clay-colored Sparrow—Reported at the beginning of the period south to Columbia and Waukesha Counties. Kavanagh found 27 in Florence County on 8 September. Last reported by Berner in Portage County on 16 October.

Field Sparrow—Reported at the beginning of the period north to Florence and Marinette Counties. Berner found 12 in Portage County on 1 October. Last reported by Heikkinen in Dane County on 5 November.

Vesper Sparrow—Found throughout the state at the beginning of the period. The Smiths found 5 in Oconto County on 14 August. Last reported in Marinette County by Kavanagh on 31 October.

Lark Sparrow—Reported by A. Holschbach in Sauk County from the beginning of the period to 12 August, by C. Martin in Dane County on 27 August, by Heikkinen in Dane County on 28 August, and by Schultz in Iron County on 23 September.

Savannah Sparrow—Reported at the beginning of the period north to Florence, Marinette, and Vilas Counties. The Smiths found 18 in Oconto County on 18 September. Last reported by Ashman in Dane County on 4 November.

Grasshopper Sparrow—Found at the beginning of the period in Portage, Sauk, and Waukesha Counties. A. Holschbach found 5 in Sauk County on 2 August. Last reported by A. Holschbach in Sauk County on 6 August.

Henslow's Sparrow—Reported at the beginning of the period in Grant, Iowa, Oconto, and Waukesha Counties. The Smiths found 5 in Oconto County on 15 August. Last reported by the Smiths in Oconto County on 16 August.

Le Conte's Sparrow—There was but one report, from Lafayette County, on 27 September by Romano.

Nelson's Sharp-tailed Sparrow—First reported by Lubahn and Thiessen in Dane County on 14 September. In Dane County, McDowell found 4 on 15 September, and Doeppers found 4 on 18 September. Last reported by Thiessen in Dane County on 26 October.

Fox Sparrow—First reported on 29 September by Berner in Portage County and by R. Johnson in Douglas County. A. Holschbach found 14 in Sauk County on 25 October. Reported at the end of the period in Dane, Manitowoc, Outagamie, and Ozaukee Counties.

Song Sparrow—Found throughout the state at the beginning of the period. Stutz found 40 in Dane County on 8 October. Reported at the end of the period north to Columbia and Sauk Counties.

Lincoln's Sparrow—Reported at the beginning of the period south to Portage County. Stutz found 8 in Dane County on 8 October. Last reported by Gustafson in Racine County on 4 November.

Swamp Sparrow—Found throughout the state at the beginning of the period. Tessen found over 50 in Dane County on 16 September. Reported at the end of the period in Dane and Sauk Counties.

White-throated Sparrow—Reported at the beginning of the period south to Portage County. R. Johnson found 48 in Douglas County on 28 September. Found at the end of the period north to Oconto County.

Harris's Sparrow—First reported by R. and C. Lukes in Door County on 16 September. Tessen saw 7 in Douglas County on 24 September. Last reported by C. Martin in Dane County on 22 October.

White-crowned Sparrow—First reported by Pugh in Racine County on 10 September. Tessen saw 15 in Milwaukee County on 4 October. Last reported by the Brassers in Sheboygan County on 19 November.

Dark-eyed Junco—Reported at the beginning of the period in Douglas, Florence, and Vilas Counties. McDowell found hundreds in Sauk County on 25 October. Reported at the end of the period north to Door, Oconto, and Marinette Counties.

Lapland Longspur—First reported by R. Johnson in Douglas County on 17 September. Tessen saw 400 in Outagamie County on 30 November. Reported at the end of the period in Outagamie and Winnebago Counties.

Smith's Longspur—Kavanagh saw 3 in Florence County on 27 September. See "By the Wayside."

Snow Bunting—First reported by Paulios in Burnett County on 2 October. Thometz found 200 in La Crosse County on 29 October. Reported at the end of the period in Door, Outagamie, and Winnebago Counties.

Northern Cardinal—Found throughout the state during the period. Stutz found 20 in Dane County on 5 September.

Rose-breasted Grosbeak—Found throughout the state at the beginning of the period. Berner found 16 in Portage County on 18 September. Last reported at Cedar Grove Ornithological Station (Sheboygan County) on 14 October.

Indigo Bunting—Found throughout the state at the beginning of the period. The Smiths found 14 in Oconto County on 14 August. Last reported by Gustafson in Waukesha County on 30 November.

Dickcissel—First reported by C. Martin in Dane County on 2 August. The Webbs found many young in Jefferson County on 10 August. Last reported by Berner in Portage County on 20 August.

Bobolink—Found in scattered areas throughout the state at the beginning of the period. The Smiths found 15 in Oconto County on

3 August and Frank found 15 in Dodge County on 28 August. Last reported by Thiessen in Dane County on 28 September.

Red-winged Blackbird—Found throughout the state at the beginning of the period. Evanson saw 24,800 in Dane County on 27 October. Reported at the end of the period in Brown, Waukesha, and Winnebago Counties.

Eastern Meadowlark—Found throughout the state at the beginning of the period. The Smiths found 5 in Oconto County on 18 September and Glueckert found 5 in Door County on 8 October. Last reported by McDowell in Dane County on 4 November.

Yellow-headed Blackbird—Reported at the beginning of the period in Dodge and Waukesha Counties. Stutz found 80 in Dodge County on 13 August. Last reported by Frank in Dodge County on 31 August.

Rusty Blackbird—First reported by Frank in Douglas County on 23 September. Paulios saw 5,000 in Sauk County on 21 October. Last repoted by Guastafson in Waukesha County on 29 November.

Brewer's Blackbird—Reported at the beginning of the period south to Dodge County. Frank saw 100 in Dodge County on 28 August. Last reported by Gustafson in Waukesha County on 29 November.

Common Grackle—Found throughout the state at the beginning of the period. A. Holschbach found over 2,100 in Iowa County on 23 October. Reported at the end of the period in Portage and Winnebago Counties.

Brown-headed Cowbird—Found throughout the state at the beginning of the period. Knispel saw 10 in Winnebago County on 5 September. Found at the end of the period in Rock, Waukesha, and Winnebago Counties.

Orchard Oriole—Reported at the beginning of the period in Manitowoc, Outagamie, and Waukesha Counties. Last reported by Vargo in Waukesha County on 15 September.

Baltimore Oriole—Found throughout the state at the beginning of the period. Tessen saw 25 in Winnebago County on 22 August. Last reported by McDowell in Dane County on 27 October.

Pine Grosbeak—First reported by Grady just west of Ashland, Ashland County, on 16 November. Brady found 8 in Ashland County on 29 November. Found at the end of the period in Ashland and Vilas Counties.

Purple Finch—Reported at the beginning of the period south to Portage County. McDowell found 12 in Dane County on 16 October. Found throughout the state at the end of the period.

House Finch—Found throughout the state during the period. Thiessen found 100 in Dane County on 30 November.

Red Crossbill—First reported by Jim Baughman in Vilas County on 7 October. Anich found 7 in Ashland County on 30 November.

White-winged Crossbill—Gustafson heard 2 calling at Vernon Marsh, Waukesha County, on 1 November.

Common Redpoll—First reported by Schaufenbuel in Portage County on 9 October. Kavanagh found 30 in Florence County on 29 November. Found at the end of the period in Ashland, Douglas, Florence, and Vilas Counties.

Pine Siskin—Reported at the beginning of the period in Doublas and Vilas Counties. The Baumanns found over 100 in Door County on 26 November. Found throughout the state at the end of the period.

American Goldfinch—Found throughout the state during the period. The Smiths found 99 in Oconto County on 14 August.

Evening Grosbeak—Reported at the beginning of the period in Douglas County by R. Johnson. Finson reported 200 at a friend's feeders in Vilas County on 22 November. Reported at the end of the period in Douglas, Florence, and Marinette Counties.

House Sparrow—Found throughout the state during the period. Knispel found 107 in Winnebago County on 17 November.

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Brown Thrasher by Ryan Brady.

Loggerhead Shrike with the remains of lunch by Ryan Brady.

