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Send all manuscripts and correspondence to the Editor; information for "Seasonal Field-Notes" should be sent to the Associate Editor or the appropriate Field-Note Compiler. Manuscripts that deal with information on birds in the State of Wisconsin, with ornithological topics of interest to WSO members, or with activities of the WSO will be considered for publication. All manuscripts submitted for possible publication should be typewritten, double-spaced, and on only one side of page-numbered typing paper. Illustrations should be submitted as photographs or good-quality drawings. Keep in mind that illustrations must remain legible when reduced to fit on a journal page. All English and scientific names of birds mentioned in manuscripts should follow *The A.O.U. Checklist of North American Birds (6th Edition)*. Use issues after Vol. 50, No. 1, 1988, as a general guide to style.

A Tax for the Unrepresented

I am eager for you and me to pay more taxes. Now wait, before you decide that I am completely crazy and should no longer be the WSO President. What I am actually eager for us to do is pay a "dedicated user fee" on certain outdoor recreational items which would be used for the support of non-game species of wildlife.

For more than half a century, hunters and fishermen have paid, mostly willingly, a user fee on their equipment to restore populations of sport fish and game and to conserve millions of acres of habitat. As a result most of the federal and state dollars spent on wildlife go to the game species, not to songbirds, wild flowers and other species that are not of concern to hunters and anglers. In the current political climate which is calling for more and more cuts in government spending, the small amounts which do support non-game species are increasingly in danger of being eliminated. We all know that many species of the birds we care about are declining, and that much work must be done to determine the reasons and to prevent further loss of these species.

Many birders, as well as others who care about wildlife, have decided it is time we take the lead in providing for the protection of the non-game species. A coalition of conservation groups has proposed a dedicated user fee in the form of a surcharge on a wide variety of outdoor products. They are suggesting an amount of 5 percent of the manufacturer's price of the product be charged for such items as: backpacks, sleeping bags, tents, camping equipment, binoculars, spotting scopes, field guides, birdseed, bird houses and feeders, recreational vehicles, cameras, and film. This amount would add 30 cents to a $10 bird book, and $2.50 to a $100 pair of binoculars.

The funds would be collected from the manufacturers, and distributed as matching grants to federal (75%) and state (25%) fish and wildlife agencies through the U.S. Fish and Wildlife Service. Funds would be allocated based on the population (⅔) and land area (⅓) of each state. There can be no diversion of these funds for purposes other than those to benefit non-game species of fish and wildlife.

These funds would be used for conservation, recreation, and education involving non-game species. The conservation efforts would include such things as learning what these species need to survive, providing for their recovery, conserving habitats, and tracking populations. Recreation activities would include building trails and viewing blinds, saving natural corridors for hikers, photographers, birders, and others who enjoy nature, and for publishing materials to help interested persons enhance their lands for wild-

life, whether it be the backyard or a thousand acres. Education would cover such things as interpreting the natural world along roads, trails, and campgrounds, establishing and maintaining nature centers, and offering programs to schools and community groups.

WSO has joined the Wildlife Diversity Funding Initiative, along with more than 500 other organizations such as the American Birding Association, American Ornithologists' Union, National Audubon Society, and Manomet Observatory. You can support the Initiative, also called *Teaming with Wildlife, A Natural Investment,* by telling the manufacturers and retailers of outdoor equipment that you are willing, even eager, to invest in the conservation of non-game species through a dedicated user fee. You can also help the cause by telling others about it and soliciting their support. Once federal legislation is introduced, you can contact your representatives expressing your support.

If we want to wake-up to the sound of birds singing, watch butterflies dance over wildflowers, listen to the spring chorus of frogs, follow animal tracks along a stream, or gaze at wild orchids for years to come, we must be willing to give our support to the efforts to protect them now. For more information contact WSO Conservation Chair, Noel Cutright, 3352 Knollwood Road, West Bend, WI 53095, work phone 414-221-2179, home 414–675–2443.

President

The 1995 Wisconsin Christmas Bird Counts

The number of species found on the 1995 Christmas Bird Counts were lower than recent years. Seven rare species were found and 14 common species were found in record numbers.

by William L. Hilsenhoff

With cold and snowy weather from early November into mid–December, the Christmas count period began with almost all lakes and most streams frozen, and a good snow cover over all except the southeast corner of Wisconsin. As anticipated, few half-hardy migratory species remained, and numbers of many waterfowl and birds of wetlands were reduced. The 133 species found on the 1995 Christmas counts was somewhat below numbers found in recent years, and well below last year's phenominal record of 149 species. Only seven species that are rare on Christmas counts were found. They were a Spruce Grouse at Clam Lake (fifth record), Trumpeter Swans at Nelson and Madison and Townsend's Solitaires at Riveredge and Milwaukee (sixth records), a Sandhill Crane at Shiocton and a Lincoln's Sparrow on the Stockbridge count (seventh records), a Peregrine Falcon at Green Bay (eighth record), and four Great Black-backed Gulls at Woodland Dunes NE (ninth record). It was generally a very normal year, with all the "common" species on the report form occurring on 15 or more counts, and only one "uncommon" species, the White-winged Crossbill, being found on enough counts to be included in Tables 2–7. All "uncommon" species on the report form were found, although the Killdeer and Gray Catbird were seen only during the count period, and not on a count. In spite of this indication that 1995 was an average count, there were 14 species that occurred in record numbers. These included the Bald Eagle, Cooper's Hawk, Wild Turkey, Glaucous Gull, Rock Dove, Mourning Dove, Eastern Screech-Owl, Red-bellied Woodpecker, Pileated Woodpecker, Black-capped Chickadee, Tufted Titmouse, Northern Shrike, White-throated Sparrow, and House Finch.

Location and Details of the Counts

Details of the weather and participation on each count are reported

in Table 1. Weather during the count period was sometimes rather cold, especially in the morning, but winds were ideal for most counts, being exceptionally light and sometimes calm. Participation was excellent, with the number of observers and total party hours second only to last year's record levels. Eighty-four counts are included in this report. The Arpin count, which reported 30 species, was not included because it was taken on January 6, after the count period. The Manitowish Waters count (23 species) and the Fond du Lac count (44 species) were not compiled because they arrived too late; no rare species were found on either count. A count at Herbster also was not compiled because it included only 3 party hours, resulting in only 6 species being found. Counts made last year at Adams and Owen apparently were not repeated. A repeat of the 1993 Cable count, and new counts at Milton, Montello, and Plainfield were welcomed additions.

The location of each count is shown in Figure 1. Counts are numbered in groups from north to south and west to east. An alphabetical listing of counts follows and includes the count number (Figure 1), the location of the count center, and the name, address, and telephone number of the compiler. Data from counts that include areas in other states are only for species and participation in Wisconsin.

Appleton (42); Jct. Hwys. 10 and 45; John Shillinglaw, 1952 Palisades Dr., Appleton, WI 54915; (414) 731-4222. **Arpin** (1/6); 1/2 mi. N Jct. Hwy. C and Oak Rd.; Dennis Seevers, 5969 Butternut Rd., Arpin, WI 54410; (715) 569 - 4260. **Ashland** (2); Jct. Hwys. 2 and 118; Dick Verch, 906 Ellis Ave., Ashland, WI 54806; (715) 682-5453. **Baraboo** (50); Jct. City View Rd. and Hwy. A; Raymond Dischler, 3830 Anchor Dr., Madison, WI 53714; (608) 249-4581 or 635- 4326. **Bayfield** (1); T 50 N, R 5 W, S-22; Albert Roy, Jr., 906 Water St., Ashland, WI 54806; (715) 682-5334. **Beloit** (73); Jct. Tracy and Eau Claire Rd.; Brad Paulson, 15034 Carroll St., Broadhead, WI 53520; (608) 879-2647. **Black River Falls** (26); Jct. Hwys. H and 54; Judy Allen, Rt. 2, Box 128, Black River Falls, WI 54615; (608) 488-4154. **Blanchardville** (59); 2.5 miles SW of Blanchardville; David Willard, Bird Division, Field Museum of Natural History, Roosevelt Rd. at Lakeshore Dr., Chicago, IL 60605; (312) 922-9410 ext. 269 (work) or 663–3744. **Bridgeport** (57); Hwy. 14 bridge over Wisconsin R.; Al Shea, 2765 Northwynde Passage, Sun Prairie, WI 53590; (608) 825-6232. **Burlington** (82); Jct. Hwy A and Crossway Rd.; Gerald DeBoer, 15935 2 Mile Rd., Franksville, WI 53126; (414) 835-4642. **Cable** (4); Cable; Brad Donahue, P.O. Box 416, Cable, WI 54821; (715) 798-3890. **Caroline** (34); 2 miles W of Caroline; Mark Peterson, Box 53, Caroline, WI 54928; (715) 754-2661. **Chippewa Falls** (19); Jct. Hwys. 178 and S; C.A. Kemper, 733 Maple St., Chippewa Falls, WI 54729; (715) 723 3815. **Clam Lake** (7); 7 miles SE of Clam Lake; Keith Merkel, 201 N. Ash Ave., Marshfield, WI 54449; (715) 384-2383. **Clyde** (54); Jct. Hwy. ZZ and Weaver Rd.; Steven Greb, 3402 Rutland-Dunn Rd., Stoughton, WI 53589; (608) 873-8936. **Columbus** (66); Jct. Johnson and Jahnke Sts.;

Table 1. Details of the Counts.

Name of Count	Date	Sky	Snow Inches	Wind Dir.	Wind M.P.H.	Temp Low	Temp High	Observers Feeder	Observers Field	Parties	Party Hours	Owl Hours
Appleton	12/16	Clear-PCl	5	N	5–10	6	43	18	26	16	42.00	2.00
Ashland	12/16	Clear	14	W	3–5	2	21	0	8	3	24.00	0.00
Baraboo	12/27	Clear	7	N	9–12	9	24	3	10	5	30.25	0.50
Bayfield	12/19	Cloudy	12	NE	17–0	20	30	1	9	4	32.00	0.00
Beloit	12/16	Clear	1		0–5	20	30	4	16	12	52.50	0.00
Black River Falls	12/16	Clear-Hazy	3		Calm	5	25	10	7	3	13.00	1.00
Blanchardville	12/17	Partly Cloudy	3		Calm	11	33	0	7	6	38.50	3.00
Bridgeport	12/18	Cloudy-PCl	2	NNE	10–17	28	34	0	16	8	69.75	8.00
Burlington	12/23	Cloudy	1			25	35	0	4	1	10.00	1.50
Cable	12/16	Partly Cloudy	18		0–5	−11	19	4	9	6	24.25	0.00
Caroline	12/23	Cloudy-Clear	10	N	0–10	22	30	8	5	3	18.00	0.50
Chippewa Falls	12/25	Cloudy	5			21	28	1	8	5	31.75	0.00
Clam Lake	12/30	Cloudy	17		Calm	26	30	0	11	5	38.25	1.75
Clyde	12/31	Cloudy	8		1–4	25	34	0	6	3	17.00	0.50
Columbus	12/30	Mostly Cloudy	3	S	10–0	28	32	3	2	1	8.00	0.00
Cooksville	1/1	Light Snow-Fog	2	NE	5–10	29	32	3	4	2	12.50	1.50
Durand	12/16	PCl-Clear	6		0–10	3	25	0	14	5	27.50	0.00
Ephraim	12/16	Clear	7	NW	0–5	12	22	13	24	9	45.25	1.00
Fifield	12/16	Clear-PCl	8	SW	0–5	−18	16	24	8	5	24.50	0.00
Fort Atkinson	12/17	Cloudy	3	S	6–5	15	34	3	7	3	20.00	0.00
Fremont	12/18	MCl-Cloudy	4	NE	5–12	17	33	0	6	4	29.50	1.00
Gilman	12/17	PCl-Cloudy	11	W	5–10	15	28	6	9	4	37.75	2.75
Grantsburg	12/16	Cloudy	18		0–10	0	15	0	7	7	36.00	0.00
Green Bay	12/16	Clear	8	NW-W	0–8	6	24	9	26	15	78.50	11.00
Green Lake	12/23	Partly Cloudy	3	N	0–10	26	30	3	10	4	26.50	3.50
Gurney	12/22	Cloudy-Clear	15	NW	0–5	23	28	2	11	5	21.00	1.00
Hales Corners	12/17	Clear-Cloudy	4	SE	0–10	20	32	0	12	7	28.00	1.00
Hartford	12/27	Cloudy	5	WNW	5	6	20	0	16	8	63.00	2.45
Hofa Park	12/17	Cloudy	8		Calm	8	32	6	9	5	55.25	0.00
Holcombe	12/23	MCl-Cloudy	5	NE	0–5	22	31	0	13	5	37.75	0.00
Horicon Marsh	12/16	Clear-PCl	6	N	5–10	8	28	0	12	5	27.50	2.50
Hudson	1/1	Light Snow	5	NE	6	27	31	1	8	5	23.50	0.25
Kenosha	12/23	Cloudy-MCl	2	WNW	6–8	26	31	0	2	1	10.00	0.00
Kettle Moraine	12/31	Cloudy-MCl	6	W	0–10	27	30	1	8	5	29.00	3.00
Kewaunee	12/31	Mostly Cloudy	4	ESE	5–10	16	30	0	22	11	58.75	2.30
Kickapoo Valley	12/17	Cloudy	5	N	5–7	19	22	0	6	3	19.00	1.00
LaCrosse	12/16	Cloudy-PCl	4	W	0–4	9	26	4	26	13	66.75	3.75
Lafarge	1/1	PCl-MCl	4	W		15	37	3	5	1	9.50	0.50
Lake Geneva	12/16	Clear	tr.		0–5	11	30	16	28	14	62.50	2.00
Lakewood	1/1	Cloudy	12	NE	10–15	22	30	0	1	1	8.50	0.00
Luck	12/28	Partly Cloudy	13	SW	0–5	12	24	14	12	8	27.00	0.00
Madison	12/16	Clear	7	S	5–8	7	25	27	80	36	241.00	39.50
Medford	1/1	PCl-Cloudy	6	NE	0–10	21	28	1	8	4	30.00	1.50
Merrill	12/26	Cloudy-PCl	12	SE-SW	8–5	11	13	1	2	1	8.50	0.00
Milton	12/16	Clear	1		3–10	16	30	4	2	1	12.00	2.00
Milwaukee	12/16	Clear	3	W	0–8	15	26	5	32	13	70.50	1.00
Montello	12/23	Cloudy-Clear	3	NW	5	22	30	5	3	3	30.00	3.25
Mount Horeb	12/30	Cl-Cloudy	6	S	5–15	18	30	15	45	20	97.75	2.75
Nelson	12/30	Light Snow	3	SSE	0–4	22	28	0	19	8	54.25	0.00
New Richmond	12/16	Cloudy-PCl	8	E	5–10	12	26	2	6	4	22.50	0.00
Oconomowoc	12/17	Cloudy-MCl	3		2–5	19	38	1	14	5	38.00	0.50
Oshkosh	12/16	Clear-PCl	4	NW	8–10	8	26	4	19	11	79.00	0.00
Oxbo	12/23	Mostly Cloudy	14			15	28	14	16	7	25.00	0.00
Pensaukee	12/16	Clear	10	NW	0–10	0	24	1	4	2	17.00	1.00
Peshtigo	12/17	Cloudy	10	E	2	27	30	0	5	3	27.50	0.00
Phelps	12/16	Clear	16		Calm	−11	24	3	8	5	29.00	0.00
Plainfield	12/20	Clear-PCl	9	N-W	5–20	12	26	0	1	1	9.25	1.00
Platteville	12/16	Cloudy	4	WSW	0–5	16	32	4	8	5	14.50	1.00
Plymouth	12/16	Mostly Cloudy	3	NW	5–15	9	24	4	12	5	34.00	0.00
Poynette	12/30	Cloudy	3		Calm	25	33	17	22	11	78.25	4.75
Racine	12/16	Clear-PCl	2	W-NW	5–10	16	35	2	14	5	31.50	4.00
Randolph	12/30	Partly Cloudy	3	SW	5–10	24	33	0	3	2	17.70	0.00
Rhinelander	12/16	Partly Cloudy	15		Calm	0	24	32	5	1	6.00	0.00
Richland Center	12/16	Clear	5	W	0–5	3	26	7	34	18	95.00	3.00
Riveredge	12/16	Clear	3	NW	0–5	12	30	29	71	31	218.00	21.00
Sauk City	12/23	Cloudy	4		Calm	12	30	1	27	13	105.50	6.00
Shawano	12/30	Cloudy	10	SW	0–10	25	31	7	6	4	20.00	1.00
Shiocton	12/21	Snow-PCl	5	N	2–3	21	27	4	12	6	44.00	1.50