"By the Wayside"—Fall 2005

Documentations of rare and uncommon species include Barrow's Goldeneye, Pacific Loon, Red Phalarope, Pomarine Jaeger, Long-tailed Jaeger, Mew Gull, Sabine's Gull, Black-legged Kittiwake, Arctic Tern, Northern Hawk Owl, Green Violet-ear, Rufous Hummingbird, Selasphorus sp., Warbling Vireo, Cave Swallow, Yellow Warbler, Magnolia Warbler, Smith's Longspur, and Indigo Bunting.

Barrow's Goldeneye (*Bucephala islandica*)

25 November 2005, in Lake Michigan in Ozaukee County—I was studying a distant scoter, which turned out to be a female Black Scoter, among a small flock of goldeneyes when I noticed one of the goldeneyes had black extending from the back farther down the sides than the others did, and white spots extending from the shoulder area back over the scapulars. I had several winter's experience with this species at Virmond and Doctor's Parks, so I knew I was seeing a Barrow's Goldeneye. I walked rapidly north for about .25 mile along the beach and had an excellent view from about 100 yards with my 20–60×, 80mm scope. The Barrow's was similar in size to the Common Goldeneyes and Black Scoter. In comparison to the Common Goldeneyes, it had a steeper forehead which was exaggerated during this observation because it frequently tilted its head downward between dives. The bill was noticeably shorter, but black like that of the Common Goldeneyes. The eye color on all the goldeneyes was very pale, but did not appear gold due to the lack of sunlight. The head and back, throat and rear flanks appeared black except for the previously mentioned spots on the scapulars (7—but the rearmost spot was tiny and barely visible), two horizontal thin white lines on the black between these spots and the white sides, and a bright white crescent on the face between the eye and bill. This contrasted with the Common Goldeneye facial mark which was also white, but circular. The breast was white, but a black spur separated it from the sides almost to the surface of the water. I watched this bird for about 20 minutes and was quite fortunate in my timing, because it soon started to snow and visibility was very poor under those conditions.—*Thomas C. Wood, Menomonee Falls, WI.*

Pacific Loon (*Gavia pacifica*)

3 September 2005, off Wisconsin Point in Douglas County—I was birding with Tom Prestby on Wisconsin Point when we both spotted an "interesting" loon. The bird was smaller and more slender than a Common Loon, but had a more rounded head than a Red-throated Loon. The head was quite dark brownish-gray. The cheek, throat, and front of the neck were white, the back of the neck gray. A sharp, thin black line marked the edge of the dark and light areas on the neck and head. The bird lacked the "necklace" of a winter adult. The bill was slender, grayish, and held horizontally. For a few minutes, while the bird was preening, we thought we could see white flanks, but when it stopped preening it showed solid grayish mottled back and sides to the waterline.—*Robbye Johnson, Superior, WI.*

3 November 2005, at Harrington Beach State Park in Ozaukee County—The noticeable thing about this loon was the darkness to the head, back of the neck, and back. With that noted, the bill was obviously not as big as a Common Loon's. It was steely gray, lacking any gonydeal angulation seen in a Common Loon. It was straight and less bulky than a Common Loon's bill. The demarcation between dark and light areas of the face and neck was clean cut unlike the irregular line and diffuse edge of a Common Loon. At one point, a Herring Gull was swimming nearby, showing the similarity in length of the two birds. A Common Loon would have been significantly larger than the Herring Gull. The contour of the head was smoother, without the prominent forehead bump usually seen on a Common Loon profile. The bill was too large/thick without the upturned look of a Red-throated Loon. The dark markings of the head, neck, and back again were much darker than on a Red-throated Loon.—*James Frank, Mequon, WI.*

15 November 2005, off Wisconsin Point in Lake Superior, Douglas County—I was birding Wisconsin Point with Shaun Putz and Larry Semo. Larry spotted two Pacific Loons relatively close to shore. They were difficult to find in the waves, but I managed to get on one of the birds with my scope. It was smaller than a Common Loon, with a straight dark bill. A dark, clean line ran between the dark gray hind neck and head, and the white cheek and front of the neck. Small dark marks across the throat formed a "necklace." The body was dark mottled gray to the waterline. I never found the other bird.—*Robbye Johnson, Superior, WI.*

Red Phalarope (*Phalaropus fulicarius*)

19 October 2005, near North Point in Milwaukee County—The bird flew in and circled a few times. In flight, it was apparent that it was a small to medium-sized shorebird. It had well-defined and rather bold wing stripes. The rump had a central stripe which eliminated Wilson's Phalarope. The bird landed about 100 feet away, at which time it was obvious that it was a phalarope in winter plumage. It also acted like a phalarope, swimming in circles, feeding on the water rather than on shore as most shorebirds do. Based on time of year, I expected it to be a Red Phalarope. To be sure, I got

out my scope and moved to within about 50 feet. In the scope views, the bill was of medium length and rather thick, not the long needle-like bill of Wilson's or Red-necked Phalaropes. I had very good views of the back, which was a uniform gray, without evidence of the white stripes that are characteristic of Red-necked Phalaropes in basic plumage. It had a prominent black eye stripe. The eye stripe shape and position matched that depicted in the *National Geographic Field Guide*, though I don't know if that is diagnostic.—*Greg Seegert, Deerfield, IL.*

21 October 2005, near North Point in Milwaukee County—I saw this wide and slightly down-sloped body of a shorebird in the lake. It had a wider neck with a rounder head. It was about the same size as a Sanderling or a Wilson's Phalarope. It was kind of wide and triangle-shaped, more like a Wilson's Phalarope than the Sanderling's round, short shape. It had a short, pointed, and wide bill size and shape. The bill was as long as the head was wide. The side of the neck, body side, and most of the tail and undertail coverts were white. The front of the head was starting to turn white. It had a thick black cap, and also a wide black mask. This went from the front of the eye to almost the back of the neck. The chin, front of neck, and side of upper neck had light orange color to it. The back of the neck from the black cap down the neck was black too. The black was wider at the base of the neck where it meets the body. There was a black tip to the tail. The primaries were black, so with the folded wing, the lower edge of the wing had a black line or edge to it. The tertials and greater coverts were also black like the primaries, but they had white edges around them. The scapulars and rest of the wing and back were light gray. With all of the field marks I could tell it was a molting juvenile Red Phalarope.—*Seth Cutright, West Bend, WI.*

19 November 2005, at North Point in Milwaukee County—This bird was approximately the size of a Sanderling, with a pearl-gray mantle, darker gray plumage in a narrow band running up the nape and onto the rear crown. It had a white face, neck, breast, and belly. There was a blackish-gray patch surrounding and distal to the eye. The relatively thick bill was approximately 20–25mm in length. Dark grayish-black primaries were visible in flight with a white "stripe" visible the length of the wing. The bird was swimming in offshore waters of Lake Michigan, and also landed on the soccer field lawn, behavior I have never seen in this species previously, where it preened and rested on the grass for 10–15 minutes. After this it flew back out onto the open water of the lake, but always relatively close, within 20 meters of shore.—*William P. Mueller, Milwaukee, WI.*

Pomarine Jaeger (*Stercorarius pomarinus*)

15 November 2005, off Wisconsin Point in Douglas County—Larry Semo, Shaun Putz and I had been standing on the beach at the eastern end of Wisconsin Point for about 15 minutes when Shaun spotted a jaeger. We watched it fly by from near the lighthouse toward the bluff, mostly parallel to shore. The bird was from about ½ to 1 mile out. Visibility was good with no heat distortion at that

distance, but it was a dark day. The bird looked mostly dark, with bright double white flashes on the underwing. The rump looked lighter, but I couldn't see other color details. The flight was even and gull-like. The bird looked large and heavy-bellied. The wing base was wider than the distance of wing base to tail tip and the "arm" looked both wider and longer than the "hand." No tail projections could be seen. The bird lifted towards a gull once, but evidently decided that it wasn't worth the effort. It flew out away from us and disappeared.—*Robbye Johnson, Superior, WI.*

Long-tailed Jaeger (*Stercorarius longicaudus*)

18 September 2005, at Superior Harbor Entry, St. Louis County, MN, and Douglas County, WI.—I did not have direct comparison of this jaeger with any gulls or terns. The bird was seen flying and there were no other gulls or terns to compare it with. The jaeger sat on the water and there were no gulls or terns near it for comparison. I do know the body size was more slender and smaller than a Ring-billed Gull. The wing length was much longer than a Ring-billed Gull. I know this by having had lots of experience observing Ring-billed Gulls. The flight was direct and the jaeger would glide and have a raptor-like wing flap. I also have seen a lot of Parasitic Jaegers in my life and this jaeger had a Bonaparte's gull-like buoyancy to it. When the jaeger in question made a bend in Minnesota waters, it twisted and landed on the water very similar to the way Bonaparte's Gulls fly and then twist and curl to land on the water. The jaeger did not call.

The mantle, for the most part, was a grayish-brown. The inner wing had some light barring on it and again it was very grayish-brown. The inner wing was distinctly barred with brownish-black barring on a whitish background. It looked nice and clean. The outer wing was grayish, and at the base of the primaries, the white patch was seen clearly. The nape, forehead, and throat were a whitish color. I did not see any field marks on the bill. The breast was whitish in color, but when the jaeger flew over my head, forty feet above, I noticed a dusted/blush appearance of a light breast band. It looked like a shadow. That is how light in color it was. I was not able to see this when the bird sat on the water. The belly was whitish in color. The undertail coverts had horizontal, dark brownish-black barring. The flanks had some light barring as well. I did not see any chestnut color or any signs of a rich brown on any part of the bird's body. The rump was distinctly barred similar to the undertail coverts, but much brighter or distinct, and that may be due to the direct sunlight on it. I failed in studying the tail to see if there were any projections from the main tail. I do know there was no 3–4 inches of a tail projection because I would have noticed it when it flew over my head, but if there was anything less than 3 inches, I would not have noticed it. The head looked round versus blocky.—*Mike Henderson, Duluth, MN.*

Mew Gull (*Larus canus*)

14 November 2005, at South Metro Pier in Milwaukee County—While tak-

ing a breather from Cave Swallow observing, I began scoping the gulls on the beach. Shortly, I noticed a sleeping gull with a little darker mantle. It was slightly smaller than neighboring Ring-billed Gulls, but distinctly larger than the nearby Bonaparte's Gulls. Also noted was a broader white crescent separating the gray wing coverts from the black primaries, which was narrower in Ring-billed Gulls. When it woke up, its very dark eye could be seen (yellow in ring-bills) along with a shorter, slimmer bill than a Ring-billed Gull would have. The bill was greenish-yellow, with a very small blackish ring near the tip. The primary wingtips could also be seen to have more white than the Ring-billed Gulls.—*Dennis Gustafson, Muskego, WI.*

26 November 2005, at South Metro Pier in Milwaukee County—I observed this bird from the concrete pier using a 20–60× spotting scope from a distance of about 50 yards. It was first spotted in the water, but soon landed on the beach among Ring-billed and Bonaparte's Gulls. It was visibly smaller than the Ring-billed Gulls, my initial assessment was that it was ¾ their size, but my field guides indicate a size difference of only about 10%.

This bird was slightly darker on the back and wings than the Ring-billed Gulls. Only with careful study did I discern that it was a shade darker gray than any Ring-billed Gull present. The field marks which prompted my further study were the dark brown eye and very broad white tertial crescent contrasting with the gray back. The underparts were mostly white except for some mottled gray on the sides of the breast. The head was also white with gray mottling, as was the nape. The bill was yellow and had a complete ring, albeit fainter and much less defined than the ring on the Ring-billed Gulls. The size and structure was drastically different. It had no detectable gonydeal angle, was shorter and about half the thickness of the bills of its nearby neighbors. This feature and the large brown eye gave the viewer an impression of a gentler bird than the Ring-billed Gulls. The wingtips were black with white spots and the legs were yellow. I did not get a good look at the bird in flight, so I cannot describe wing surfaces or the tail. After about fifteen minutes, it tucked its bill into its wing and rested facing me, so the only way to pick it out of the crowd was to note its smaller size. Viewing conditions were excellent with partly cloudy skies, 26 degrees F., and no wind.—*Thomas C. Wood, Menomonee Falls, WI.*

Sabine's Gull (*Xema sabini*)

25 September 2005, off Wisconsin Point in Douglas County—These juvenile Sabine's Gulls were observed by at least 20 birders during the WSO weekend field trip at Superior from the vicinity of the Wisconsin Point breakwater at the harbor entrance. The first individual was spotted about 10:20 a.m., as it came in from far offshore over Lake Superior. Eventually it flew west into Minnesota waters near Duluth. The closest distance from us was about 600–800 meters, but we had great views of the very distinctive wing pattern—especially as it flew in front of the Duluth shoreline/hillside. On the upperwings, there was a dark (blackish) triangle on the outer part of the wing, which tapered to a point near the wrist. The middle part of

each wing was a striking broad white triangle that included the inner primaries, and most of the secondaries, along with some of the wing coverts, and which also had its middle peak near the bend of the wing. The inner wings, especially the secondary coverts, were a medium to dark brownish color, which extended across the mantle/back of the bird. This wing pattern was very flashy, and was very different from the wing patterns of the adult and juvenile Bonaparte's Gulls that were observed flying over the lake from time to time throughout the day and during the observation period of this bird. The underparts were white and the white tail had a dark terminal band that was difficult to see most of the time. A much better view was had of the second juvenile Sabine's Gull, which was seen about 30 minutes later. It was initially within about 50–75 meters of us. It crossed the Wisconsin breakwater about ¾ of the way out to the lighthouse and continued flying east. The wing pattern was identical to that of the other Sabine's Gull seen earlier, but of course we had much better looks. We could easily see the white forehead/face and white underparts, along with the white tail and black terminal band.—*Thomas Schultz, Green Lake, WI.*

Black-legged Kittiwake (*Rissa tridactyla*)

22 September 2005, at the Milwaukee Coast Guard Impoundment in Milwaukee County—While talking, John Idzikowski and I noticed a gull flying towards us, heading south. Its rapid wing beat and floppy flight called attention to itself. As it came closer, I saw it had a relatively small, very dark bill; a mostly white head with a darker spot behind the dark eye; mostly gray mantle and wings above (under wings mostly white) and a mostly white tail, but with some terminal black banding present. The upper wings had a partial dark carpal bar extending outward to dark edges along the leading edge of the wing, forming an "M" pattern. Because of heavy moulting in the primaries, this was not as distinct as it sometimes can be, but was still quite evident. I initially called out "Bonaparte's," due to a superficial resemblance (and not expecting any kittiwakes), but John corrected me by pointing out its size (similar to a Ring-billed Gull). I then noted it lacked the dark trailing edge of young Bonaparte's wings and the bill was thicker than a Bonaparte's, but thinner than a Ring-billed Gull's bill. Because of moulting, tail shape was not very obvious, but it appeared squared off, not rounded. Legs were not seen and I didn't think of checking for a darker collar until too late.—*Dennis Gustafson, Muskego, WI.*

Arctic Tern (*Sterna paradisaea*)

24 September 2006, Wisconsin Point in Douglas County—Jesse Peterson, Mike McDowell, and I trekked out to the lighthouse on Wisconsin Point hoping we would get better views of any passing birds. While glassing the lake with my binoculars I noticed an unusually dark and long-tailed tern flying with a group of Common Terns. I quickly trained my scope on the bird and began studying it. While I was studying the bird either Mike or Jesse commented on the "dark tern out

there." Together we watched the bird for a few minutes and became somewhat confident in our ID of Arctic Tern. We discussed the field marks we should be looking for to separate Arctic from Common Tern and once we felt we had seen many of the field marks in favor of Arctic Tern, we radioed our find to the rest of the WSO field trip participants on the beach. Of course, at this point the Arctic Tern chose to fly half a mile away. Mike stayed on the bird for a long time and saw it start to return to the vicinity of the lighthouse. Through the radios we were able to give the rest of the group tips on locating the bird and I believe everyone was finally able to find it. During this second pass we had amazing looks at the Arctic and Common Terns. Among the features noted in the Arctic Tern were the darker gray plumage, compared to Common Terns, and long-tailed appearance. The head projection and bill length were shorter on the Arctic than the Common Terns. On a few occasions, we were able to see the thin, dark trailing edge on the tip of the underwing of the Arctic Tern. The Arctic Tern also appeared longer-winged than the commons and had a slightly different flight style. Other field marks observed on the Arctic Tern that do not separate it from Common Tern include: complete black cap, gray belly, mantle, and wings, and white tail and cheeks.—*Aaron Stutz, Madison, WI.*

24 September 2006, Wisconsin Point in Douglas County—This bird was observed by at least 25–30 birders during the WSO weekend field trip at Superior from the vicinity of the Wisconsin Point breakwater at the harbor entrance. It was first spotted by Aaron Stutz and Jesse Peterson who were observing from out at the lighthouse and then subsequently brought to the group's attention via radio. The distance varied during observation, but the closest approach to our group was perhaps 400 meters, as we viewed with scopes.