(continued)

Table 1. *(Continued)*

Name of Count	Date	Sky	Snow Inches	Wind Dir.	Wind M.P.H.	Temp Low	Temp High	Observers Feeder	Observers Field	Parties	Party Hours	Owl Hours
Spencer	12/28	Fog-PCl	7		Calm	1	21	4	9	6	48.50	4.75
Spruce	12/30	Cloudy	9	SSW	0–5	24	33	0	3	2	17.50	0.75
Stevens Point	12/16	Clear-PCl	8	NW	0–8	−4	19	3	34	8	57.25	0.00
Stockbridge	12/16	Clear	6			6	26	1	8	5	28.50	1.00
Three Lakes	12/17	Cloudy	16		Calm	20	28	3	6	4	17.00	0.00
Trempealeau	12/30	Cloudy-Snow	2	S	0–2	33	36	5	19	8	53.00	1.00
Waukesha	12/16	Clear	3	NE	6	16	27	5	31	10	87.75	9.75
Waupaca	12/27	Clear	5	NW	0–10	−5	22	0	2	2	18.50	1.50
Wausau	12/16	Clear-PCl	9		0–5	−1	20	5	11	8	52.00	3.00
Wautoma	12/29	Clear-Cloudy	5	SW	25–30	4	20	53	12	8	28.00	2.00
Willard	12/26	Drizzle-Snow	5	SE-NW	5	12	20	6	11	5	41.50	1.25
Wisconsin Rapids	12/16	Clear			0–5	4	22	4	31	10	44.75	0.50
Woodland Dunes NW	12/30	Cloudy	7		0–5	27	34	1	12	6	25.00	0.00
Woodland Dunes NE	12/31	Light Fog	4	NE	5–8	28	30	5	10	8	43.25	0.00
Woodland Dunes SW	12/16	Clear	4	WNW-SE	5–10	1	19	1	9	7	32.25	0.00
Woodland Dunes SE	12/17	Cloudy	4	S-SE	0–10	15	30	4	11	7	37.00	0.25
TOTAL								**450**	**1,147**	**565**	**3,421.70**	**179.75**

Phyllis Johnson, P.O. Box 303 Cornucopia, WI 54827; (715) 742-3960. **Cooksville** (72); Cooksville; David and Anna Marie Huset, 242 W. Church St., Evansville, WI 53536; (608) 882-5648. **Durand** (24); Jct. Hwys. 25 and DD 3 miles N of Durand; C.A. Kemper, 733 Maple St., Chippewa Falls, WI 54729; (715) 723-3815. **Ephraim** (32); Hwy. A 3 miles S of Jct. with Hwy 42; Paul and Kathleen Regnier, P.O. Box 152, Baileys Harbor, WI 54202; (414) 839-2802. **Fifield** (9); Fifield Post Office; Thomas Nicholls, 2160 Draper Ave., Roseville, MN 55113; (612) 636-2592. **Fond du Lac** (late); Jct. Tower and Cody Roads; Jeff Baughman, W8985 Hwy. SS, Adell, WI 53001; (414) 626-4713. **Fort Atkinson** (70); Jct. Main St. and Sherman Ave.; Richard Wanie, W5920 Lee Dr., Fort Atkinson, WI 53538; (414) 563–6274. **Fremont** (41); Jct. Hwys. I and HH 4 miles SW of Fremont; Daryl Tessen, 3118 N. Oneida St., Appleton, WI 54911; (414) 735-9903. **Gilman** (17); 1 mile W of Miller Dam; Janice Luepke, B-894 Eau Pleine Rd., Spencer, WI 54479; (715) 659-3910. **Grantsburg** (5); Jct. Hwys. 70 and 48; Dennis Allaman, 506 W. St. George, Grantsburg, WI 54840; (715) 463-2366. **Green Bay** (37); Jct. Allouez and S. Webster Avenues; John Jacobs, Neville Public Museum, 210 Museum Pl., Green Bay, WI 54303; (414) 448-4460. **Green Lake** (62); Jct. Hwy. J and Swamp Rd.; Thomas Schultz, N6104 Honeysuckle Lane, Green Lake, WI 54941; (414) 294–3021. **Gurney** (3); Gurney; Joan Elias, HCR 780, Gurney, WI 54559; (715) 893–2358. **Hales Corners** (81); Jct. Hwy 41 and Puetz Rd. (Milwaukee Co. only); John Schaeffer, 6636 W. Coldspring Rd., Greenfield WI 53220; (414) 543-3429. **Hartford** (67); Jct. Hwys. 60 and 83; Judy Haseleu, 337 W. State St., Hartford, WI 53027; (414) 673-5865. **Hofa Park** (36); Jct. Hofa Park Dr. and Parkview; Elaine Friedrick, W1776 Hofa Park Dr., Seymour, WI 54165; (414) 822-3016. **Holcombe** (16); Chippewa-Rusk county line 1 mile E of Hwy. 27; C.A. Kemper, 733 Maple St., Chippewa Falls, WI 54729; (715) 723-3815. **Horicon Marsh** (65) Jct. Main Ditch and Main Dike in Refuge; Bill

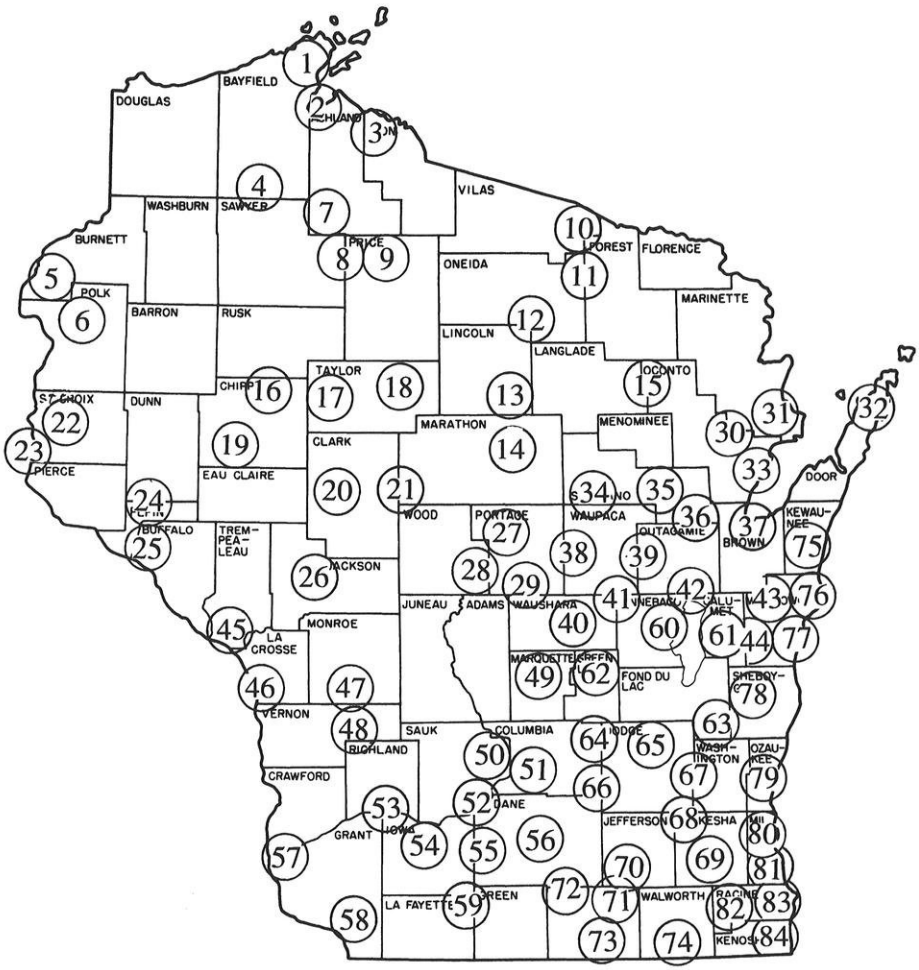

Figure 1. Locations of the 1995 Wisconsin Christmas bird counts.

Volkert, DNR, N7725 Hwy. 28, Horicon, WI 53032; (414) 387-7877. **Hudson** (23); Afton, MN; Helen Lien, 5148 29th Ave. S., Minneapolis, MN 55417; (612) 729-5982. **Kenosha** (84); Jct. Hwys. 158 and HH (Kenosha Co. only); Ron Hoffmann, Box 886, Kenosha, WI 53141; (414) 654- 5854. **Kettle Moraine** (63); Hwy. DD, W of Auburn Lake; Bill Volkert, W996 Birchwood Dr., Campbellsport, WI 53010; (414) 533-8939. **Kewaunee** (75); Jct. Hwys. 42 and D; William Mueller, 1242 S. 45 St., Milwaukee, WI 53214; (414) 643–7279. **Kickapoo Valley** (47); Jct. Hwys. T and 131; Eric Epstein, Rt. 2, Box 455, Norwalk, WI 54648; (608) 823-7837. **LaCrosse** (46); LaCrosse Courthouse; Fred Lesher, 509 Winona St., LaCrosse, WI 54603; (608) 783-1149. **LaFarge** (48); Jct. Hwys. 131 and 82; Dan Hazlett, P.O. Box 264, LaFarge, WI 54639. **Lake Geneva** (74); Inter-

laken Resort, Hwy. 50; Patricia Parsons, N3241 North Williams St., Lake Geneva, WI 53147; (414) 248-1232. **Lakewood** (15); Jct. Hwys. T and FR 2117; John Woodcock, 1718 Cedar Grove Dr., Apt. 3A, Manitowoc, WI 54220; (414) 684-0447. **Luck** (6); Jct. Roads 180th St. and 180th Ave. in Polk Co.; John Nygren, 920 3rd Ave., Luck, WI 54853; (715) 472-2508. **Madison** (56); State Capitol; Carol Anderson and Tony Kalenic, 4638 Bonner Lane, Madison, WI 53704; (608) 249-8836. **Manitowish Waters** (late); Jct. Hwy. 51 and Hwy. W; John Bates, Hwy. 47, #2263, Mercer, WI 54547; (715) 476-2828. **Medford** (18); 1.5 mi. E and 0.5 mi. N of Jct. Hwys. 13 and M east; Michael Riegert, N763 Oriole Dr., Stetsonville, WI 54480; (715) 678-2627. **Merrill** (13); Jct. South End Rd. and Hwy. 107; Alan Rusch, 3342 Westview Lane, Madison, WI 53713; (608) 274-1224. **Milton** (71); Milton; Katy Hess, P/O/ Box 81, Milton, WI 53563; (608) 868-2972. **Milwaukee** (80); Jct. Port Washington Rd. and Hampton Ave.; Jim Frank, 4339 W. Laverna Ave., Mequon, WI 53092; (414) 242–2443. **Montello** (49); Harrisville; Daryl Christensen, N6053 Hwy. Y, Montello, WI 53949; (608) 296-3068. **Mount Horeb** (55); Mount Horeb; Sharon & Warren Gaskill, 10405 Bell Rd., Black Earth, WI 53515; (608) 767-3642. **Nelson** (25); 1 mile S of Jct. Hwys. I and D; C.A. Kemper, 733 Maple St., Chippewa Falls, WI 54729; (715) 723-3815. **New Richmond** (22); 2 miles E of Boardman; Joseph Merchak, 210 Ilwaco Rd., River Falls, WI 54022; (715) 425-1169. **Oconomowoc** (68); Hwy 67, 2 miles N of Oconomowoc; Alex Kailing, W330 N8275 W. Shore Dr., Hartland, WI 53029; (414) 966-1072. **Oshkosh** (60); Jct. Hwys. 21 and 41; Thomas Ziebell, 1322 Ceape Ave., Oshkosh, WI 54901; (414) 235-0326. **Oxbo** (8); Jct. Hwys. EE and 70; Larry Gregg, 829 Atwood Ave., Park Falls, WI 54552; (715) 762-3446. **Pensaukee** (33); Pensaukee; Thomas Erdman, 4093 Hwy. S, Route 2, Oconto, WI 54153; (414) 834-3416. **Peshtigo** (31); Harmony Corners; Leo Feller, 530 Rainbow Circle, Peshtigo, WI 54157; (715) 582-3373. **Phelps** (10); Jct. FR 2199 and FR 2533, 2 miles SW of Phelps; Bill Reardon, 2547 Hwy. 70 E, Eagle River, WI 54521; (715) 479-8055. **Plainfield** (29); Jct. Hwy. BB and 3rd Ave. NW of Almond; Don Nussbaum, 1544 Ames St., Neenah, WI 54956; (414) 729-9137. **Platteville** (58); Cornelia: Tom Goltry, 660 Pioneer Rd., Platteville, WI 53818; (608) 348-9666. **Plymouth** (78); Jct. Hwys. 23 and C; Harold Koopman, 415 Caroline St., Plymouth, WI 53073; (414) 892-8101. **Poynette** (51); Jct. Hwys. 51 and CS; Mark & Sue Martin, Goose Pond Sanctuary, W7468 Prairie Lane, Arlington, WI 53911; (608) 635-4160. **Racine** (83); Hwy. H 0.5 miles S of Hwy. K (Racine Co. only); Gerald DeBoer, 15935 2 Mile Rd., Franksville, WI 53126; (414) 835-4642. **Randolph** (64); Hwy P midway between Cambria and Randolph; Larry Michael, 116 S. Nebraska St., Horicon, WI 53032; (414) 485-2936. **Rhinelander** (12); Rhinelander; Ced Vig, 919 Birch Bend, Rhinelander, WI 54501; (715) 362-3047. **Richland Center** (53); Jct. Hwys. O and TB SE of Richland Center; Robert Hirschy, University of Wisconsin Center-Richland, Richland Center, WI 53581; (608) 647-6186. **Riveredge**

(79); Jct. Hwy. 33 and Lakeland School Rd.; Joan Berkopec, c/o Riveredge Nature Center, P.O. Box 26, Newburg, WI 53060; (414) 375-2715. **Sauk City** (52); 2.5 miles SE of Witwen; Becky Isenring, 6869 Taylor Road, Sauk City, WI 53583; (608) 643- 6906. **Shawano** (35); 3 miles N of Lunds; Mark Peterson, Box 53, Caroline, WI 54928; (715) 754-2661. **Shiocton** (39); Jct. Hwys. M and 54; James Anderson, Mosquito Hill Nature Center, N3880 Rogers Rd., New London, WI 54961; (414) 779–6433. **Spencer** (21); Jct. Hwys. F and 153; Janice Luepke, B-894 Eau Pleine Rd., Spencer, WI 54479; (715) 659-3910. **Spruce** (30); 1 1/2 miles N of Spruce on Hwy. B; Jerry Smith, 6865 Fredrickson Road, Lena, WI 54139; (414) 829-6353. **Stevens Point** (27); Old Main, U.W.-Stevens Point; Nancy Stevenson, 1890 Red Pine Lane, Stevens Point, WI 54481; (715) 341-0084. **Stockbridge** (61); 3 miles SE of Stockbridge; Carroll Rudy, W3866 Hwy. H, Chilton, WI 53014; (414) 849- 9021. **Three Lakes** (11); 6 miles E of Three Lakes; Bill Reardon, 2547 Hwy. 70 E, Eagle River, WI 54521; (715) 479-8055. **Trempealeau** (45); Jct. Hwy K and Fremont St., Trempealeau; Thomas Hunter, 11675 Jay St., Trempealeau, WI 54661; (608) 534-6233. **Waukesha** (69); Jct. Hwy. D and Brookhill Rd.; Patrick Horn, 376W19840 Sunny Hill Dr., Muskego, WI 53150; (414) 679-1459. **Waupaca** (38); Jct. Hwy.49 & Smokey Valley Rd.; Daryl Tessen, 3118 N. Oneida St., Appleton, WI 84911; (414) 735-9903. **Wausau** (14); Jct. Grand Ave. and Thomas St.; Walter Tamminen, 1224 N 4th Ave., Wausau, WI 54401; (715) 675-7669. **Wautoma** (40); Mount Morris; Delbert Greenman, 1218 Hwy W, Redgranite, WI 54970; (414) 787- 3036. **Willard** (20); 1 mile E and 1.5 miles S of Willard; Janice Luepke, B-894 Eau Pleine Rd., Spencer, WI 54479; (715) 659-3910. **Wisconsin Rapids** (28); Wisconsin Rapids Airport; LaVonne Middleton, 210 Shorewood Ter., Wisconsin Rapids, WI 54494; (715) 423-3242. **Woodland Dunes NW** (43); Menchalville, **NE** (76); Jct. Hwy. V and Samz Rd. **SW** (44); 3 miles W of St. Nazianz; and **SE** (77); 2 mi. S of Newtonburg; all in Manitowoc Co. as drawn on a map; Bernard Brouchoud, Woodland Dunes Nature Center, P.O. Box 2108, Manitowoc, WI 54221–2108; (414) 793-4007.

Results of the Counts

Results are reported in Tables 2–8. Common species are reported in Tables 2–7, with counts in similar areas of the state grouped together in each table. The number of individuals of each species is compared in Table 7 with the average for the previous ten years, corrected for participation (total party hours). Numbers of uncommon and rare species are reported in Table 8, with counts for each species listed in the same orders as in Tables 2–7. Undocumented reports of species for which documentation was requested were not compiled. These included a Trumpeter Swan, a Thayer's Gull, a White-crowned Sparrow, and a Clay-colored Sparrow. Other species were not included because documentation was inadequate or indicated the identification was in error.

In spite of a lack of rarities, many counts were excellent this year; several were even better than in last

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

Species	Bayfield 1	Ashland 2	Gurney 3	Cable 4	Grantsburg 5	Luck 6	Clam Lake 7	Oxbo 8	Fifield 9	Phelps 10	Three Lakes 11	Rhinelander 12	Merrill 13	Wausau 14	Lakewood 15
Canada Goose	0	0	0	0	352	7	0	0	0	0	0	0	0	x	0
American Black Duck	0	41	0	0	0	0	0	0	0	0	0	0	0	1	0
Mallard	2	60	0	0	48	0	0	0	0	0	0	182	365	86	0
Common Goldeneye	4	0	0	0	0	0	6	0	3	0	0	0	1	4	0
Common Merganser	0	0	0	0	0	0	0	0	1	0	0	0	0	1	0
Bald Eagle	1	0	3	3	4	1	0	9	1	3	0	1	2	4	0
Northern Harrier	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Sharp-shinned Hawk	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0
Cooper's Hawk	0	0	0	0	0	1	0	0	0	0	0	0	0	2	0
Northern Goshawk	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0
Red-tailed Hawk	0	0	0	0	0	0	0	0	0	0	0	0	0	5	0
Rough-legged Hawk	1	0	0	0	5	0	0	1	0	0	0	0	0	2	1
American Kestrel	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ring-necked Pheasant	0	0	0	0	6	12	0	0	0	0	0	0	0	0	0
Ruffed Grouse	0	1	1	6	2	1	26	33	10	7	3	3	1	4	1
Wild Turkey	0	0	0	0	0	9	0	0	0	0	0	0	0	17	0
Ring-billed Gull	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Herring Gull	324	11	0	0	0	0	0	0	0	0	0	0	0	0	0
Rock Dove	21	54	16	0	133	54	0	47	62	0	0	0	0	456	8
Mourning Dove	52	7	x	0	9	5	0	3	16	5	26	188	3	358	0
Eastern Screech-Owl	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Great Horned Owl	0	0	x	0	0	1	0	1	0	0	0	0	0	1	0
Barred Owl	0	0	0	x	0	3	1	2	1	1	1	0	0	0	0
Belted Kingfisher	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Red-headed Woodpecker	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Red-bellied Woodpecker	0	0	0	0	1	9	0	0	0	0	1	1	0	14	0
Downy Woodpecker	9	1	2	19	18	29	4	36	41	16	34	37	5	49	4
Hairy Woodpecker	5	3	10	20	11	20	14	44	49	24	12	62	1	33	6
Northern Flicker	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Pileated Woodpecker	1	1	3	2	7	7	1	7	7	0	3	15	0	2	0
Horned Lark	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Blue Jay	46	28	24	26	108	90	27	116	116	63	33	86	6	132	11
American Crow	39	51	58	14	174	52	29	66	97	51	17	25	22	399	12
Common Raven	61	8	94	138	32	22	83	76	33	56	23	8	0	2	1
Black-capped Chickadee	156	148	145	145	265	157	386	350	770	451	139	332	55	849	46
Tufted Titmouse	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Red-breasted Nuthatch	7	9	3	23	3	14	11	43	40	45	18	43	5	62	0
White-breasted Nuthatch	4	7	12	37	22	51	14	31	57	31	9	103	3	44	2
Brown Creeper	0	0	0	2	0	0	1	3	3	0	0	4	0	1	0
Golden-crowned Kinglet	0	0	0	0	0	0	4	0	0	0	0	0	0	0	0
American Robin	0	1	0	0	0	0	0	0	0	0	0	0	1	1	0
Cedar Waxwing	0	0	0	0	0	0	0	0	x	0	0	0	0	15	0
Northern Shrike	6	3	0	1	2	0	2	0	4	1	1	0	0	4	1
European Starling	200	252	6	0	24	118	0	0	119	41	0	0	4	392	16
Northern Cardinal	x	2	0	0	6	45	0	0	3	0	0	1	6	86	0
American Tree Sparrow	0	0	0	0	6	9	0	0	0	0	0	0	0	30	0
Song Sparrow	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
White-throated Sparrow	3	0	0	0	0	0	0	0	0	0	0	0	0	1	0
Dark-eyed Junco	1	0	0	2	2	0	0	0	0	3	0	4	4	130	0
Snow Bunting	0	105	50	0	92	0	0	62	6	0	0	0	0	236	0
Red-winged Blackbird	0	1	0	0	0	0	0	0	0	0	0	1	0	0	0
Common Grackle	0	0	0	0	1	0	0	0	3	0	0	1	0	0	0
Pine Grosbeak	22	24	20	12	10	0	48	146	95	61	14	50	0	7	0
Purple Finch	0	0	4	0	15	3	0	5	6	0	0	5	0	14	0
House Finch	1	104	0	0	0	2	0	0	0	0	0	1	2	112	0
White-winged Crossbill	0	0	0	0	2	0	42	0	80	1	21	0	0	0	24
Common Redpoll	139	1	0	0	114	89	230	125	32	19	40	1	0	124	x
Pine Siskin	4	2	7	23	12	40	4	147	34	5	8	15	5	103	1
American Goldfinch	140	52	48	160	87	56	1	178	122	86	107	238	0	143	11
Evening Grosbeak	121	18	56	38	12	14	31	226	242	126	141	390	3	11	60
House Sparrow	161	27	45	0	17	161	0	0	0	0	13	0	35	376	0
Total Species	**28**	**30**	**20**	**18**	**38**	**32**	**23**	**26**	**31**	**22**	**24**	**28**	**21**	**44**	**16**

x = Found within 3 days of the count day but not on the day of the count.

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

Species	Holcombe 16	Gilman 17	Medford 18	Chippewa Falls 19	Willard 20	Spencer 21	New Richmond 22	Hudson 23	Durand 24	Nelson 25	Black River Falls 26	Stevens Point 27	Wisconsin Rapids 28	Plainfield 29
Canada Goose	x	0	0	7	0	0	1797	1407	0	50	0	2	0	0
American Black Duck	0	0	0	45	0	0	7	0	0	0	0	5	5	0
Mallard	0	0	0	518	0	6	404	450	7	54	0	1340	285	0
Common Goldeneye	0	0	0	6	0	0	0	53	0	17	0	450	240	0
Common Merganser	0	0	0	0	0	0	0	72	0	47	0	7	4	0
Bald Eagle	1	9	1	2	1	0	2	3	6	89	5	3	1	0
Northern Harrier	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Sharp-shinned Hawk	0	0	0	1	1	0	0	0	0	0	0	0	1	0
Cooper's Hawk	0	0	2	1	2	2	0	1	0	0	0	1	2	0
Northern Goshawk	0	0	0	0	0	1	1	1	0	0	0	1	2	0
Red-tailed Hawk	2	3	0	19	14	13	6	7	47	41	7	3	8	5
Rough-legged Hawk	0	1	0	2	3	3	4	2	9	7	4	6	0	0
American Kestrel	0	2	0	1	3	0	0	0	2	1	1	0	7	0
Ring-necked Pheasant	0	2	2	6	0	1	40	19	7	0	0	0	1	0
Ruffed Grouse	6	10	17	2	5	6	–	1	2	8	5	1	15	1
Wild Turkey	0	0	0	0	12	0	8	0	85	87	101	16	68	1
Ring-billed Gull	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Herring Gull	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Rock Dove	349	330	179	569	280	682	479	167	349	432	79	294	345	84
Mourning Dove	57	46	5	59	24	151	2	1	24	46	26	127	190	35
Eastern Screech-Owl	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Great Horned Owl	0	1	0	0	1	5	0	0	1	5	2	0	1	0
Barred Owl	0	2	0	0	3	2	0	2	0	1	1	1	1	0
Belted Kingfisher	0	1	0	2	0	1	1	1	0	0	0	2	0	0
Red-headed Woodpecker	0	0	0	0	3	0	0	0	0	2	1	0	0	0
Red-bellied Woodpecker	1	1	1	9	19	12	9	13	18	39	15	9	2	1
Downy Woodpecker	18	27	17	38	50	51	17	37	12	54	26	33	23	6
Hairy Woodpecker	10	36	16	15	27	19	13	12	15	18	11	26	11	0
Northern Flicker	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Pileated Woodpecker	0	6	1	0	2	1	3	5	4	20	6	4	1	0
Horned Lark	0	0	0	1	2	0	0	0	29	0	0	0	5	0
Blue Jay	101	155	191	194	194	163	139	172	212	306	116	88	132	13
American Crow	281	119	298	336	150	556	328	296	474	344	98	296	205	190
Common Raven	6	25	3	0	4	0	0	0	0	1	1	0	0	0
Black-capped Chickadee	472	706	781	296	674	679	163	171	198	423	157	563	290	54
Tufted Titmouse	0	0	0	25	2	0	0	0	0	0	0	0	0	0
Red-breasted Nuthatch	9	35	18	33	49	21	9	15	4	5	24	41	38	2
White-breasted Nuthatch	33	51	19	61	65	49	17	36	44	48	60	71	34	4
Brown Creeper	0	1	0	1	0	1	0	2	5	0	0	2	4	0
Golden-crowned Kinglet	0	0	0	0	0	0	0	0	0	0	0	0	0	0
American Robin	0	1	0	0	0	0	0	2	16	2	1	0	0	0
Cedar Waxwing	0	0	0	0	0	0	10	117	17	4	8	0	0	0
Northern Shrike	5	2	8	9	16	11	1	3	9	8	2	0	4	1
European Starling	466	207	1040	645	637	2241	230	365	914	626	34	56	39	102
Northern Cardinal	15	6	10	39	56	49	68	22	64	84	79	47	30	4
American Tree Sparrow	39	52	0	208	110	43	128	6	278	219	89	91	36	73
Song Sparrow	0	0	0	0	0	0	0	0	0	0	0	0	0	0
White-throated Sparrow	0	x	0	1	0	0	3	0	0	0	1	4	0	0
Dark-eyed Junco	0	55	6	202	65	34	141	105	768	543	322	171	112	158
Snow Bunting	0	227	8	0	103	301	6	45	3	0	0	216	11	13
Red-winged Blackbird	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Common Grackle	0	1	0	0	0	0	0	0	0	0	0	0	0	0
Pine Grosbeak	17	9	25	6	0	1	0	0	0	0	0	11	2	0
Purple Finch	3	0	3	0	0	0	39	5	7	9	49	5	25	0
House Finch	0	0	0	160	0	5	16	48	89	126	12	66	1	11
White-winged Crossbill	0	11	9	0	0	201	0	0	0	0	0	0	0	0
Common Redpoll	139	354	98	176	95	165	51	14	138	45	2	153	87	1
Pine Siskin	7	22	21	198	25	22	2	4	47	82	7	84	77	14
American Goldfinch	43	175	121	109	351	61	81	52	213	214	216	164	120	42
Evening Grosbeak	15	163	203	0	72	0	0	0	0	0	23	0	5	0
House Sparrow	288	424	94	686	748	855	294	181	693	2052	28	274	169	32
Total Species	**27**	**40**	**30**	**40**	**38**	**37**	**38**	**42**	**37**	**41**	**36**	**42**	**43**	**25**

x = Found within 3 days of the count day but not on the day of the count.