This was a medium-sixed *Sterna* tern in adult plumage, about the same size as the Common Terns that were flying in the same area. The upperparts were a uniform medium pale-gray color, except for the solid and complete black cap, and bright white rump and tail. The gray coloration extended across the top of the wings to the tips, including the primaries. There was no evidence of a dark wedge in the upper surface of the primaries, as would be expected in a Common Tern. The upper primaries were completely gray and they were not whitish, as would be expected if this had been an adult Forster's Tern. The underwings were pale, with only a narrow dark stripe along the trailing edge of the primaries, narrower than the corresponding dark stripe seen on Common Terns. The throat and breast also were gray, and contrasted noticeably with the white cheeks. Structurally, this tern had a short-necked appearance, which was accentuated even more by the relatively small bill. The head/bill projection was also shorter than would be expected in a Forster's, which tends to have an even larger/heavier bill than a Common Tern. This feature was compared with the corresponding head/bill shapes of the nearby Common Terns, and everyone was in agreement with this difference from the shape of the commons. The bill color could not be determined, at least by me.—*Thomas Schultz, Green Lake, WI.*

Northern Hawk Owl (*Surnia ulula*)

23 November 2005, 1.6 miles west of the Bayfield County line on CR 13—The bird was about crow size, but lacked the prominent head. The bird was fairly robust, not sleek looking, with a relatively long tail. The eyes were yellow, and the bill dark with yellow stripes down the center. Heavy horizontal barring was on the breast. The overall coloration was brownish. While in hand [banding], the bird chattered a bit, not to mention it was fairly footy. The bird was first observed perched near the top of a tree alongside the road. After release, the bird once again perched near the top of a tree. It was perched on the edge of a second- or third-growth deciduous forest overlooking a wide roadside and adjacent shrubby clearing.—*David A. Grosshuesch, Duluth, MN.*

Green Violet-ear (*Colibri thalassinus*)

31 August 2005, Solon Springs in Douglas County—When Daryl Tessen got an invitation to visit the house where the Green Violet-ear was being seen, three of us went there on the morning of 31 August 2005. We sat for a while with cameras focused on the feeder the bird had been visiting. There were other feeders. Not long after that he called "There it is!" which sent us running. The bird was sitting in the underbrush and making short flights, nabbing insects. We had fairly clear views from about 25 feet. This hummingbird was larger than the ruby-throats, all dark emerald green (appearing black in the shade) except for the breast, which had an iridescent deep blue wash, and an elongated oval patch of deep blue over the eye that ran back over the ear, and narrowly to the bill. The bill was black and slightly decurved. The tail and wings looked black. We had been hearing loud chipping and other odd sounds, and realized that the bird had been there the entire time. We watched it for a few minutes.—*Robbye Johnson, Superior, WI.*

Rufous Hummingbird (*Selasphorus rufus*)

8 October 2005, Greenfield in Milwaukee County—Joan Sommer and I went to Greenfield to see this visiting hummingbird. The bird seemed to be about the size of our Ruby-throated Hummingbirds, but had very orangy-red sides of the breast. The base of the tail also was orangy with black at the ends of the center rectices, but white tips on about the outer 3 or 4 rectices. On the chin were just a few iridescent feathers beginning to show at the center. The back was still greenish, so this was likely an immature male. Hummingbird experts identified this bird as a rufous rather than Allen's based on the shape of the edges of the rectices and I would certainly have to go along with that. To me, the bill appeared a little larger than the Allen's would be.—*Marilyn Bontly, Bayside, WI.*

Selasphorus Species

30 October 2005, south of Black Earth in Dane County—This bird was observed for about 40 minutes from a distance of about 10–15 yards. The bird spent most of its time visiting some flowers in a planter and a nearby

hummingbird feeder. From the distance I was standing I could not see the detail in the tail necessary to ID this bird to species (rufous vs. Allen's), but I did observe a bird that was clearly one of these two species. The upperparts of the bird were mostly green, but as someone used to seeing nothing but Ruby-throated Hummingbirds, this bird was unusually rufous. There were rufous feathers on the bird's flanks, back, nape, auriculars, at the base of the bird's tail and around the eye. The amount of rufous on this bird alone, suggests to me the bird is a subadult male Rufous Hummingbird. Other features noted were gray/white underparts (with rufous flanks), a long black bill, a few red/orange feathers at the base of the gorget, and dark gray/brown wings. Although I did not notice it in the field, a look at the photographs show a bird with a tail that projects slightly beyond the wingtips—a field mark in favor of rufous. Again, I do not believe my view was definitive enough to ID this bird to species, but an analysis of the photos shows a number of features in favor of a Rufous Hummingbird.—*Aaron Stutz, Madison, WI.*

14 October 2005, Fond du Lac County—A female-plumaged hummingbird, which appeared to be about the same size as a Ruby-throated Hummingbird, came in to the Schollmeyer's feeder at about 12:30 pm. The first thing I noticed was a greenish-backed hummer with a buffy wash along its sides. This buffy wash tapered in slightly toward the upper breast. The bird initially stayed for only about a minute, but I did notice some greenish feather spots on the otherwise white throat feathers before it departed. The bird returned a second time about 5 minutes later. This time it stayed for a good 2–3 minutes allowing further study. As the bird perched on the feeder, I noted that the primary projection was only slightly shorter than the tail. The white (central) tail tips could be seen only slightly beyond the primaries. The viewable base of the central tail feathers to midway down the central tail was a darker-buff (rufous) color, from the point where the rufous stopped to the white tips was black. The bill was about the same length as the head (base of bill to nape), black, and fairly straight (maybe a slight decurve). The eye was dark (black) and there was a small white post-ocular spot behind the eye. The crown and nape were the same color as the back. The base color of the throat was white with several small green spots. With the looks I had and the short time I spent with the bird, I could only identify this bird as *Selasphorus* species (Rufous/Allen's).—*Jeffrey L. Baughman, Campbellsport, WI.*

Warbling Vireo (*Vireo gilvus*)

6 November 2005, near Lake Mendota in Middleton, Dane County—Dave Fallow and Edgar Spalding were birding slowly on bicycles along a road that parallels the west shore of Lake Mendota in Middleton at approximately 3 pm on Sunday, 6 November. A small shrub-lined creek meets the wet ditch that runs along the edge of the road. A small bird flying up from the creek into a shrub stopped us. It was a Yellow-rumped Warbler, and a second yellow-rumped was chipping nearby. A third bird was flitting in the same clump of bushes. Its first appearance was brief, but long enough to see

that the upperparts of the bird were an even gray-olive green, without any streaking or other markings. The underparts were whitish-gray. The gray-green wing lacked wingbars or any other markings and did not contrast with the back. The dark bill was thick and vireo-like rather than warbler-thin. This first viewing was only a short few seconds in length. The bird disappeared into the shrub, but some pishing coaxed it back out into the open. In addition to confirming the features just mentioned, this longer second sighting allowed study of the head and underparts. The only notable feature on the relatively plain head was an indistinct whitish-gray supercilium that was similarly pale before and behind the eye and not bordered by any dark line. There was no eyering or dark line through the eye. The top of the head was similar to the nape and back, giving no capped appearance. The throat, breast, and belly were whitish-gray. Only the flanks were suffused with some yellowish-green. This second view was probably not more than 10 or 15 seconds, but was sufficient for both of us to conclude that the bird was a Warbling Vireo.—*Edgar Spalding, Middleton, WI.*

Cave Swallow (*Petrochelidon fulva*)