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

Species	Spruce 30	Peshtigo 31	Ephraim 32	Pensaukee 33	Caroline 34	Shawano 35	Hofa Park 36	Green Bay 37	Waupaca 38	Shiocton 39	Wautoma 40	Fremont 41	Appleton 42	Woodland Dunes NW 43	Woodland Dunes SW 44
Canada Goose	0	0	73	0	0	0	0	4320	2	1	11	77	1720	1	13
American Black Duck	0	0	26	0	5	0	0	293	2	0	1	13	173	8	0
Mallard	0	9	669	4	120	4	0	3683	117	2	218	235	4350	21	0
Common Goldeneye	0	4	836	0	0	2	0	0	10	0	0	0	0	881	0
Common Merganser	0	13	79	8	0	8	0	28	0	0	0	1	556	0	0
Bald Eagle	2	8	4	2	1	4	0	x	0	1	2	0	37	0	0
Northern Harrier	0	0	0	1	0	0	1	0	0	0	0	1	1	0	4
Sharp-shinned Hawk	0	0	1	x	2	1	1	0	0	0	1	1	7	1	1
Cooper's Hawk	0	1	0	1	0	0	x	6	1	2	1	0	15	0	1
Northern Goshawk	2	0	0	0	0	1	0	0	0	0	0	0	0	0	0
Red-tailed Hawk	13	11	1	11	8	2	16	74	15	48	16	22	112	7	11
Rough-legged Hawk	9	28	1	2	5	5	0	2	2	3	21	35	8	1	33
American Kestrel	1	2	0	4	1	4	16	17	1	16	0	19	34	9	10
Ring-necked Pheasant	5	7	0	2	5	2	12	0	0	4	0	3	11	0	3
Ruffed Grouse	0	4	12	x	8	6	0	0	1	1	2	8	x	4	0
Wild Turkey	4	149	4	5	19	5	0	0	49	1	182	0	6	2	34
Ring-billed Gull	0	0	x	0	0	0	6	0	0	0	0	0	2	0	0
Herring Gull	0	0	2305	0	0	0	0	1	0	0	0	0	13	76	0
Rock Dove	400	388	54	487	242	413	642	1278	143	682	227	388	1945	375	417
Mourning Dove	418	419	129	335	121	167	282	778	15	223	217	478	1787	96	15
Eastern Screech-Owl	0	1	0	x	1	0	0	4	0	1	0	1	1	0	1
Great Horned Owl	2	4	2	1	1	3	1	9	0	5	5	2	20	5	8
Barred Owl	x	0	2	x	0	2	0	2	1	3	1	3	2	0	1
Belted Kingfisher	1	0	0	0	3	0	0	1	1	2	0	4	1	0	0
Red-headed Woodpecker	0	2	0	0	0	0	3	1	1	0	3	0	1	0	1
Red-bellied Woodpecker	2	5	10	2	12	9	0	11	3	13	27	14	27	3	5
Downy Woodpecker	22	23	30	16	31	23	45	55	20	46	69	63	80	20	36
Hairy Woodpecker	15	26	33	8	21	26	18	27	4	30	28	20	29	15	15
Northern Flicker	1	0	0	0	1	1	1	1	0	1	1	12	3	0	0
Pileated Woodpecker	3	2	11	1	2	5	0	0	4	4	10	3	0	1	3
Horned Lark	0	0	0	0	0	0	0	0	0	0	0	41	18	0	12
Blue Jay	82	208	148	69	147	91	113	81	78	138	387	142	126	62	74
American Crow	394	220	213	69	172	237	102	364	162	131	638	210	273	127	126
Common Raven	1	13	14	3	4	5	1	0	2	0	0	0	0	0	0
Black-capped Chickadee	195	504	290	173	373	324	205	288	261	381	445	319	408	160	158
Tufted Titmouse	0	0	0	0	1	0	0	0	0	0	2	0	1	0	0
Red-breasted Nuthatch	5	7	31	3	30	45	13	21	32	21	54	29	67	10	9
White-breasted Nuthatch	14	31	25	16	52	44	24	93	46	30	105	64	102	43	28
Brown Creeper	0	1	x	1	1	15	2	1	4	3	5	6	7	0	1
Golden-crowned Kinglet	0	0	0	0	15	4	0	0	0	0	0	1	0	0	0
American Robin	0	0	2	0	0	0	3	5	0	6	1	1	10	0	0
Cedar Waxwing	0	0	0	0	0	3	2	17	0	14	30	0	29	0	0
Northern Shrike	4	6	4	4	4	3	3	5	1	16	8	7	7	1	0
European Starling	405	746	237	285	281	736	684	1929	230	720	1222	585	1201	221	324
Northern Cardinal	10	32	53	18	76	13	43	138	10	85	142	87	204	36	31
American Tree Sparrow	130	94	3	261	57	52	34	98	28	39	56	356	141	22	58
Song Sparrow	0	1	0	0	0	0	0	1	0	2	0	1	1	1	0
White-throated Sparrow	0	0	0	0	0	1	0	1	0	0	0	0	33	0	0
Dark-eyed Junco	32	50	42	22	133	108	65	249	130	139	1175	285	475	41	57
Snow Bunting	0	54	90	63	47	22	3146	52	350	140	0	55	56	25	0
Red-winged Blackbird	0	0	0	0	0	0	0	4	0	0	0	1	2	0	0
Common Grackle	0	0	12	0	0	2	4	20	0	0	0	0	0	0	0
Pine Grosbeak	17	26	18	0	9	1	0	0	0	0	0	0	0	0	0
Purple Finch	0	1	0	3	19	76	17	2	4	0	14	2	19	0	0
House Finch	4	104	0	12	108	29	29	186	66	106	90	65	527	0	0
White-winged Crossbill	2	0	0	0	12	0	0	13	0	0	0	0	0	0	0
Common Redpoll	186	85	64	7	14	36	6	8	41	16	54	62	32	36	0
Pine Siskin	87	22	122	71	303	318	22	43	221	23	96	48	89	2	0
American Goldfinch	216	189	122	81	249	177	117	180	23	103	358	175	208	60	33
Evening Grosbeak	13	10	150	0	3	7	0	1	0	0	72	1	24	0	3
House Sparrow	328	423	8	132	240	197	624	1637	169	474	92	780	1672	172	300
Total Species	**36**	**43**	**48**	**37**	**46**	**53**	**37**	**59**	**39**	**44**	**46**	**49**	**73**	**34**	**35**

x Found within 3 days of the count day but not on the day of the count.

Table 5. Number of each species in southwest and south-central Wisconsin found on 15 or more counts.

Species	Trempealeau 45	LaCrosse 46	Kickapoo Valley 47	LaFarge 48	Montello 49	Baraboo 50	Poynette 51	Sauk City 52	Richland Center 53	Clyde 54	Mount Horeb 55	Madison 56	Bridgeport 57	Platteville 58	Blanchardville 59
Canada Goose	1	1	0	0	1467	1275	3500	175	0	4	0	1921	11	0	0
American Black Duck	22	3	0	0	4	2	9	11	0	0	0	45	1	0	0
Mallard	84	764	0	0	417	230	276	324	13	3	3	4843	100	0	1
Common Goldeneye	2	3	0	0	1	15	25	75	0	0	0	51	50	0	0
Common Merganser	1	0	0	0	0	36	128	358	0	0	0	14	0	0	0
Bald Eagle	4	19	3	0	1	16	6	180	7	2	1	0	102	0	0
Northern Harrier	1	0	0	0	0	0	0	0	8	0	0	0	0	0	0
Sharp-shinned Hawk	4	1	0	0	2	2	8	4	2	0	1	6	1	0	2
Cooper's Hawk	3	2	1	1	0	1	9	5	1	1	1	17	3	0	0
Northern Goshawk	0	1	0	0	x	0	0	1	0	0	0	1	0	0	0
Red-tailed Hawk	24	46	38	42	11	42	80	69	81	12	80	98	64	30	62
Rough-legged Hawk	10	2	8	3	12	16	16	24	15	10	8	3	14	5	6
American Kestrel	10	10	8	1	0	4	12	26	29	7	14	17	24	9	16
Ring-necked Pheasant	2	3	0	0	2	0	45	2	3	3	10	6	13	2	20
Ruffed Grouse	3	3	7	2	3	3	2	5	27	0	6	0	1	0	2
Wild Turkey	91	159	380	117	106	126	265	613	847	227	179	12	346	16	37
Ring-billed Gull	0	1	0	0	0	0	0	0	0	0	0	9	0	0	0
Herring Gull	0	8	0	0	0	0	1	0	0	0	0	1	1	0	0
Rock Dove	410	153	190	193	442	408	498	1042	761	0	432	1064	448	90	187
Mourning Dove	109	169	11	1	27	54	585	851	166	67	296	1050	162	28	81
Eastern Screech-Owl	0	4	0	0	0	1	7	10	x	4	x	135	10	x	9
Great Horned Owl	1	1	4	2	3	4	22	14	8	2	8	25	7	2	44
Barred Owl	2	2	0	0	2	4	2	9	3	0	1	1	0	x	1
Belted Kingfisher	2	2	0	0	2	1	5	3	0	2	1	10	3	2	3
Red-headed Woodpecker	4	1	0	1	2	1	2	2	5	1	2	0	1	5	8
Red-bellied Woodpecker	39	41	20	11	6	16	72	82	67	4	48	100	85	10	51
Downy Woodpecker	77	60	26	13	21	23	129	140	114	10	98	273	74	22	79
Hairy Woodpecker	42	24	4	5	8	7	46	27	26	2	27	80	20	11	21
Northern Flicker	2	1	0	0	28	0	10	6	1	0	4	3	2	1	0
Pileated Woodpecker	7	5	4	1	4	5	3	13	9	2	3	0	14	0	1
Horned Lark	13	52	0	39	6	0	8	7	5	1	3	22	67	0	60
Blue Jay	318	195	135	117	125	202	561	451	48	60	206	333	174	60	226
American Crow	616	428	1102	956	333	423	939	1232	620	133	478	2074	380	134	532
Common Raven	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Black-capped Chickadee	236	400	112	38	119	195	563	553	350	27	302	1321	333	39	305
Tufted Titmouse	1	14	6	0	1	2	42	10	24	4	24	5	47	12	0
Red-breasted Nuthatch	14	44	8	1	3	19	71	69	11	0	20	223	15	5	22
White-breasted Nuthatch	99	133	20	11	34	53	163	162	102	10	103	365	154	28	103
Brown Creeper	2	25	0	0	1	4	13	7	2	0	x	72	11	0	2
Golden-crowned Kinglet	0	39	2	0	0	1	2	1	0	0	0	5	2	0	0
American Robin	12	1	0	0	0	0	54	28	0	0	8	171	0	0	1
Cedar Waxwing	7	52	0	0	52	73	292	105	0	0	0	92	158	0	1
Northern Shrike	2	1	1	1	4	7	14	8	2	0	10	14	9	0	6
European Starling	473	2147	196	112	183	269	1834	1509	1182	130	1078	3733	677	139	676
Northern Cardinal	124	187	85	41	56	27	257	223	314	31	191	512	147	48	221
American Tree Sparrow	676	184	126	110	209	34	493	815	259	36	426	931	439	23	1198
Song Sparrow	0	1	0	0	0	0	31	6	1	0	0	56	6	1	14
White-throated Sparrow	1	1	0	0	0	0	6	6	0	0	5	65	2	0	1
Dark-eyed Junco	568	637	160	137	300	270	1194	1371	792	44	435	1380	870	82	636
Snow Bunting	0	0	0	0	34	0	150	0	19	0	0	20	338	0	0
Red-winged Blackbird	0	216	0	0	0	0	58	0	0	0	0	0	16	0	0
Common Grackle	0	3	0	0	0	0	0	5	2	0	2	1	1	0	0
Pine Grosbeak	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Purple Finch	95	9	6	5	54	7	67	84	70	3	34	54	9	25	13
House Finch	23	102	40	4	13	35	196	518	135	0	48	1104	119	91	9
White-winged Crossbill	0	0	0	0	0	0	20	12	0	0	0	0	0	0	0
Common Redpoll	0	0	0	0	10	3	34	2	0	0	1	11	3	0	1
Pine Siskin	32	150	80	0	32	13	94	107	41	14	66	345	60	25	64
American Goldfinch	183	169	108	6	227	50	526	310	511	74	244	390	463	102	159
Evening Grosbeak	0	0	0	0	9	0	0	0	6	0	7	0	0	0	0
House Sparrow	836	518	346	179	88	42	1232	883	1118	75	517	1699	1591	248	1259
Total Species	**50**	**60**	**33**	**29**	**47**	**45**	**69**	**63**	**46**	**32**	**48**	**79**	**62**	**30**	**47**

x = Found within 3 days of the count day but not on the day of the count.

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

Species	Oshkosh 60	Stockbridge 61	Green Lake 62	Kettle Moraine 63	Randolph 64	Horicon Marsh 65	Columbus 66	Hartford 67	Oconomowoc 68	Waukesha 69	Fort Atkinson 70	Milton 71	Cooksville 72	Beloit 73	Lake Geneva 74
Canada Goose	6	0	120000	0	71	5000	0	91	6430	1577	13	507	102	1500	17395
American Black Duck	36	0	3	6	1	0	5	9	11	0	1	0	4	0	0
Mallard	1154	0	380	9	6	9	328	18	1163	332	225	215	81	2049	163
Common Goldeneye	4	0	84	0	0	0	0	0	6	0	0	23	24	85	853
Common Merganser	16	0	271	0	0	0	0	0	0	0	0	0	2	14	123
Bald Eagle	1	0	8	0	0	x	0	0	0	0	0	0	0	0	0
Northern Harrier	3	x	1	0	0	3	0	0	1	1	0	0	0	2	2
Sharp-shinned Hawk	3	x	2	0	0	0	1	1	0	2	0	1	0	0	5
Cooper's Hawk	9	2	1	0	2	3	0	9	1	2	1	0	4	5	4
Northern Goshawk	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Red-tailed Hawk	42	38	16	23	36	26	4	26	24	58	16	23	11	42	43
Rough-legged Hawk	6	4	5	5	3	6	0	2	1	8	0	1	1	4	2
American Kestrel	24	7	3	12	9	13	5	14	3	10	5	5	9	17	19
Ring-necked Pheasant	13	0	x	1	0	0	25	2	2	3	2	8	4	19	35
Ruffed Grouse	0	0	1	7	0	0	0	0	0	0	0	0	0	0	0
Wild Turkey	0	51	x	1	0	0	0	27	16	44	0	0	1	3	67
Ring-billed Gull	3	0	0	0	0	0	0	0	2	1	0	0	2	1	342
Herring Gull	2	0	14	0	0	0	0	0	0	0	0	0	0	0	46
Rock Dove	1090	844	184	710	329	570	221	565	396	567	65	319	194	589	438
Mourning Dove	1109	82	129	243	271	259	96	147	66	264	147	113	207	195	235
Eastern Screech-Owl	1	1	1	1	0	3	0	2	2	9	0	0	5	2	0
Great Horned Owl	3	1	21	3	0	9	0	6	5	9	1	1	4	3	4
Barred Owl	0	x	6	4	0	3	0	2	1	0	0	1	2	x	0
Belted Kingfisher	0	0	0	1	0	1	0	3	2	3	0	0	1	2	1
Red-headed Woodpecker	0	0	0	0	0	0	1	0	0	0	0	0	0	2	2
Red-bellied Woodpecker	14	7	14	13	7	3	4	20	10	11	23	6	x	15	37
Downy Woodpecker	68	56	40	41	55	25	11	78	32	63	21	23	29	56	70
Hairy Woodpecker	14	9	20	22	12	2	3	12	13	15	4	7	9	13	23
Northern Flicker	0	1	32	2	0	0	0	2	1	3	0	1	0	3	1
Pileated Woodpecker	0	0	x	1	1	0	0	0	0	2	0	0	0	0	0
Horned Lark	31	12	0	45	2	21	33	44	1	16	0	24	0	8	35
Blue Jay	132	70	108	190	97	44	22	76	21	60	10	19	41	73	70
American Crow	246	72	113	435	68	96	143	555	395	481	149	203	132	549	528
Common Raven	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Black-capped Chickadee	286	121	144	437	122	85	13	432	167	345	125	110	48	158	313
Tufted Titmouse	0	0	0	0	1	0	0	0	x	0	2	25	1	3	1
Red-breasted Nuthatch	39	1	4	133	8	7	8	37	24	38	18	21	12	7	54
White-breasted Nuthatch	58	29	45	40	51	13	9	63	55	59	12	28	17	26	71
Brown Creeper	3	1	0	4	1	1	2	1	x	x	1	2	x	5	2
Golden-crowned Kinglet	2	0	0	0	0	0	0	3	0	0	0	0	0	0	0
American Robin	3	0	3	0	0	1	0	5	9	7	0	4	0	6	0
Cedar Waxwing	5	1	20	18	6	1	0	0	64	33	0	0	x	0	35
Northern Shrike	3	3	1	7	2	6	0	5	3	7	1	1	2	3	1
European Starling	2419	844	663	615	2135	955	721	707	541	771	176	352	191	319	1633
Northern Cardinal	32	65	47	106	40	18	13	90	108	212	56	44	120	130	139
American Tree Sparrow	296	148	194	21	125	369	10	62	102	187	174	78	109	490	405
Song Sparrow	0	0	0	0	0	2	1	2	1	12	0	0	3	15	22
White-throated Sparrow	6	0	0	0	0	0	0	0	1	1	0	1	2	x	7
Dark-eyed Junco	263	59	228	194	136	47	23	152	659	407	100	128	75	446	480
Snow Bunting	121	2175	0	0	0	227	0	0	0	0	0	17	0	300	0
Red-winged Blackbird	3	0	0	0	18	0	0	0	0	2	0	0	75	0	0
Common Grackle	0	0	0	0	0	2	1	0	0	0	0	0	0	0	1
Pine Grosbeak	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Purple Finch	3	0	28	4	1	1	0	20	3	15	31	8	2	0	5
House Finch	80	3	5	15	26	17	41	88	60	154	27	113	52	212	172
White-winged Crossbill	0	0	0	69	0	0	0	0	0	0	0	0	0	0	0
Common Redpoll	81	5	52	100	102	3	2	26	0	24	0	0	3	1	47
Pine Siskin	49	16	42	65	0	0	5	22	85	65	18	9	43	11	76
American Goldfinch	125	45	113	87	92	32	32	81	30	151	179	42	92	19	127
Evening Grosbeak	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0
House Sparrow	2208	1340	81	637	584	735	630	323	233	371	248	104	219	592	486
Total Species	**52**	**34**	**44**	**42**	**33**	**38**	**30**	**42**	**49**	**53**	**31**	**38**	**42**	**47**	**56**

x = Found within 3 days of the count day but not on the day of the count.

Table 7. Number of each species in Lake Michigan counties found on 15 or more counts.

Species	Kewaunee 75	Woodland Dunes NE 76	Woodland Dunes SE 77	Plymouth 78	Riveredge 79	Milwaukee 80	Hales Corners 81	Burlington 82	Racine 83	Kenosha 84	Number of Counts	Number of Individuals	Percent Change
Canada Goose	1108	0	883	0	2928	1995	1049	413	4317	13190	45	196,770	+54%
American Black Duck	0	1	85	0	95	23	2	0	4	12	37	1,020	−32%
Mallard	3	200	1010	19	1487	1926	697	74	472	2800	61	35,117	+26%
Common Goldeneye	438	41	150	0	306	1437	59	0	159	150	39	6,558	+25%
Common Merganser	124	21	84	0	168	5	3	0	2	2	31	2,192	−50%
Bald Eagle	0	x	0	0	0	1	1	0	0	0	47	567	+44%
Northern Harrier	0	0	0	1	0	0	0	0	2	x	16	33	−53%
Sharp-shinned Hawk	1	3	2	x	7	4	2	0	4	x	39	92	+58%
Cooper's Hawk	3	1	0	0	7	7	2	0	5	0	47	155	+148%
Northern Goshawk	0	0	0	1	3	1	1	0	0	0	16	20	−35%
Red-tailed Hawk	9	2	9	26	80	24	19	14	45	6	69	1,988	+35%
Rough-legged Hawk	3	1	1	5	5	1	0	4	2	0	67	428	−3%
American Kestrel	9	5	5	2	32	6	11	3	12	5	59	583	−11%
Ring-necked Pheasant	8	2	0	7	11	1	0	0	4	31	50	439	+74%
Ruffed Grouse	3	5	1	0	4	0	0	0	0	0	54	309	−17%
Wild Turkey	46	12	2	194	36	0	0	2	0	10	52	4,897	+344%
Ring-billed Gull	20	8	6	0	331	1318	416	0	344	86	18	2,898	−45%
Herring Gull	1529	1986	170	0	288	2965	34	0	36	4	21	9,815	−21%
Rock Dove	712	207	182	429	1169	455	28	27	465	44	77	30,667	+26%
Mourning Dove	284	452	256	224	737	324	346	34	262	28	80	17,112	+33%
Eastern Screech-Owl	2	0	1	0	19	1	2	0	5	0	30	247	+21%
Great Horned Owl	6	1	2	x	40	7	0	2	3	x	59	365	+5%
Barred Owl	1	1	2	0	10	0	0	0	0	0	44	99	+16%
Belted Kingfisher	0	x	0	0	1	5	0	0	1	x	37	79	+14%
Red-headed Woodpecker	0	0	0	0	2	0	0	0	1	x	28	61	−62%
Red-bellied Woodpecker	0	2	1	13	59	4	4	1	6	1	71	1,245	+21%
Downy Woodpecker	32	49	22	36	291	73	19	9	33	6	84	3,689	+17%
Hairy Woodpecker	7	21	7	12	76	14	4	0	3	1	82	1,531	+2%
Northern Flicker	2	0	0	3	8	4	0	0	3	x	35	146	+22%
Pileated Woodpecker	0	1	0	1	1	1	0	0	0	0	55	237	+27%
Horned Lark	12	x	9	5	34	0	0	0	21	13	38	757	−54%
Blue Jay	103	68	56	69	300	11	18	9	47	11	84	9,970	−12%
American Crow	318	149	248	195	1175	1459	301	21	179	44	84	27,149	+22%
Common Raven	0	0	0	0	0	0	0	0	0	0	28	720	+11%
Black-capped Chickadee	286	228	160	152	1332	410	84	45	185	43	84	25,229	+19%
Tufted Titmouse	0	0	0	0	0	0	0	0	1	1	27	258	+84%
Red-breasted Nuthatch	0	9	7	13	68	30	10	4	24	0	80	2,107	+106%
White-breasted Nuthatch	17	46	33	24	294	45	14	6	22	3	84	4,356	+7%
Brown Creeper	0	0	0	0	17	2	0	5	1	x	50	264	+11%
Golden-crowned Kinglet	10	0	0	0	13	1	0	0	4	0	17	109	−51%
American Robin	0	0	0	1	27	100	1	0	1	2	36	498	−29%
Cedar Waxwing	10	0	0	6	115	315	22	0	64	3	37	1,816	+2%
Northern Shrike	10	4	1	5	14	10	1	1	4	0	73	351	+87%
European Starling	1074	220	1544	433	2720	1109	1507	36	431	115	79	55,149	+4%
Northern Cardinal	13	79	58	50	403	104	65	11	93	5	76	6,265	+11%
American Tree Sparrow	37	55	0	31	300	69	84	52	55	25	70	12,283	−10%
Song Sparrow	0	0	0	1	2	11	6	0	20	x	27	221	−3%
White-throated Sparrow	0	1	2	1	6	31	2	2	0	x	30	198	+184%
Dark-eyed Junco	90	137	152	188	999	272	98	44	223	111	75	20,418	+8%
Snow Bunting	237	10	0	4	3	0	0	0	0	0	42	9,239	+36%
Red-winged Blackbird	0	0	0	0	0	0	3	0	2	2	15	404	−76%
Common Grackle	1	x	0	5	0	0	0	0	9	x	20	77	−73%
Pine Grosbeak	0	0	0	0	1	0	0	0	0	0	25	652	−6%
Purple Finch	0	0	0	1	15	5	0	0	13	0	57	1,044	−30%
House Finch	62	133	86	37	276	167	33	7	180	2	67	6,567	+232%
White-winged Crossbill	0	0	0	1	0	0	0	0	0	0	16	520	+16%
Common Redpoll	33	35	0	25	13	5	0	0	0	2	64	3,703	+30%
Pine Siskin	69	18	146	46	76	24	13	4	41	5	80	4,560	+13%
American Goldfinch	28	103	34	83	371	116	15	19	48	81	83	11,349	−10%
Evening Grosbeak	0	19	0	1	1	0	0	0	0	0	38	2,298	−55%
House Sparrow	1124	332	245	392	1647	1170	119	25	597	149	77	40,123	−35%
Total Species	**49**	**43**	**41**	**40**	**76**	**61**	**42**	**32**	**59**	**44**			

x = Found within 3 days of the count day but not on the day of the count.

Table 8. Species found on 14 or fewer counts.

Species	Number of counts	Number of birds	Count and number
Pied-billed Grebe	1	1	Fremont 1
Double-crested Cormorant	3	17	Green Bay 7, Appleton 4, Riveredge 6, (Kenosha)
Great Blue Heron	11	16	Hudson 1, Green Bay 1, Trempealeau 1, LaCrosse 1, Poynette 1, Sauk City 2, Madison 3, Oconomowoc 1, Waukesha 2, Cooksville 1, Milwaukee 2, (Kenosha)
Black-crowned Night Heron	1	1	Green Bay 1
Tundra Swan	5	6	New Richmond 1, Trempealeau 1, LaCrosse 2, Madison 1, Riveredge 1
Trumpeter Swan	2	8	Nelson 7, Madison 1
Mute Swan	6	26	Stevens Point 2, Shawano 6, Green Bay 3, Montello 5, Madison 2, Waukesha 8
Snow Goose	1	1	Appleton 1
Wood Duck	8	18	Grantsburg 3, Chippewa Falls 1, Stevens Point 1, Ephraim 1, Caroline 1, LaCrosse 4, Madison 4, Beloit 3, (Kenosha)
Green-winged Teal	2	4	(Montello), Poynette 3, Madison 1
Northern Pintail	4	5	(Green Bay), Appleton 1, Bridgeport 2, Oshkosh 1, Waukesha 1
Northern Shoveler	2	65	Madison 64, Oshkosh 1
Gadwall	7	297	Green Bay 1, Appleton 4, Madison 249, Hartford 4, Oconomowoc 2, Cooksville 34, Lake Geneva 3, (Milwaukee)
American Wigeon	2	8	Appleton 2, Madison 6
Canvasback	6	60	Green Bay 8, Madison 1, Oconomowoc 2, Lake Geneva 46, Racine 2, Kenosha 1
Redhead	4	11	(Appleton), LaCrosse 1, Madison 1, Riveredge 2, Milwaukee 7, (Kenosha)
Ring-necked Duck	3	8	Green Bay 2, Appleton 1, Madison 5
Greater Scaup	6	6018	Ephraim 8, Appleton 1, Milwaukee 5261, Hales Corners 2, Racine 2, Kenosha 744
Lesser Scaup	7	29	Green Bay 1, Appleton 1, Sauk City 1, Madison 6, Oshkosh 1, Riveredge 8, Milwaukee 11
Oldsquaw	7	485	Ephraim 173, Kewaunee 280, Riveredge 2, Milwaukee 6, Hales Corners 11, Racine 12, Kenosha 1
Bufflehead	12	736	Appleton 3, Sauk City 1, Madison 6, Green Lake 3, Lake Geneva 25, Kewaunee 36, Woodland Dunes SE 2, Riveredge 38, Milwaukee 317, Hales Corners 141, Racine 32, Kenosha 132
Hooded Merganser	10	29	Hudson 3, Ephraim 4, (Green Bay), Appleton 4, Poynette 2, Madison 8, Oshkosh 1, Green Lake 3, Oconomowoc 1, Lake Geneva 2, Riveredge 1
Red-breasted Merganser	11	284	New Richmond 1, Appleton 1, Madison 2, Beloit 2, Kewaunee 18, Woodland Dunes SE 30, Riveredge 12, Milwaukee 135, Hales Corners 39, Racine 41, Kenosha 3
Ruddy Duck	5	7	Appleton 1, Madison 1, Lake Geneva 3, Riveredge 1, Burlington 1, (Kenosha)
Red-shouldered Hawk	5	6	Caroline 1, (Fremont), Montello 1, Kettle Moraine 1, Lake Geneva 1, Riveredge 2
Golden Eagle	2	5	Kickapoo Valley 2, Bridgeport 3
Peregrine Falcon	1	1	Green Bay 1
Gray Partridge	9	124	Pensaukee 12, Hofa Park 18, Green Bay 8, Poynette 10, Mount Horeb 25, Bridgeport 16, Blanchardville 12, Kewaunee 21, Riveredge 2
Spruce Grouse	1	1	Clam Lake 1
Greater Prairie-Chicken	3	19	Spencer 6, Wisconsin Rapids 1, Plainfield 12
Sharp-tailed Grouse	2	12	Grantsburg 2, Gilman 10
Northern Bobwhite	6	57	Appleton 2, Trempealeau 10, Montello 11, Sauk City 7, Richland Center 24, Blanchardville 3
Virginia Rail	1	11	Poynette 11
American Coot	12	1080	Appleton 2, LaCrosse 1, Madison 16, Bridgeport 1, Green Lake 2, Oconomowoc 1, Beloit 1, Lake Geneva 1034, Riveredge 17, Milwaukee 2, Racine 1, Kenosha 2
Sandhill Crane	1	1	Shiocton 1

(continued)

Table 8. *(Continued)*

Species	Number of counts	Number of birds	Count and number
Common Snipe	13	27	Plainfield 1, Shawano 1, Wautoma 4, Kickapoo Valley 2, Poynette 4, Sauk City 1, Richland Center 3, Mount Horeb 2, Madison 2, Bridgeport 2, Blanchardville 2, (Beloit), Waukesha 2, Racine 1
Bonaparte's Gull	1	1	(Milwaukee), Kenosha 1
Thayer's Gull	1	1	Riveredge 1
Glaucous Gull	5	18	Woodland Dunes NW 1, Woodland Dunes NE 14, Woodland Dunes SE 1, Riveredge 1, Milwaukee 1
Great Black-backed Gull	1	4	Woodland Dunes NE 4
Snowy Owl	4	4	Ashland 1, Spencer 1, (Ephraim), (Hofa Park), Wautoma 1, Oshkosh 1, (Horicon Marsh)
Long-eared Owl	8	19	Poynette 1, Sauk City 1, Madison 1, Waukesha 11, Lake Geneva 1, Kewaunee 2, Riveredge 1, Burlington 1, (Kenosha)
Short-eared Owl	5	8	Woodland Dunes SW 1, Poynette 1, Milwaukee 1, Burlington 3, Racine 2
Northern Saw-whet Owl	2	2	(Cable), Holcombe 1, Poynette 1, (Mount Horeb)
Yellow-bellied Sapsucker	12	13	Shawano 1, Wautoma 1, Appleton 1, LaCrosse 1, Poynette 1, Mount Horeb 2, Madison 1, Bridgeport 1, Waukesha 1, Lake Geneva 1, Riveredge 1, (Milwaukee), Kenosha 1
Gray Jay	6	103	Clam Lake 18, Fifield 21, Oxbo 28, Phelps 4, Three Lakes 17, Rhinelander 15, (Hofa Park)
Boreal Chickadee	3	8	Three Lakes 6, Wausau 1, Shawano 1
Carolina Wren	4	4	Ephraim 1, LaCrosse 1, Madison 1, Waukesha 1
Winter Wren	2	2	Appleton 1, (Woodland Dunes NE), Riveredge 1
Ruby-crowned Kinglet	1	1	Appleton 1
Eastern Bluebird	6	17	Nelson 2, Poynette 1, Sauk City 7, Richland Center 1, Mount Horeb 5, Madison 1
Townsend's Solitaire	2	2	Riveredge 1, Milwaukee 1
Hermit Thrush	4	4	Appleton 1, Madison 1, Milwaukee 1, Burlington 1
Varied Thrush	2	2	Ephraim 1, Milwaukee 1
Northern Mockingbird	1	2	Riveredge 2
Brown Thrasher	7	7	Green Bay 1, Wautoma 1, Appleton 1, Madison 1, Blanchardville 1, Woodland Dunes NE 1, Racine 1
Bohemian Waxwing	11	696	Grantsburg 45, Three Lakes 5, Chippewa Falls 1, Willard 1, Stevens Point 1, Peshtigo 150, Ephraim 1, Shawano 400, Wautoma 2, Baraboo 55, (Beloit), Kewaunee 35
Yellow-rumped Warbler	1	1	Sauk City 1, (Woodland Dunes NE)
Rufous-sided Towhee	4	6	Ephraim 1, Shawano 2, (Green Bay), Madison 2, Woodland Dunes SE 1
Field Sparrow	4	6	Poynette 1, Sauk City 1, Bridgeport 3, Riveredge 1
Fox Sparrow	1	2	Bridgeport 2, (Cooksville), (Beloit)
Lincoln's Sparrow	1	1	Stockbridge 1
Swamp Sparrow	14	44	Rhinelander 1, Shiocton 1, Poynette 10, Sauk City 5, Mount Horeb 3, Madison 10, Bridgeport 1, Blanchardville 3, Oconomowoc 1, Waukesha 1, Riveredge 3, Milwaukee 2, Racine 1, Kenosha 2
White-crowned Sparrow	2	4	New Richmond 1, Beloit 3
Lapland Longspur	5	28	Ashland 2, Waupaca 1, Fremont 2, Bridgeport 21, Riveredge 2
Eastern Meadowlark	3	3	Hofa Park 1, Fremont 1, Kettle Moraine 1
Western Meadowlark	1	2	Bridgeport 2
meadowlark spp.	4	4	Wausau 1, Durand 1, Appleton 1, Kewaunee 1, (Kenosha)
Rusty Blackbird	5	5	Holcombe 1, Gilman 1, Waukesha 1, Woodland Dunes NE 1, Woodland Dunes SE 1, (Plymouth)
Brewer's Blackbird	3	7	Gilman 1, Oconomowoc 1, Fort Atkinson 5
Brown-headed Cowbird	10	32	Grantsburg 3, Nelson 2, Spruce 7, Green Bay 3, Poynette 1, Madison 2, Blanchardville 8, Oshkosh 1, Milton 1, Racine 4 (Kenosha)
Red Crossbill	7	38	Medford 12, Shawano 5, Shiocton 2, Woodland Dunes SW 2, Poynette 6, Stockbridge 2, Kettle Moraine 9
Hoary Redpoll	1	1	Waupaca 1

Parentheses indicate species was seen within 3 days of the count but not on the count.

year's record count. Only 13 reported less than 30 species and 45 reported 40 or more. The Madison count found the greatest number of species (79), followed by counts at Riveredge (76), Appleton (73), Poynette (69), Sauk City (63), Bridgeport (62), Milwaukee (61), and LaCrosse (60). A summary of general abundance within various groups of species follows.