13 November 2005, Municipal pier in Oak Creek, Milwaukee County—Bob Domagalski and I found 14-18 (perhaps as many as 20) Cave Swallows at the South Metro Sewage Treatment Plant/Pier in Oak Creek off 5th Avenue, in the afternoon of 13 November 2005. We watched these birds for several hours in constantly changing light conditions until we had numerous views of these from many angles. The light orange-colored throat, chestnut or cinnamon forehead on many birds, and slightly darker orange rump was plainly visible, but only for brief periods on each bird. Birds flew immediately overhead on dozens of occasions, and I repeatedly heard call notes that were unlike Cliff Swallow vocalizations. More like a "swit" or "kvit." Because it was afternoon and the light at an angle our view of these birds was challenging at times, it was often difficult to see all necessary field marks at once. The birds were in constant motion and actively feeding. But over the course of several hours we collectively saw good views of many of these birds, and there were perhaps 7-9 in view at once from below the wall, or approximately 14–18 that were in view when we were viewing from on the wall, and could see the treatment ponds/tanks. These birds also had blue-black mantles, a blue-black color on the dorsal side of the tail, and a blue-black crown. The belly was light in color (pale whitish/off white).—*William P. Mueller, Milwaukee, WI.*

13 November 2005, Municipal pier in Oak Creek, Milwaukee County—On the afternoon of 13 November 2005, I joined Bill Mueller at the municipal pier in Oak Creek, Milwaukee County to check the lakeshore for unusual late fall migrants. When I arrived, Bill was already at the pier and was waving me down. He already was watching the Cave Swallows. There were something like 12 to 15 swallows feeding over the settling ponds on the sewage treatment plant directly south of the municipal pier. They often flew directly over our heads. We watched these swallows for over an hour. The birds were feeding on flying insects that hov-

ered over the settling ponds. The swallows were in continual motion in pursuit of these insects. Only once did I see a swallow land on a railing of the sewage treatment plant, and that was only for a few moments—before I could catch a good look of the resting bird. This motion along with the poor light and strong wind did not give the best opportunity for viewing.

Details that were clear included the following: the throat, upper breast, and the broad nape were pale orange in color with no noticeable tonal change within the entire area of the throat, upper breast, and nape. The tail was relatively long and ended in a broad straight line, with never an indication of the slightest indentation. The rump was orange and a slightly deeper shade of orange than the throat, upper breast, and nape. The top of the head (the cap) was dense black. Because the swallows were darting so quickly and were nearly always at a level higher than ourselves, it was difficult to view the forehead. Over the course of an hour, I had something like 100 glimpses of the forehead. Nearly every time I felt I was seeing an orange forehead, an orange slightly more dense than on the throat, breast, and nape. This would indicate adult Cave Swallows. The other swallows, in which I could not see a distinct orange, and in which I also saw no hint of white, might have been first year Cave Swallows. As these swallows flew overhead, they gave call notes that were nothing like what I am accustomed to hearing in Cliff Swallows. I would like to point out that, with great views of the undersides of these swallows, I could tell they were of the southwestern population of Cave Swallows rather than the Caribbean. I looked closely for a hint of rufous in the flanks and saw none. If this record should be accepted, I believe it should be noted that these Cave Swallows were of the Mexican or southwestern population.—*Robert C. Domagalski, Menomonee Falls, WI.*

14 November 2005, South Metro Pier in Milwaukee County—Karen Johnson and I saw swallows, 6 or 7 I'd say, flying almost directly overhead as we walked across the parking area. They looked the shape that is like Cliff Swallows with their squared-off tails. Several of the birds flew toward me so that I could see there was no white or light color on the forehead; it was darker. I could not say it was reddish, but buffy, definitely not white. Also, the throat area was not dark or black, but it was instead pale creamy or light gray in color, which seemed to extend around the side of the neck. There was no black or blackish area on the throat. Obviously, my looks were not the best as the birds continued in flight. But I was able to observe enough of the forehead and throat area to be sure these birds were Cave Swallows and not Cliff Swallows. The rump, which I did see as the birds flew about, was orangy. The belly and underparts were off-white to grayish.—*Marilyn Bontly, Bayside, WI.*

14 November 2005, South Metro Pier in Oak Creek, Milwaukee County—I arrived at the pier and was able to immediately locate the possible Cave Swallows that had been found the day before. During the next half hour I was able to observe at least six individuals as they flew low over the sewage treatment tanks. When the swallows flew low in front of the walls or buildings, I could see their colors and patterns very well. These small,

Cave Swallow photographed on 20 November 2005 at the South Metro Pier in Oak Creek, Milwaukee County by Mike McDowell. This invasion of Cave Swallows was Wisconsin's first record of this species.

chunky swallows were generally dark blue with buffy rumps and pale collars. The tail was squared off, not deeply forked. With this pattern it was obvious that we were observing either Cave or Cliff Swallows. The forehead patch on all the individuals was a dark rufous color. This contrasted with a paler, tawny throat. The throat color was about the same as the rump and the auriculars were light like the throat. The dark color of the forehead contrasting with a lighter throat eliminated Cliff Swallow. I was able to get excellent views of the first Cave Swallows seen in Wisconsin.—*Mark Korducki, New Berlin, WI.*

14 and 21 November 2005, South Metro Pier in Oak Creek, Milwaukee County—While first scoping over the area, several swallows were seen almost right away, skimming over the settlement ponds. Even at a distance, the darker upper (dorsal) body color contrasted with the buffy rump. The undersides were pale overall. Later, at close range, the buffy throats were clearly seen, with no dark area at the base of the throat. The foreheads were dark, with only a little contrast with the darker crown. The cheeks were buffy, like the throats, and the breast and belly were whitish. The pale nape was seen a few times. Most views were

from underneath or closer to eye level. The tail was square, not forked at all.

The second time of observation (21 November), only one swallow was observed, 4 times during the half hour. All of the previous field marks were seen, but this time with a little better light, the chestnut-colored forehead was clearly seen. It only appeared a little less dark than the crown on the 14th.—*Dennis Gustafson, Muskego, WI.*

20 November 2005, South Metro Pier in Milwaukee County—This bird was observed on a frustratingly overcast day at distances ranging from 15 to 70 yards. I observed the bird in flight through my scope and binoculars. The best looks I had of the bird came from peering over the wall at South Metro Pier. On one occasion I saw the bird perched on a railing and Mike McDowell was able to snap an exceptional, under the conditions, picture.

I first saw this swallow in flight above the sewage treatment tanks. From the stairs, I saw the bird in flight. Through my scope I occasionally saw the bird in favorable light. I noticed a dark-winged swallow with a dark mantle. The mantle had 2 white streaks near the border of the mantle and scapulars, indicating the bird was an adult. The bird's tail was square and the rump was tan/buff, very similar in color to the bird's throat. I could never make out any color on the bird's forehead while the bird was in flight. Underneath the bird was simply pale with no distinctive features and no real contrast between belly and underwing coloration. This alone rules out all swallow species except Cliff and Cave. By peering over the wall at South Metro Pier I saw the Cave Swallow feeding at close range in the closest tank. For 2–3 minutes, I saw the bird perched on a railing. I soon got out of the way so Mike McDowell could snap a picture. From this vantage point I saw almost exactly what you see in Mike's picture, a dark mantled, dark-winged swallow, with pale underparts, orange-buff throat and red-orange forehead. What you can see in Mike's picture that I could not see at the time is the projection of the red-orange forehead feathers to the region above the bird's eye, a feature diagnostic for Cave Swallows. The contrast between the forehead color and the throat color indicates the bird belongs to the Mexican population, which is the population with a history of vagrancy to the Northeast and Great Lakes regions.—*Aaron Stutz, Madison, WI.*

YELLOW WARBLER (*Dendroica petechia*)

20 November 2005, South Metro Pier in Milwaukee County—While scanning the gulls at South Metro Pier I heard someone yell "Cave Swallow" and I turned to see John Idzikowski waving at us from the stairs. As I raced to the stairs I saw a yellowish warbler fly into the grass on the beach. Torn between finding a warbler that seemed unusually late and the Cave Swallow, I chose to go see the Cave Swallow. Returning to the beach determined to find the bird I made a pishing noise near the grass and saw a warbler pop up. Surprisingly, this was not my yellow warbler, but a Common Yellowthroat. Having no luck with the yellowish warbler I returned to watching gulls on the beach and a stream of Long-tailed Ducks fly by out on the lake. As other

birders arrived we went to show them the Cave Swallow. As we climbed and peered over the wall, someone saw the yellow warbler flush. Tom Prestby, Mike McDowell, and I spotted the bird low in some trees and had a few good looks at it before it ducked out of view. The bird I saw was a female Yellow Warbler. The bird was almost entirely yellow, especially the underparts and throat. The back was yellow with some olive and black tones mixed in—not nearly as olive as the underparts of a female Wilson's or Hooded Warbler. As the bird was perched I could clearly see yellow edges on the bird's folded secondaries and tertials—another feature not consistent with female Hooded or Wilson's Warblers.—*Aaron Stutz, Madison, WI.*