Waterfowl—Although most lakes and rivers were frozen, it was not an exceptionally poor year for waterfowl. Canada Geese were found in well above normal numbers, due mostly to a large concentration on Green Lake, and Mallards and Common Goldeneyes also occurred in numbers well above the 10-year average. Numbers of Common Mergansers were well below normal, but other mergansers and ducks were found mostly in average or slightly below average numbers. Exceptions were Greater Scaup, Oldsquaw, and Buffleheads, which were somewhat more numerous, and Northern Shovelers and Lesser Scaup, which were unusually scarce. Numbers of all species of swans were very low, probably because of the mostly frozen water, and scoters and grebes were completely absent, except for one Pied-billed Grebe at Fremont.

Hawks and Eagles—It was a great year for many species of hawks and eagles. Bald Eagles and Cooper's Hawks occurred in record numbers, and Sharp-shinned Hawks appeared in near record numbers. The number of Red-tailed Hawks was 35% above the 10-year average, Rough-legged Hawks and Red-shouldered Hawks occurred in near normal numbers, and American Kestrels were somewhat less abundant than in most years. Only the Northern Harrier and Northern Goshawk were unusually scarce, with numbers well below the average for the previous 10 years.

Grouse, Pheasants, Quail, etc.—A record number of Wild Turkeys was seen last year (2,022 on 33 counts), but the 4,897 on 52 counts in 1995 shattered that record and documented a continued expansion of their population and range within Wisconsin. For the second year in a row, counts of Ring-necked Pheasants were well above the recent 10-year average, indicating a revival in the population of this species. The 124 Gray Partridges was the best total since 1990, and Northern Bobwhites also showed signs of revival, occurring in about normal numbers. Numbers of Ruffed Grouse and Greater Prairie-Chickens were below average, and Sharp-tailed Grouse were found only on counts at Grantsburg and Gilman. A Spruce Grouse on the Clam Lake count was a highlight.

Gulls and Other Waterbirds—With most marshes, ponds, and lakes frozen, it was a very poor year for gulls and other water related birds. Gulls were confined almost entirely to the Great Lakes. Numbers of Ring-billed Gulls and Herring Gulls were well below the 10-year average, and only one Bonaparte's Gull was seen. Highlights were the 18 Glaucous Gulls, a record number, 4 Great Black-backed Gulls at Woodland Dunes NE, and a Thayer's Gull at Riveredge. Killdeers were absent, except for one seen during the count period at Kenosha, and rails were found

only on the Poynette count, which reported an impressive 11 Virginia Rails. Surprisingly, there were 16 Great Blue Herons on 11 counts, and a Black-crowned Night Heron at Green Bay, the first one seen since 1986. Belted Kingfishers were found in above average numbers, while numbers of Common Snipes were slightly below average.

Doves—Rock Doves (30,667) and Mourning Doves (17,112) were found in record numbers. Although the record number of Cooper's Hawks has adversely affected Mourning Dove numbers in some suburban areas, Cooper's Hawks obviously have not had an impact on dove populations statewide.

Owls—It was a very good year for owls. Eastern Screech-Owls were found in record numbers (247), 135 of which were found at Madison. The 365 Great Horned Owls was second only to the 416 reported in 1987, and the 99 Barred Owls was the highest total since 1987. Long-eared Owls also appeared in above average numbers, and the 8 Short-eared Owls was the best count since 1990. Only two Northern Saw-whet Owls were found, and Snowy Owls occurred in well below normal numbers.

Woodpeckers—It was also a very good year for woodpeckers. Red-bellied Woodpeckers and Pileated Woodpeckers occurred in record numbers, and Downy Woodpeckers and Hairy Woodpeckers, Northern Flickers, and Yellow-bellied Sapsuckers all were found in above average numbers. Counts of Red-headed Woodpeckers, however, were 62% below the 10-year average, and no Black-backed Woodpeckers were seen.

Jays, Crows, Chickadees, Nuthatches, etc.—Black-capped Chickadees and Tufted Titmice were found in record numbers, the latter occurring on a record 27 counts, 13 more than last year. American Crows were 22% more numerous than the recent 10-year average, and the number of Common Ravens (720) was the second highest total ever recorded. Counts of White-breasted Nuthatches were above average, and Red-breasted Nuthatch appeared in near record numbers (2107); 2158 were found in 1989. Numbers of Blue Jays were somewhat below average, while counts of Gray Jays were above average.

Creepers, Kinglets, Wrens, and Warblers—Brown Creepers were more numerous than in most years, but Golden-crowned Kinglets were unusually scarce. A Ruby-crowned Kinglet at Appleton was a highlight. Winter Wrens were also very scarce, with only two being found; this is the lowest total since 1983. Four Carolina Wrens were found, the one at Ephraim being the farthest north. The only Yellow-rumped Warbler appeared on the Sauk City count.

Thrushes, Shrikes, Waxwings, etc.—It was an excellent year for Northern Shrikes, which occurred statewide in record numbers. Except for American Robins, which were found in distinctly lower numbers, it was aa average year for thrushes. Eastern Bluebirds and Hermit Thrushes were found in average numbers, and the 7 Brown Thrashers was slightly above average. While Cedar Waxwings were

also found in normal numbers, the invasion of Bohemian Waxwings into northern Wisconsin was the best since 1989. Highlights were two Northern Mockingbirds at Riveredge, and Townsend's Solitaires at Riveredge and Milwaukee. A Gray Catbird was seen at Green Bay during the count period, but none appeared on counts.

Sparrows, etc.—Numbers of Northern Cardinals and Dark-eyed Juncos were above the 10-year average, while numbers of American Tree, Swamp, Fox, and White-crowned sparrows were distinctly below the 10-year average. White-throated Sparrows, however, occurred in record numbers and Song Sparrows in normal numbers. Rufous-sided Towhees were found at Ephraim, Shawano (2, one of which was the spotted western race), Madison (2), and Woodland Dunes SE. A highlight was a Lincoln's Sparrow coming to a feeder on the Stockbridge count, and documented by two color drawings by Carroll Rudy. A Chipping Sparrow at a feeder in Oshkosh during the count period was unfortunately not seen on the day of the count.

Open Country Birds—Although a good snow cover existed over most of the state, which usually makes these species easy to find, only Snow Buntings were found in numbers above the 10-year average. Horned Larks and Lapland Longspurs were unusually scarce, and meadowlarks also occurred in below average numbers.

Blackbirds—For the third consecutive year, counts of blackbirds were extremely low. Numbers of Red-winged Blackbirds were 76% below the recent 10-year average, and Common Grackles were 73% below; the 5 Rusty Blackbirds was the lowest count since 1973, and the 32 Brown-headed Cowbirds was the lowest total in at least 30 years.

Finches—There was a good mix of winter finches this year, with some being more abundant than the 10-year average, and some less abundant. House Finches again occurred statewide in record numbers (6,567), so it appears that the conjuntivitis outbreak that has been killing this species in the eastern United States, has not had a significant impact in Wisconsin. Numbers of Purple Finches, which occurred in record numbers last year, were 30% below the 10-year average this year. I am convinced that several observers are still misidentifying House Finches as Purple Finches. On most counts House Finches greatly outnumbered Purple Finches, but on some counts in adjacent areas reported numbers of Purple Finches were relative high and sometimes even greater than reported numbers of House Finches. House Finches have become a very common year-around resident in Wisconsin, and are especially abundant in suburbs, where they frequently visit feeders. In winter they often travel in flocks of 50 or more birds. They have longer tails than Purple Finches and lack distinct stripes on the top of the head. Males are a bright, brick red, which differs from the strawberry red Purple Finch, and they have distinct stripes on the belly above the legs. Females are very different from Purple Finches because they lack distinct

stripes on the upper back and head, and they never have a pale line through the eye, which is always present in Purple Finch females and young.

Pine Grosbeaks and Evening Grosbeaks were mostly restricted to northern Wisconsin, with the latter being found in well below normal numbers. Pine Siskins, which were virtually absent from southern Wisconsin last year, were once again very common, but American Goldfinch numbers were somewhat below normal. White-winged Crossbills were the most numerous they have been since 1989, while Red Crossbills were less abundant than usual. Although spectacular numbers of Common Redpolls were not found, the invasion progressed farther south than usual for December; they occurred in well above average numbers and on a record number of counts. A highlight was a Hoary Redpoll on the Waupaca count.

House Sparrows—While numbers may be reduced by severe winters, this year's count (40,123) was the lowest in at least the last 30 years. This is quite amazing when you consider that numbers of observers were much lower 20 to 30 years ago. As recently as 1989, House Sparrow numbers were at a record level of 69,786. Although weather may be a factor, I believe that competition from House Finches, which first appeared on Wisconsin Christmas counts in 1986, is the main reason for the decline. Most House Sparrows I have seen on recent Christmas counts have been around barnyards, and they have become uncommon in suburban areas. Five or six years ago 20 or more House Sparrows at my feeders was a common sight, but in the last few years numbers have dwindled until now I rarely see a House Sparrow. I saw three one day last week, the first to appear in at least two months.

Summary

If only rarities and the number of species are considered, the 1995 Christmas count was very average. However, many species occurred in above average numbers and 14 occurred in record numbers. Many counts had excellent numbers of most species, and some counts even recorded a record number of species. In spite of the lack of rarities, I believe most observers found the counts an interesting and rewarding experience.

There is no charge for publication of counts in the *Passenger Pigeon,* only for those also published in *American Birds.* Submission of counts to *American Birds* (on their report form), as well as to the Wisconsin Society for Ornithology (on our latest report form, please!), is encouraged. Individuals participating in counts should submit reports and documentation to the count compiler, and not to Daryl Tessen. If you wish to participate in a count in 1996, please contact the compiler in your area. If you plan to initiate a new count in an area not presently covered (Figure 1), please write to me to avoid conflicts and overlapping of other areas, and to obtain a report form.

William Hilsenhoff
Department of Entomology
University of Wisconsin
Madison, WI 53706

Great Egret *by Gerald H. Emmerich, Jr.*

Turtle-Flambeau Flowage Wildlife Surveys 1980–1990 and 1995

This paper summarizes the major Turtle-Flambeau Flowage wildlife surveys conducted by WDNR. The paper summarizes and compares the first 11 years of baseline data to those of subsequent 5 year surveys.

by Bruce Bacon and Claire Gower

The Turtle-Flambeau Flowage (TFF) wetland complex has been long recognized as a natural resource treasure. Since the area was dammed and flooded in 1926 as a hydro-electric reservoir, numerous wildlife species responded tremendously. Because this wildlife response was compatible with the Chippewa and Flambeau Improvement Company's (CFIC) intended purpose for the flowage, water storage, CFIC recognized the wildlife's values and cooperated in wildlife management projects on the flowage, its wetlands and surrounding uplands.

Cooperation also involved surveys of the TFF's wildlife. There was some concern that periodic drawdowns and their timing might impact nesting waterbirds, including loons and waterfowl (Belant and Anderson 1991). There was an opportunity to expand baseline surveys for loons in cooperation with Sigurd Olson Environmental Institute's Project Loon Watch. The wildlife staff also wanted to develop a survey design for large bodies of water that would provide reliable and comparable results (Belant et al. 1993).

In 1991, CFIC sold the TFF to the State of Wisconsin. While much of the recreational use of the flowage will remain the same, state ownership will involve more intense habitat and recreation management. State ownership also comes with special management requirements which are detailed in a Wisconsin Department of Natural Resources (WDNR) Master Plan approved in 1995 (WDNR 1995a). Stated goals include "protect . . . wildlife communities, especially endangered and threatened species" (WDNR 1995a).

State ownership may result in increased use of the TFF and if this occurs, the effect of increased use on wildlife populations will need to be monitored. Motorized recreational

use of northern Wisconsin's waterways has greatly increased in recent years and as it occurs on the TFF we need to objectively evaluate its impact on wildlife. This survey will aid in that assessment.

From 1980 to 1989 CFIC joined with the WDNR and funded a number of cooperative wildlife projects on the TFF. Waterfowl nest boxes (used mostly by Hooded Mergansers (*Lophodytes cucullatus*) and Osprey (*Pandion haliaetus*) platforms were the most conspicuous projects. Wildlife surveys were carried out by WDNR personnel. Ongoing evaluation of projects will dictate management changes.

This paper summarizes the major TFF annual wildlife survey begun by wildlife manager John Olson and technician Jeff Wilson in 1980. After 1990 it was decided to conduct the survey every 5 years and compare the results to the 1980–90 baseline data. This paper summarizes and compares the first 11 years of baseline data to the first (1995) of the subsequent 5 year surveys.

Study Area

The TFF is located in southern Iron County near the village of Mercer in northern Wisconsin. It was created by impounding the Flambeau and Turtle Rivers thus flooding 16 named lakes and surrounding lowlands. The WDNR currently owns 22,343 acres in and surrounding the flowage with plans to purchase an additional 20,000 acres. There are 13,849 acres of water surrounded by almost 14,000 acres of wetland, providing an abundance of diverse wetland habitat for wildlife. Over 327 miles of shoreline and 314 islands add to the diversity and abundance of wildlife habitat (WDNR 1995a). The CFIC still manages water levels on the flowage, resulting in seasonal drawdowns, primarily in early winter and late summer.

The TFF currently has the largest concentration of breeding pairs of Bald Eagles (*Halaeetus leucocephalus*), Osprey and Common Loons (*Gavia immer*) in Wisconsin.

The uplands surrounding the Flowage are mostly forested with northern hardwoods, aspen, and spruce-fir. White pine and hemlock, while once probably dominating the landscape, are still present in scattered stands. Logging has been a significant activity in the past, resulting in stands of various quality and age. Natural and man-made grassy openings are scattered throughout the TFF. Most of these openings are small, less than one acre in size.

Methods

The objective initially was to survey wetland avian species of special concern such as the Common Loon and species of management importance such as waterfowl. Other bird species were observed and in future years added to the official list to be counted. Waterfowl young were tallied according to species and age class to provide production data.

Volunteer observers were solicited from local and eventually statewide resource personnel. The majority of observers were from the Mercer Ranger Station, including foresters, fisheries personnel, fire control and law enforcement. Volunteers were enticed to assist with the promise of

a cookout and campout on a TFF island! The evening before the survey, volunteers were divided into boat crews, given specific duties and provided with maps and record forms for their respective routes.

In 1980 the TFF was divided into 4 water (boat) transects. Routes followed the shoreline at a distance from which wildlife near the shore can be identified. From 1981 on, the survey consisted of 6 non-overlapping shoreline transects covering the same area that was surveyed in 1980. These transects are travelled by motor boat with at least 3 people per boat. There is a motor operator, an observer, and a recorder. Binoculars were used to identify species. All boat occupants looked for wildlife. The same route maps and standard recording forms were used each year.