20 November 2005, South Metro Sewage Treatment Plant in Milwaukee County—I had a good back view of the bird in flight from above as it flew down from the breakwall into tall grass near a small pond on the beach below. I noted golden-olive color on the bird's back and wings as very striking. Contrasting charcoal-gray primaries, secondaries, and tail feathers with highlighting golden-olive was obvious. The slight olive tone might have been from overcast lighting and I wasn't ready to call it a Yellow Warbler. About 30 minutes later through 8× binoculars from 10 to 15 feet away, I observed a nondescript, long-tailed, pale yellowish-colored warbler foraging in the thicket and small trees along the barricade wall of the water treatment plant. The bird's face was pale yellow with no obvious contrasting markings. It was very uniformly pale yellow from the nape, head, breast, flanks, and belly—mantle just slightly more golden toned. I did not pick up any breast streaking, but my view of the bird was profile. The primaries and tail feathers were charcoal-gray accented with obvious contrasting almost golden-olive edges, scapulars appearing slightly more yellow. It had a long, fairly straight, slender, medium-dark bill.—*Mike McDowell, Waunakee, WI.*

Magnolia Warbler (*Dendroica magnolia*)

5 November 2005, at Lake Oschwald in Manitowoc County—While birding Lake Oschwald in St. Nazianz, Manitowoc County, on 5 November 2005, I was fortunate to find a single Magnolia Warbler. Knowing that there are few state records for the magnolia in November, I paid particular attention to this individual. It was gray/green above with white double wing bars (thin, yet easily noticed) and a yellow rump. The tail, beyond the yellow rump, was brownish with no noticeable markings. The throat and undersides were pale yellow with rather distinct dark streaks along the flanks. There was a dull gray band across the yellow of the upper breast. The undertail was white. The first half of the underside of the tail, that nearest the body, was white while the back half was dark.—*Robert C. Domagalski, Menomonee Falls, WI.*

Smith's Longspur (*Calcarius pictus*)

27 September 2005, Spread Eagle Barrens in Florence County—While traveling along the dirt road, I observed 3 large sparrow-sized birds darting in and out of the grasses along the roadside. Two birds flew a short distance into the grasses along the road.

As I stopped the car, I focused the one remaining bird in my window-mount scope. I followed it for 15 minutes as it continued to walk along the roadside picking up bits of debris and seeds. With the scope I continued to have excellent looks as the bird spent much of the time in the open. I noted the buff-colored belly with finely streaked breast and sides. The two outer tail feathers on the fairly long tail were white. There were white tips on the lesser coverts and a fine white line on the greater coverts. The head was buffy with light buff malar stripes and the throat was plain pale buff. The crown was pale buff with just a hint of darker fine striping. The auricular was darker brown with a light buff spot in the center back. There was a pale eye-ring and a thin light-colored bill. On the back were pale brown and buff stripes. There was no rufous color on the coverts, head, or nape. The three birds called a rattle call similar to the Lapland Longspur call with a slight descending at the end, much of the viewing time.—*Kay Kavanagh, Niagara, WI.*

Indigo Bunting (*Passerina cyanea*)

27 November 2005, Mukwonago in Waukesha County—This bird was slightly smaller than the House Finches it was feeding with. It was overall a drab brown bird except for the bluish patch on one wing and a bluish/gray tail. There was an absence of wing bars. The upper mandible had a dark blue wash and a dark tip to the bill. It had a cream-colored throat patch, slight streaking on the breast, and a light-colored belly. The legs were dark. There was subtle but noticeable streaking on the mantle.—*Maureen Gross, Mukwonago, WI.*

A Great Blue Heron waiting for a meal was photographed by Ryan Brady.

Singing Sedge Wren photographed by Ryan Brady.

Common Loon on nest by Ryan Brady.

WSO Records Committee Report Fall 2005

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The WSO Records Committee reviewed 69 records of 25 species for the fall 2005 season, accepting 59 of the reports. Multiple reports and photos of Wisconsin's first Cave Swallows pushed the state list to 427 species. Other highlights include the state's third and fourth Green Violetear records and the sixth fall record of Smith's Longspur.

Accepted

Pacific Loon—

#2005-095 Douglas Co., 3 September 2005, R. Johnson.

#2005-063 Douglas Co., 22, 23 September 2005, Tessen; 23 September 2005, Frank.

#2005-064 Ozaukee Co., 3 November 2005, Frank.

#2005-094 Douglas Co., 15 November 2005, R. Johnson.

These winter plumaged birds were noticeably smaller than a Common Loon, with shorter, more slender, but straight bills. Instead of exhibiting a small knob-like prominence on the forehead as a Common Loon or Arctic Loon does, the forehead and crown on these birds was smooth in profile. The dark gray of the hindneck was cleanly demarcated from the white of the foreneck in a straight line, in contrast to the irregular, sometimes diffuse border on the side of the neck of a Common Loon. The overall dark color of the hindneck, and top of the head was darker than the back color. The gray of the top of the head extended down to encompass the eye. The eye of a Common Loon would have white appearing just above the eye and just in front of the eye, making it much easier to see against a white background than on the dark gray background of a Pacific Loon's periocular area.

The 23 September bird for a time exhibited some white above the waterline initially giving rise to thoughts of an Arctic Loon. This white was irregular in contour and extended the full length of the bird, instead of being cleanly confined to the caudal portion of the bird. In addition, the bird seemed to be listing to one side as it floated and preened. As it ultimately

floated around to expose the other side, the caudal view revealed the significant amount of tilt to the body, and the opposite side view exhibited no white above the water line. The entire illusion of a possible Arctic Loon was created by a slight roll to the body. The 3 September bird also gave a short impression of white along the flank while preening that disappeared as it moved.

(For further field identification discussion, see *Birding*, Volume 29, No. 2.)

Cackling Goose—

#2005-065 Bayfield Co., 23 September 2005, Schultz.

#2005-066 Douglas Co., 24 September 2005, Schultz.

#2005-067 Winnebago Co., 11 November 2005, Schultz.

#2005-068 Green Lake Co., 21 November 2005, Schultz.

These small "Canada Geese" generally seemed to be ½ the size of the Canada Geese, with disproportionately short necks, and very stubby bills.

The identification of smaller Canada-type geese appears to be much less than settled. For now, the smallest, Ross's Goose-sized individuals, with very short-necks and stubby bills would appear to be Cackling Geese. A fair number of other relatively smaller geese may not be identifiable, whether seen well, photographed, or collected.

Barrow's Goldeneye—

#2005-069 Ozaukee Co., 25 November 2005, T. Wood.

This male bird was similar in size to the Common Goldeneyes around it. The forehead was steeper, the bill shorter, and the white facial spot was more crescent-shaped than circular when compared to the Common Goldeneyes. The black of the back extended farther down the sides than on the Commons, with white spots evident within this black. At the shoulder, this black almost extended down to the waterline.

This observation was in far northeastern Ozaukee Co., not at the "traditional" southern Ozaukee site of the recent decade.

Red Phalarope—

#2005-071 Milwaukee Co., 19 October 2005, Seegert; 20 October 2005, Mooney, Gustafson, Tessen; 21 October 2005, S. Cutright (photo).

#2005-072 Milwaukee Co., 19 November 2005, Mueller, Mooney, T.Wood; 20 November 2005, McDowell (photo); 22 November 2005, Tessen.

These small shorebirds were observed swimming in circles and feeding on the algae coated shoreline. One observer reported one of the birds to rest on the grassy soccer field adjacent to the shoreline. They were white with unmarked light gray backs, black crowns, black eye patches, and relatively thick, medium length dark bills. In flight, the dark wings exhibited a white stripe.

Pomarine Jaeger—

#2005-096 Douglas Co., 15 November 2005, R. Johnson.

Seen at considerable distance, this bird appeared very dark and heavy bellied. The wing base appeared broader than the distance from the back of the wing base to the tail. Double white flashes were evident on the outer portion of the lower wing. Tail projections, if present, were not seen at this

distance. In flight, this bird flew like a gull.

Long-tailed Jaeger—

#2005-092 Douglas Co., 18 September 2005, Hendrickson.

Seen in flight and then resting on the water, this bird was striking in the paleness to the head, neck and upper breast. It wasn't white, but described as a dirty white. Gray and black barring was apparent on the underwings, rump, and flanks. The upper wing was grayish brown and the outer portion of the underwing had a white area at the base of the primaries. Tail projections were not seen. The overall size seemed small for a jaeger and the wings proportionately longer than expected.

Mew Gull—

#2005-076 Milwaukee Co., 14 November 2005, Gustafson, Tessen; 26 November 2005, T. Wood.

This gull was a little smaller than adjacent Ring-billed Gulls, with a slightly darker gray mantle, a brown rather than yellow eye, and a larger white tertial crescent. The bill was yellow, noticeably thinner and shorter than the bill of the Ring-bills.

Black-legged Kittiwake—

#2005-078 Milwaukee Co., 22 September 2005, Gustafson.

This flyby observation was of a Ring-billed Gull-sized bird with a grayish mantle and wings, with a black bar extending out to the carpus then down the front of the wing. The black trailing edge of the wing of an immature Bonaparte's Gull was not seen. The bill was black; a black auricular spot was also noted. The white tail had a terminal black band.

Sabine's Gull—

#2005-077 Douglas Co., 25 September 2005, S. Cutright, Schultz.

These reports were all of immature birds, similar in size to associated Bonaparte's Gulls. Overall they were white below, but had a mottled gray-brown mantle that extended in heavy smudging onto the otherwise whitish head. The white tail had a black terminal band. Most striking and diagnostic was the wing pattern. The outer black triangle, middle white triangle, and inner gray-brown triangle were easily seen, even at a distance.

Arctic Tern—

#2005-079 Douglas Co., 24 September 2005, Stutz, Schultz, S. Cutright.

Loosely associated with some Common Terns, this individual differed in the uniformity of the grayness of the mantle and upperwing. It lacked the dark outer primaries of the Common Terns, the black being limited to the very trailing edge of the outer ¼ of the wing. The underwing exhibited this same narrow black edge to the primaries, a noticeably thinner line of black than on the underwing of the Common Terns. The grayness of the breast and throat contrasted with the white cheek. Although similar in size to the Common Terns, the head and bill both seemed shorter than those of the Commons.

Northern Hawk-Owl—

#2005-080 Douglas Co., 23 November 2005, Grosshuesch.

This observation was of a crow-sized owl sitting conspicuously on top of

small trees, but ultimately captured, banded, and released. The brown bird had heavy horizontal banding on the breast, a relatively long tail, yellow eyes, a yellow bill.

Rufous Hummingbird—

#2005-081 Milwaukee Co., 16 September 2005, Boos; 4 October 2005, Tessen; 7 October 2005, Gustafson; 8 October 2005, Bontly.

This ruby-throated-sized hummingbird was striking in the presence of a rufous crown, back, and rump, in addition to rusty flanks. Green was interspersed with the rufous on the back and crown. The belly and central breast were white. The white throat was just flecked with reddish feathers. The tail feathers were of uniform width.

Selasphorus sp. Hummingbird

#2005-093 Dane Co., 30 October 2005, Stutz.

#2005-100 Fond du Lac Co., 27 September–15 November 2005, Schollmeyer (photo); 14 October 2005, Jeff Baughman.

The rufous flanks of these birds, without rufous on the otherwise green backs of these individuals leaves separation of Rufous and Allen's Hummingbirds difficult unless in hand. Female and immature birds are generally considered inseparable in the field, although these vagrant birds are considered to be in all likelihood Rufous Hummingbirds.

Green Violet-ear—

#2005-082 Douglas Co., 31 August, 2, 3 September 2005, R. Johnson.

#2005-091 Sauk Co., 4 September 2005, Ott (photo).

This large, overall green hummingbird had a relatively long, dark, slightly decurved bill. The upper breast and cheek were blue-violet.

These are Wisconsin's third and fourth records of this hummingbird, all in the past seven years.

Warbling Vireo—

#2005-083 Dane Co., 6 November 2005, Spaulding.

This small passerine had a thicker vireo-like bill in contrast to a thin warbler bill. The drab overall color was characterized as having a gray-olive back, grayish-white underparts, slight yellow-green suffusion on the flanks, no wingbars, an unmarked face, and a black bill.

The only other November record of a Warbling Vireo in Wisconsin is 14 November 1962.

Cave Swallow—

#2005-084 Milwaukee Co., 13, 14 November 2005, Idzikowski (photo); 13 November 2005, Mueller, Domagalski; 14 November 2005, Korducki, Tessen, Bontly; 14, 21 November 2005, Gustafson; 19 November 2005, Franke (photo); 20 November 2005, Stutz, McDowell (photo).

As many as 14 birds were observed on the 13th of November. They appeared to be similar in size, shape, and color to Cliff Swallows. They differed in having the buffy color of the breast extend up into the throat, eliminating the reddish throat of the Cliff Swallow. In addition, the forehead was reddish instead of the buffy color of the Cliff

Swallow. No hint of rufous could be seen on the flanks, suggesting the Mexican subspecies. The vocalizations were also noted to be different from those of Cliff Swallows—described as "kvit."

This is a part of an unprecedented invasion of the Midwest in November. These are Wisconsin's first records of Cave Swallows, bringing the state list to 427 species.

Yellow Warbler—

#2005-086 Milwaukee Co., 20 November 2005, Stutz, McDowell; 21 November 2005, Gustafson.

This small yellowish warbler did not show much contrast in color from the back/wings to the breast. There were no wingbars, but the yellow-olive wing feathers were edged in yellow. There were no marking on the yellow face, and faint reddish streaks were noted on the breast.

The only later record for Wisconsin is 4 December 1999.

Magnolia Warbler—

#2005-088 Manitowoc Co., 5 November 2005, Domagalski.

This small warbler was gray-green above with two white wingbars, a yellow rump, and brown tail. The throat and breast was pale yellow, with dark streaks along the flanks. A faint grayish band crossed the upper breast. The underside of the tail was white on the proximal half, dark on the distal half.

There are only 5 other November records of Magnolia Warblers for Wisconsin.

Smith's Longspur —

#2005-089 Florence Co., 27 September 2005, Kavanaugh.

Three large sparrow-sized birds were seen along a dirt roadside. The breast was buff in color with fine streaking. The longer than expected tail has outer white feathers. White edges were evident on the lesser coverts and to a smaller extent on the greater coverts. The head and neck were buffy with light buff malar stripes. A darker area was noted on the auricular region and fine streaks were reported on the top of the head. A rattling call similar to a Lapland Longspur was heard.

This is the earliest of six fall records for Wisconsin.

Indigo Bunting—

#2005-090 Waukesha Co., 27 November 2005, Gross, 30 November 2005, Gustafson.

This drab brown bird was smaller than the associated House Finches. The tail was bluish as was an area of the wing. The throat was creamy in color and the breast had faint streaking. The finch-like bill was bluish-gray with a black tip. No wingbars were seen.

There are three winter records for Wisconsin beyond this very late fall report.

Not Accepted

Western Sandpiper—

#2005-070 Milwaukee Co., 28 August 2005.

This peep was larger than nearby Least Sandpipers, but similar in size to the Semipalmated Sandpipers. The bill of this individual was felt to be longer than the Semipalmated's with some droop at the tip. The shape or posture of the bird seemed a bit

longer than the stubbier profile of the Semipalmated Sandpipers. In coloration, there didn't appear to be much distinction. Rufous was not evident on the crown or scapulars, although a hint may have been present on the cheek. There was a haze of a brownish band across the upper breast. Due to variation in the bill length of Semipalmated Sandpipers, without more traits to indicate a Western, the identification is uncertain.

Pomarine Jaeger—

#2005-073 Douglas Co., 25 September 2005.