The survey was carried out in mid to late June to coincide with the waterfowl brood period, when loon chicks were hatched out and hopefully to get suitable weather for survey conditions.

The survey began at daybreak when waterfowl broods are more likely to be found in open water. Other wildlife are also more active in early mornings. Routes were normally completed by 11:00 AM DST. A debriefing occurred as each boat returned to the campsite.

Originally participants recorded flying birds along with observation time and direction of flight in an effort to compare and sort out these birds between survey routes. This proved too difficult, so we included only birds on the water or flushed off the water and single observations of a species. Belant (1989) gives additional information on techniques and study area.

After the 1990 survey it was decided to use the combined 1980–90 data as a baseline to evaluate future TFF wildlife population responses to management and recreation uses of the flowage. The survey will be repeated every 5 years, starting in 1995. This coincides with Project Loon Watch's statewide loon survey, also run every 5 years.

Results and Discussion

Every year, participants recorded a large number of species (13 to 41) and individual birds (157 to 1100) (Table 1). Apparent population changes occurred for several species where enough data were collected each year.

The numbers of Osprey rose from 1980 to 1983 and then stabilized (Figure 1). Observed Osprey in this survey were an index to occupied pairs but under-estimated the actual Osprey breeding population (from WDNR aerial surveys). The aerial surveys and banding data show at least 8 chicks were alive at the time of the 1995 survey which only detected 3 chicks. Survey results from 1980–1990 data indicate a similar trend (Table 1). The boat survey is not a true reflection of Osprey production on the TFF because it did not detect many Osprey young present in occupied nests. In addition, several nests are difficult to see from the water.

Osprey breeding pairs and chick production increased through 1988 most likely due to the presence of nest platforms erected in the early 1980's. However, production of

Table 1. Most abundant species observed on the Turtle Flambeau Flowage Survey 1980–90 and 1995

	Year												
Bird species	1980	81	82	83	84	85	86	87	88	89	90	Mean	95
Loon													
Adult	33	99	39	58	73	80	55	49	52	55	70	60.2	70
Chicks	—	14	6	16	14	20	14	16	19	18	20	14.2	10
Flying	5	11	4	3	—	—	5	9	14	20	2	6.6	27
Total	38	124	49	87	87	100	74	74	85	93	92	82.0	107
Bald Eagle													
Adult	6	12	18	9	21	20	17	16	9	13	13	14	10
Chicks	—	2	—	7	1	2	10	5	3	8	10	4.4	10
Flying	6	4	4	—	—	—	5	7	6	11	10	4.8	3
Total	12	18	22	16	22	22	32	28	18	32	33	23.2	23
Osprey													
Adult	10	12	24	31	23	21	18	30	21	19	22	21	19
Chicks	—	—	—	—	—	4	2	3	6	1	2	1.6	3
Flying	—	—	—	—	—	—	6	16	16	17	8	5.7	12
Total	10	12	24	31	23	25	26	49	43	37	32	28.4	34
Mallard													
Adult	34	30	50	69	27	83	28	68	92	124	177	71.1	107
Flightless yg.	7	14	16	68	32	54	103	116	288	129	248	97.7	113
Flying	2	2	—	—	—	—	4	1	18	15	32	6.7	3
Total	43	46	66	137	59	137	135	185	398	268	459	175.5	223
Black Duck													
Adult	7	2	5	2	2	4	20	14	10	26	15	9.7	2
Flightless yg.	—	—	—	—	14	6	8	52	54	10	17	14.6	5
Total	7	2	5	2	16	10	28	66	64	36	32	24.4	7
Blue-winged Teal													
Total (adults)	5	—	1	5	2	0	5	3	5	6	3	3.2	—
Wood Duck													
Adults	—	19	10	8	29	8	4	8	19	12	14	11.9	4
Flightless yg.	—	—	—	—	—	4	—	—	21	10	19	4.9	—
Total	—	19	10	8	29	12	4	8	40	22	33	16.8	4
Common Merganser													
Adult	—	6	—	2	15	—	5	27	5	18	—	7.1	12
Flightless yg.	—	19	—	—	—	—	—	67	—	19	—	9.5	17
Total	—	25	—	2	15	—	5	94	5	27	—	16.6	29
Hooded Merganser													
Adult	4	9	2	12	35	42	25	79	116	125	95	49.5	45
Flightless yg.	24	6	—	44	72	33	29	182	242	57	48	67	67
Flying	—	—	—	—	—	—	16	16	29	36	19	10.5	8
Total	28	15	2	56	107	75	70	277	387	218	162	127	120
Total Waterfowl*													
Adults	52	67	69	98	111	137	87	200	248	321	308	154.3	170
Flightless yg.	31	39	16	112	118	97	140	417	599	225	332	193.2	202
Flying	2	2	—	—	—	—	20	17	47	51	51	17.2	11
Total	85	108	85	210	229	234	247	634	894	597	691	364	383
Canada Goose													
Total	—	—	—	—	—	—	8	8	—	2	2	1.6	14
Great Blue Heron													
Total	10	12	16	7	12	15	16	24	43	63	81	27.2	7
Ring-billed Gull													
Total	—	—	—	—	1	5	3	1	—	2	3	1.4	3
Black Tern													
Total	—	9	13	12	—	16	23	8	1	2	7	10.2	6
Belted Kingfisher													
Total	—	—	1	—	—	—	2	11	1	3	7	2.2	14
Pileated Woodpecker													
Total	—	—	1	—	—	—	—	1	1	1	1	0.45	1

*Also includes waterfowl only seen in 5 or fewer years. See Appendix A

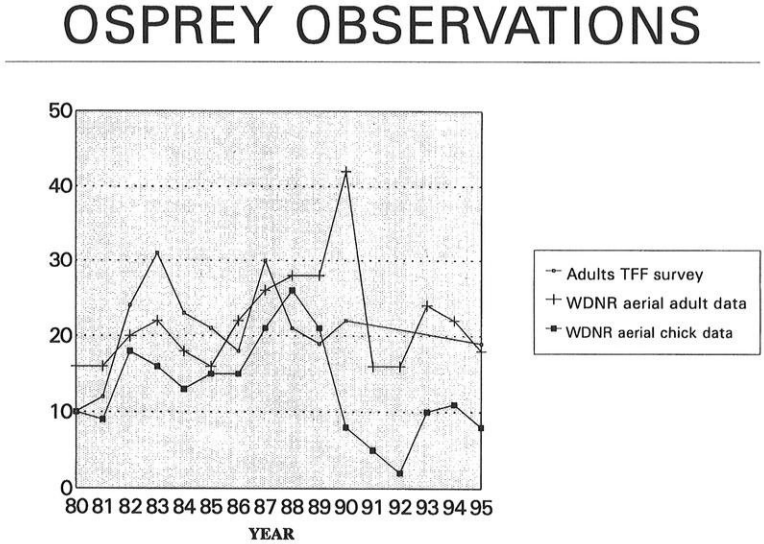

Figure 1. TFF survey data compared with WDNR aerial survey flights.

young Osprey has declined in recent years. The number of available platforms has remained stable during this period with unoccupied platforms available each year. From 1991 to 1995 the average number of active Osprey nests with young in late June was 7.6. This is down from average of 10.0 in 1986–1990, after Osprey numbers had increased from average of 6.2 nests with young in June, 1981–1985 (WDNR files, Mercer). The number of young fledging per nest has also declined.

Observed Bald Eagle numbers went from 12 in 1980 to their peak in the mid 1980's, stabilizing around 15–20 (Figure 2). There were 13 adults and 10 young counted in 1995. From WDNR aerial surveys there were 13 known active nest territories on the TFF in 1995 (WDNR 1995b). Most nests are visible from the water and eagle young are large enough at the time of the survey to be seen in their nests. Even so, there was no correlation ($r = 0.246$, $t = 0.623$, $P = 0.556$) between the TFF survey and WDNR aerial production surveys. Several young eagles were found dead or had already fledged at the time of the TFF survey in some years.

Common Loons, a focal species for this survey, have increased on the TFF but may have reached a plateau. Observed loon production increased to 18–20 young per year in 1988–90 (Figure 3).. This increase was statistically significant ($r = 0.758$, $t = 3.486$, $P = 0.007$). Project Loon Watch data from volunteer loon observers agrees with the TFF survey although in some years the Loon Watch data came from the TFF survey. Since 1990, loon chick numbers (Loon Watch information) have declined (1992 10, 1993 14, 1994 10) and the 1995 survey agreed, as only 10 chicks were detected in 1995. Two

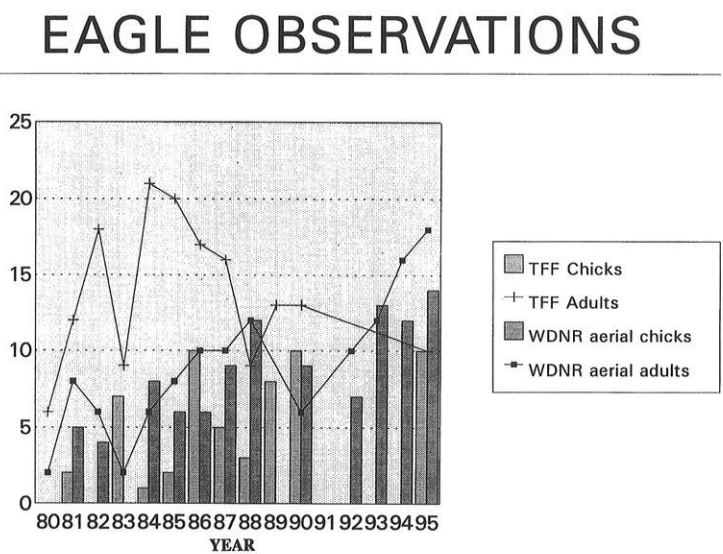

Figure 2. TFF survey results compared with the WDNR aerial survey flights. (No aerial counts 1989,91)

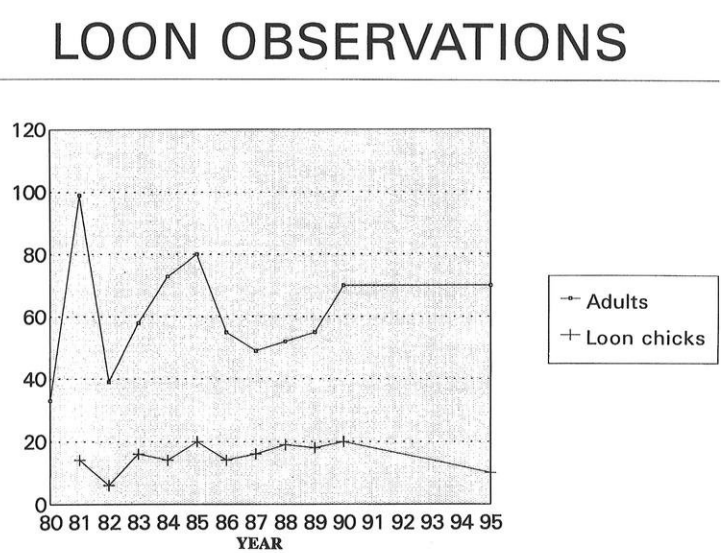

Figure 3. TFF survey results (Does not include flying loons)

additional loon chicks were known to be alive on the TFF at the time of the 1995 survey, from observations by independent researchers. Finding 83% of the loon chicks present in 1995 would indicate we had reasonably good coverage during the survey, despite our concerns that

weather greatly reduced our ability to detect wildlife. A similar comparison in 1986 and 1987 of this survey with a concurrent loon research project on the TFF showed the TFF survey detected 94% of the loon chicks (Belant et al. 1993).

Adult loon numbers varied annually but remained high in relation to the numbers of occupied nest territories. This could mean that the best territories are currently occupied. Also some adults are nonbreeders, others have territories off of the TFF but are found feeding on the TFF and others are suspected of having multiple lake territories with a small portion of the TFF included (Belant 1991). The fluctuations in the numbers of adult loons present during this survey probably do not reflect changes in the breeding population (Belant et al. 1993).

Waterfowl numbers varied year to year with the lowest numbers during the early years of the survey, 1980–82, when observers were not focussing on waterfowl (Figure 4). Their numbers increased to the highest years of 1987–90 along with the improvement of regional waterfowl numbers. Brood numbers and young per brood are indicators of that year's waterfowl production (Table 2). Mallard (*Anas platyrhynchos*) ducklings were an important component of the increase in waterfowl numbers, 1980–1990, and their increase was statistically significant ($r = 0.846$, $t = 4.751$, $P = 0.001$).

The lack of upland nesting cover probably limits the numbers of Mallards and other dabbling ducks. The flowage's stained waters reduce sunlight penetration and may limit aquatic invertebrates and thus effect duckling survival. The lack of submergent and emergent plants in the TFF also limit aquatic invertebrates and minnows, food for waterfowl and Bald Eagles, Osprey and Common Loons (Andrews and Threinen 1970).

Waterfowl numbers observed on the TFF in 1995 were slightly over one half of the 1987–90 average even though the North American duck breeding population levels were at their highest in over 20 years (Figure 4). As mentioned elsewhere, weather played a big part in the 1995 survey. Hens had their broods hidden safely away from the wind, waves, rain and our sight. It is also possible that drought-displaced ducks showed up on the TFF from 1987 to 1989, increasing local production and demonstrating the importance of larger bodies of water when shallow wetlands are dry.

A waterfowl nest box program was begun on the TFF in the winter prior to the 1984 nesting season. Previous to this, about 10 boxes were on the TFF from 1980–83. The occupancy rate by Wood Ducks (*Aix sponsa*) always remained low but the response by Hooded Mergansers was high enough to justify the program. The TFF survey detected an increase in Wood Duck and Hooded Merganser young after the box program began (Figure 5). As Wood Duck boxes were destroyed by ice or removed for other reasons, the TFF survey documented a decline in the young of these species. As the number of boxes are further reduced it will be interesting to see if duckling numbers continue to decline or stabilize, at a level supported by natural cavities. Also, could there have been

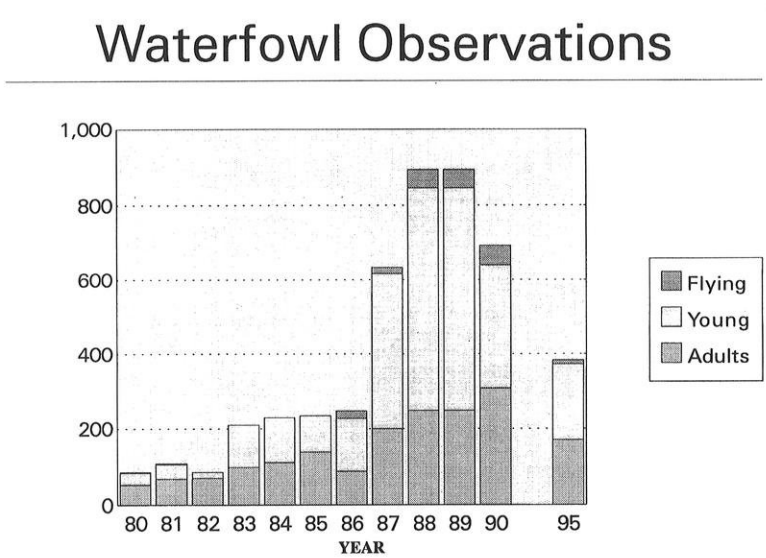

Figure 4. Adults, young and flying ducks observed on TFF survey.

other factors that increased duckling production or detectability in 1987 and 1988 for all waterfowl species (Table 2)?

Differences in observers' ability to correctly identify species, especially waterfowl broods, may account for some of the discrepancies in year to year differences in waterfowl numbers. Yearly fluctuations in the number of individual duck species observed are probably due somewhat to this discrepancy.