This all dark, bulky bird was seen at a good distance, initially soaring and then after settling briefly on the water, it flew with strong steady wingbeats. White flashes were seen on the underwing primary base region and some projection was reported from the central tail. The relative width of the wings was not indicated. The bulk of the bird may well indicate a Pomarine Jaeger, but a Parasitic Jaeger isn't eliminated from consideration.

Long-tailed Jaeger—

#2005-074 Douglas Co., 25 September 2005.

This Ring-billed Gull-sized jaeger had a dark cap, light cheek, and a dark chest band. The underwing was dark brown with a triangular flash of white toward the base of the primaries. The mantle was lighter than the dark brown of the flight feathers. Also noted were dark undertail coverts. Although it was felt there were tail projections, it wasn't apparent how long they actually were. The overall shape of the wing was felt to be longer and narrower than expected for other jaegers. Flight patterns were recorded.

The breast band sounded more distinct/prominent than might be expected for a Long-tail. An underwing white flash also seems unexpected for what otherwise fits an adult plumage. As always, jaeger identification has many hurdles. This description doesn't rule out a Parasitic Jaeger.

Black-headed Gull—

#2005-075 Douglas Co., 24 September 2005.

A Bonaparte's-sized Gull was seen at considerable distance in heavy overcast conditions. The upperwing pattern was similar to an immature Bonaparte's, but the outer white triangle was entirely encased in black. The Bonaparte's Gull would have black along the outer edge of this white area as well as along the caudal edge., but light gray along the inner edge. In addition the black along the caudal edge was wider on this bird than on a Bonaparte's. The tail tip had a black terminal band as well. Without at least seeing the underwing tip to report the extent of the anticipated black primaries, this identification isn't complete.

Sabine's Gull—

#2005-077 Douglas Co., 22,23,25 September 2005.

The limited, one-sentence description of these probably appropriately identified birds was not diagnostic. No size was indicated and the only color mentioned was black, gray, and white triangles on the wing and a black band on the tail.

Eurasian Collared-Dove—

#2005-087 Waukesha Co., 31 August 2005.

A dove larger than a Mourning Dove with an overall pale coloration

and a squared off tail was reported. It wasn't seen well enough to see the undertail coverts, nor the dark crescent on the back of the neck.

Green Violet-ear—

#2005-082 Douglas Co., 31 August 2005.

Simply described as a large blue and green hummer with a long bill isn't specific to a Green Violet-ear. Magnificent and Blue-throated Hummingbirds could also fit this description.

Cave Swallow—

#2005-085 Sheboygan Co., 16 November 2005, (specimen).

Indication of a specimen being picked up on the beach in southern Sheboygan Co. was received, but at this time no description of the specimen or photograph has been obtained to list it as an accepted record.

Great Tit—

#2005-036 Door Co., 15 November 2005.

This chickadee-like bird was heavier in build than a Black-capped Chickadee. It had a black cap and throat surrounding a white cheek. The black throat extended down the center of a yellowish breast.

It had been present in this area since early April. Although correctly identified, the origin of this individual is assumed to be captivity.

Pyrrhuloxia—

#2005-097 Milwaukee Co.

This videotaped bird was difficult to evaluate due to the distance from the cameraman, but enough was discernible to indicate a female cardinal-like bird. The striking differences involved the lack of the black face mask of the cardinal, with a yellow bill rather than the red of a female cardinal or gray of an immature bird. More importantly, the shape of the bill did not fit even an aberrant cardinal. The beak was not as elongated as a cardinal and the lateral edge of the upper beak had a notch or angle to it instead of being rather straight as is evident on a cardinal. These beak characteristics fit a Pyrrhuloxia.

In doubt is the origin of this bird. Without previous evidence of extralimital wandering, it is uncertain whether this bird is a true vagrant or perhaps an escaped caged bird. (There is a report of this species under consideration in Ontario from a year prior to this report.)

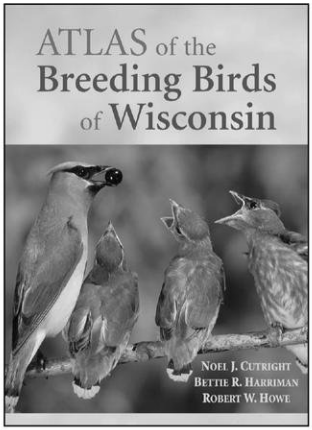
Savannah Sparrow by Ryan Brady.

ABOUT THE ARTISTS

Ryan Brady actively birds, taking many photographs of what he sees, in the Ashland area. He obtained his B.S. degree from Northland College and worked on the Wisconsin Breeding Bird Atlas as a paid field observer. He has a M.S. in Raptor Biology from Boise State University in Idaho.

Gray Krogman has been digiscoping birds in western Wisconsin (mostly around Eau Claire) for several years. He also enjoys photographing butterflies.

For **John Van Den Brandt**, capturing bird images is the perfect marriage of two of his passions—birding and photography. An Appleton native, John has been very actively birding since 1990 and currently has over 500 species on his lower-48 list. While birds are his primary subjects, he also has photographed a wide variety of wildlife across North America.



Atlas of the Breeding Birds of Wisconsin

- Features almost 1,400 photographs, distribution maps, and figures – **all in color**!
- Based on studies done by more than 1,600 field observers between 1995 and 2000.
- Edited by Noel J. Cutright, Bettie R. Harriman, and Robert W. Howe.

The largest natural history survey ever conducted in Wisconsin has resulted in this comprehensive guide to birds that breed in the state.

Hardcover, large format (9" x 11.25"), 624 pages. Copyright 2006. ISBN-10: 0-9774986-0-3; ISBN-13: 978-0-9774986-0-4.

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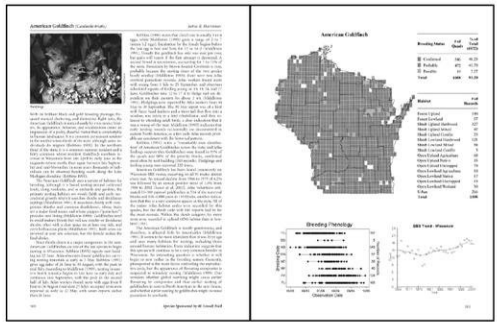

The two-page species accounts – 214 of them in all – provide a host of information on the state's breeding species, including their range, habitat preference, breeding biology, conservation concerns, and population trends. An additional 23 less-common species also are covered. Also included are chapters on Atlas methodology, results, history, habitats, and conservation.

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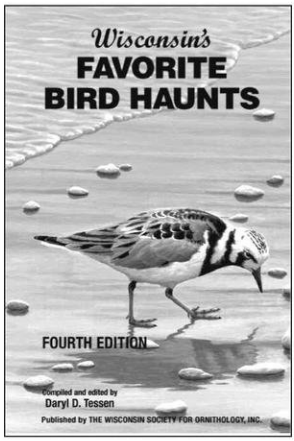

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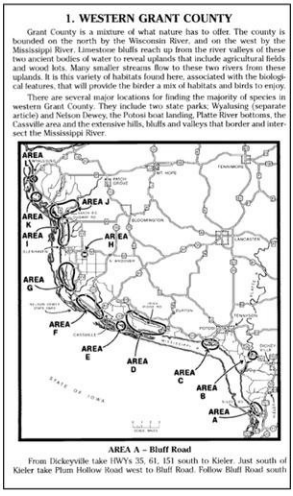

1. WESTERN GRANT COUNTY

Grant County is a mixture of what nature has to offer. The county is bounded on the north by the Wisconsin River, and on the west by the Mississippi River. Limestone bluffs reach up from the river valleys of these two ancient bodies of water to reveal uplands that include agricultural fields and wood lots. Many smaller streams flow to these two rivers from these uplands. It is this variety of habitats found here, associated with the biological features, that will provide the birder a mix of habitats and birds to enjoy.

There are several major locations for finding the majority of species in western Grant County. They include two state parks, Wyalusing (separate article) and Nelson Dewey, the Potosi boat landing, Platte River bottoms, the Cassville area and the extensive hills, bluffs and valleys that border and intersect the Mississippi River.

AREA A – Bluff Road

From Dickeyville take HWYs 35, 61, 151 south to Kieler. Just south of Kieler take Plum Hollow Road west to Bluff Road. Follow Bluff Road south

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THE WISCONSIN SOCIETY FOR ORNITHOLOGY

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