Canada Geese (*Branta canadensis*) numbers were not included as part of the waterfowl observations (Figure 5). Prior to 1986's translocation of Canada Geese to the TFF, no geese were observed on the TFF survey. In 1986 seventy-three Canada Geese were translocated from the Green Bay area with more being added to the TFF in 1987 (45 geese), 1988 (25) and 1989 (25). These geese were picked up on the TFF survey and continue to be part of the waterfowl community.

A substantial decline in Great Blue Heron (*Ardea herodias*) numbers is apparent from the 1995 survey (Table 1) and agrees with casual observations in the 1990's on the TFF. Black Ducks (*Anas rubripes*) were also noticeably missing in 1995. With the weather conditions in 1995, Black Ducks could easily have been mistaken for Mallards.

In 1995, all birds seen, including songbirds in adjacent uplands were recorded as a contribution towards the development of an official TFF bird List available from the Mercer WDNR Ranger station. Appendix A lists bird species recorded throughout the survey years, including the number of years seen. Direct evidence of breeding was documented for several species. Apart from some

Table 2. Adult and immature loon and ducks observed in 1980–90 and 1995

	Year											
Brood	1980	81	82	83	84	85	86	87	88	89	90	95
Loon												
No. of adults*	—	14	10	23	18	31	20	24	17	25	30	9
No. of young	—	14	6	16	14	20	14	16	19	18	20	10**
No. of young per adult	—	1.0	0.6	0.7	0.8	0.6	0.7	0.7	1.1	0.7	0.7	1.1
Average brood size	—	2	1.5	1.3	1.5	1.3	1.4	1.3	1.7	1.5	1.3	2
Mallard												
No. of adults	1	2	2	16	6	35	17	37	40	20	52	36
No. of young	7	14	16	68	32	54	103	116	288	129	248	113
No. of young per adult	7.0	7.0	8.0	4.2	5.3	1.5	6.0	3.1	7.2	6.4	4.7	3.1
Average brood size	7	7	8	7.5	6.4	4.9	6.4	8.2	6.8	6.1	6.0	5.1
Hooded Merganser												
No. of adults	2	1	—	6	7	3	4	21	36	10	12	9
No. of young	24	6	—	44	72	33	29	182	242	57	48	67
No. of young per adult	12.0	6.0	—	7.3	10.2	11.0	7.2	8.6	6.7	5.7	4.0	7.4
Average brood size	12	6	—	8.8	9	6.6	7.25	8.2	6.5	5.1	4.0	6.0
Black Duck												
No. of adults	—	—	—	—	1	1	1	10	9	1	4	1
No. of young	—	—	—	—	14	6	8	52	54	10	17	5
No. of young per adult	—	—	—	—	14.0	6.0	8.0	5.2	6.0	10.0	4.2	5.0
Average brood size	—	—	—	—	14	6	8	5.7	6	5	4.2	5
Common Merganser												
No. of adults	—	2	—	—	1	—	—	10	—	3	—	3
No. of young	—	19	—	—	9	—	—	67	—	19	—	17
No. of young per adult	—	9.5	—	—	9.0	—	—	6.7	—	6.3	—	5.6
Average brood size	—	9.5	—	—	9	—	—	6.7	—	9.5	—	5.6
Wood Duck												
No. of adults	—	—	—	—	—	1	—	—	4	2	3	—
No. of young	—	—	—	—	—	4	—	—	21	10	19	—
No. of young per adult	—	—	—	—	—	4.0	—	—	3.5	5.0	6.3	—
Average brood size	—	—	—	—	—	4	—	—	5.2	5	6.3	—

*Adults include only breeders seen with chicks.

**High winds, waves and rain made observations of wildlife difficult. Loons could easily avoid detection. Researchers knew of 12 loon chicks alive on the TFF at the time of the survey.

waterfowl numbers, other groups of bird species observed have significantly increased in numbers from 1980 to 1995. This could possibly be due to more emphasis on recording additional species in later years of the survey.

In 1990 the survey detected the first occurrence of nesting Merlins (*Falco columbarius*) on the TFF. Since that year Merlins have been observed attempting to nest on the TFF annually.

Weather can play an important role in any wildlife survey but was especially critical with the TFF survey. In 1989 and 1995 wind, cold temperatures, and rain were intense enough to consider terminating the survey, but because of the logistics involved and the fact that everyone was already camped on the TFF, the surveys were conducted. Therefore in these years the results should be considered minimum counts as finding birds, especially waterfowl broods, was difficult. Unfortunately 1995 was a once-in-5 year survey and we are not scheduled to run it until 2000. Weather inconsistencies may cause us to re-evaluate our methods and allow a second survey run in the same year or the following year.

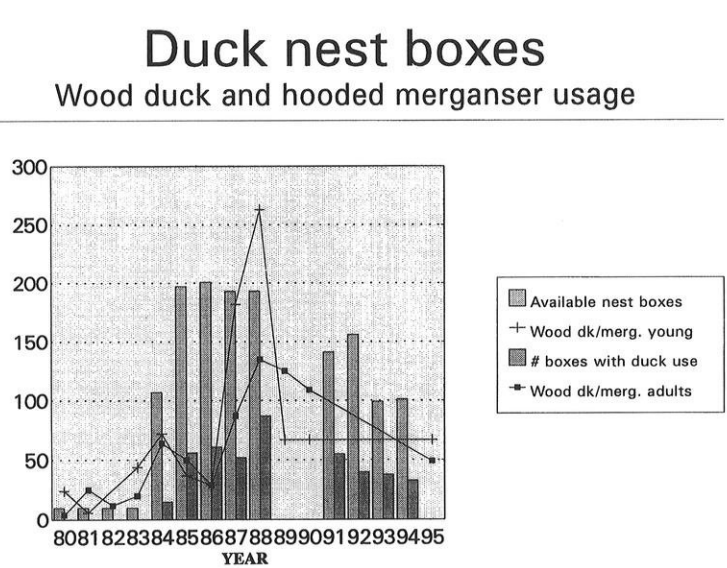

Figure 5. Number of adults and young compared to the number of nest boxes available on the TFF

Summary

The survey results document the value of the TFF to many wildlife species, especially several threatened or rare species such as loon and Osprey. Management that benefits them will continue to be important and necessary. Eagle numbers are comparable to other good areas in northern Wisconsin's eagle breeding range. These three species in addition to several other species require special attention to nest habitat, disturbance and a continued healthy fish population.

The 1995 results have to be considered in the context of weather conditions incurred during this year. The continuation of this survey will provide the WDNR a long-term evaluation of specific management actions on the TFF, incorporated into the overall TFF master plan.

Acknowledgements

Many enthusiastic people assisted with this survey, coming from the WDNR, Michigan DNR, US Fish & Wildlife Service, Great Lakes Indian Fish and Wildlife Commission, Iron County Forestry Department, UW-Stevens Point, UW-Eau Claire, Northland College, and England. Many thanks to all of them. John Olson and Jeff Wilson were instrumental in developing the survey and making it successful every year. The tradition of a pre-survey cookout, camping on one of TFF's many islands, and research and management presentations was attractive enough to have to turn down volunteers in most years! John Olson and James Evrard reviewed this paper and provided valuable contributions.

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Bruce Bacon
Wisconsin Department of Natural Resources
Mercer, WI 54547
and
Claire Gower
WYE College, University of London
Wye, Ashford
Kent TN25 5AH
England

Appendix A. Turtle Flambeau Flowage Survey Bird List
Breeding status: B = Breeding population known; MB = May breed; M = Migration. Abundance: A = Abundant; C = Common; U = Uncommon; R = Rare. (Note. Abundance is a subjective evaluation by the author and it must be recognized that it will vary by season.)

	Breeding status	Abundance
Common Loon *Gavia immer*	B	C
Bald Eagle *Haliaeetus leucocephalus*	B	C
Osprey *Pandion haliaetus*	B	A
Mallard *Anas platyrhynchos*	B	A
American Black Duck *Anas rubripes*	B	U
Gadwall *Anas strepera***	M	R
American Wigeon *Mareca americana***	M	U
Blue-winged Teal *Anas discors*	B	U
Wood Duck *Aix sponsa*	B	U
Ring-necked Duck *Aythya collaris***	MB	U
Bufflehead *Bucephala albeola**	M	U
Lesser Scaup *Aythya affinis**	MB	U
Common Merganser *Mergus merganser*	B	U
Red-breasted Merganser *Mergus serrator**	M	U
Hooded Merganser *Lophodytes cucullatus*	B	C
Canada Goose *Branta canadensis***	B	C
Pied-billed Grebe *Podilymbus podiceps***	B	C
Horned Grebe *Podiceps auritus**	M	R
Great Blue Heron *Ardea herodias*	B	C
Green Heron *Butoridae virescens***	MB	U
American Bittern *Botaurus lentiginosius**	B	U
Ring-billed Gull *Larus delawarenis*	MB	C
Common Tern *Sterna hirundo**	M	R

(continued)

Appendix A. *(Continued)*

	Breeding status	Abundance
Black Tern *Chlionias niger*	B	U
Caspian Tern *Hydroprogne caspia**	M	R
Common Snipe *Gallinago gallinago**	B	C
Spotted Sandpiper *Actitis macularia***	MB	C
Killdeer *Charadrius vociferus**	B	U
Double-crested Cormorant *Phalacrocorax auritus***	M	U
Cooper's Hawk *Accipiter cooperii***	B	U
Northern Goshawk *Accipiter gentilis**	B	R
Sharp-shinned Hawk *Accipiter striatus***	B	U
Broad-winged Hawk *Buteo platypterus***	B	C
Merlin *Falco columbarius***	B	R
American Kestrel *Falco sparverius**	B	U
Great Horned Owl *Bubo virginianus**	B	C
Belted Kingfisher *Megaceryle alcyon*	B	C
Pileated Woodpecker *Dryocopus pileatus*	B	U
Northern Flicker *Colaptes auratus**	B	C
Eastern Kingbird *Tyrannus tyrannus***	B	C
Eastern Phoebe *Sayomis phoebe**	B	U
Tree Swallow *Iridoprocne bicolor***	B	A
Barn Swallow *Hirundo rustica**	MB	U
Bank Swallow *Riparia riparia***	B	U
Purple Martin *Progne subis**	MB	U
American Crow *Corvus brachyrhynchos***	B	A
Common Raven *Corvus corax***	B	C
Blue Jay *Cyanocitta cristata**	B	A
American Robin *Turdus migratorius***	B	A
Hermit Thrush *Hylocichla guttata**	MB	U
Cedar Waxwing *Bombyciia cedrorum**	B	C
Red-eyed Vireo *Vireo olivaceus**	B	C
Yellow-headed Blackbird *Xanthocephalus xanthocephalus***	B	U
Red-winged Blackbird *Agelaius pheniceus***	B	A
Brewer's Blackbird *Euphagus cyanocephalus**	MB	R
Common Grackle *Quiscalus quiscula**	B	C
Scarlet Tanager *Piranga olivacea**	MB	U
American Goldfinch *Spinus tristis**	B	C
Marsh Wren *Cistothorus palustris**	MB	U
Song Sparrow *Melospiza melodia**	B	U
White-throated Sparrow *Zonttrichia albecollis**	B	C
Black-throated Green Warbler *Dendroica virens**	B	U
Yellow Warbler *Dendroica petechia**	MB	U
Ovenbird *Seiurus aurocapillus**	B	A
Ruby-throated Hummingbird *Archilochus colubris**	B	U

*Species seen in only one year
**Species seen in 2–5 years from a total of 12 years

Apostle Islands National Lakeshore 1995 Breeding Bird Survey Report

Apostle Islands National Lakeshore includes 21 islands and a mainland unit. The islands range in size from 1 to 4,000 ha (3 to 10,000 acres), and provide important habitat for resident breeding birds as well as neotropical migrants.

In 1990, a long-term monitoring program for breeding birds was begun. During the 1991–1993 surveys, 3 and 5 minute observation periods were used. In 1994 and 1995 the periods were extended to 5 and 10 minutes. Increasing the observation period to 10 minutes increased the number of birds and species recorded. In 1995, the location of some surveys points were changed to better represent habitat types and points were permanently marked.

Seventy-four species were recorded at observation points in 1995. Stockton Island had the highest species diversity, followed by the Mainland Unit. Devils, Raspberry and Sand Islands had the highest number of birds per stop. Pine and dune habitats supported the highest species diversity, followed by boreal forest and aspen/birch habitats. Bog and pine habitats had the greatest number of birds per stop, followed by boreal forest.

From 1991 to 1994, bird abundance steadily declined and then leveled off in 1995. With the exception of Devils and Oak Islands, bird abundance was lower in 1995 than the five-year mean. Aspen/birch forest and bogs were the only habitats that did not show a decline in 1995 from the five-year mean. Red-eyed Vireo showed a large (40%) and steady decline from 1991–1994 and then recovered somewhat in 1995, however, abundance in 1995 was still 17% below numbers recorded in 1991.

Long-term monitoring of forest birds is needed to determine trends in species abundance and richness. As one of the few islands of undeveloped land left in the Midwest, it is important that nesting habitats in the Lakeshore be protected. The Apostle Islands may serve as a valuable "control" habitat in determining the impacts of forest fragmentation occurring throughout North America.

by Julie F. Van Stappen and Matthew E. Dallman

Apostle Islands National Lakeshore provides important habitat for resident breeding birds as well as neotropical migrants. The islands within the Lakeshore range in size from 1 to 4,000 ha (3 to 10,000 acres), and contain a diverse mosaic of habitats. The Apostle Islands are near the northwestern limits of the eastern hemlock/white pine/northern hardwood forest. They are also on the southern fringe of the boreal forest. Most of the islands were disturbed by human activity such as logging and related fires, farming and quarrying. At present, most of the Lakeshore is covered with unbroken second growth forests of varying ages. However, some pristine old-growth forests remain on Bear, Devils, North Twin, Outer, Raspberry and Sand Islands. Devils and Raspberry Islands and the stands on Outer and Sand Islands were spared commercial logging because of their designation as U.S. lighthouse reserves.

Various research projects have studied the diversity of the avifauna of the Apostle Islands. In the late 1970's, Temple and Harris (1985) conducted an intensive survey of nesting forest birds in the Apostle Islands. This study resulted in the publication "Birds of the Apostle Islands." Beals (1958, 1960) and Manbeck (1978) also studied breeding birds in the Lakeshore.

Apostle Islands National Lakeshore began its long-term monitoring program for breeding birds in 1990. The survey in 1990 was conducted on Devils, Long, Outer, Sand and Stockton Islands (Figure 1) (Van Stappen and Doolittle 1990). In 1991, additional transects were added on the Mainland unit, Outer and Raspberry Islands. The Outer Island and Raspberry Island transects were added to increase the amount of old-growth forest surveyed. In 1991, the survey time was increased from three to five minutes and in 1994 increased to 10 minutes in order to be consistent with other breeding bird surveys being conducted throughout the Midwest. Additionally, in 1995 the survey points were permanently marked. This will increase the consistency of data collected from year to year.

Long-term monitoring of forest birds is needed to determine trends in species abundance and richness. As one of the few islands of undeveloped land left in the Midwest, it is important that nesting habitat in the Lakeshore is protected. The Apostle Islands may serve as a valuable "control" habitat in determining the impacts of forest fragmentation occurring throughout North America.

Objectives

1. Conduct long-term monitoring of breeding birds in the lakeshore through annual surveys to determine trends in avian populations.
2. Describe important breeding bird habitats within the lakeshore.
3. Data collected will be available for comparative use by other established breeding bird surveys.

Methods

The breeding bird survey is conducted along approximately 38 miles (61 km) of trails within the Lakeshore. Devils, Long, Oak, Outer, Raspberry, Sand and Stockton Islands, and the Mainland Unit are

surveyed (Figure 1). Transects were established along trails and sampling points were permanently marked. A round aluminum numbered tag fastened to the back side of a conspicuous tree and a rectangular foil tag fastened to the trail side mark the witness tree. Trails selected as transects and permanently marked survey points will allow for the

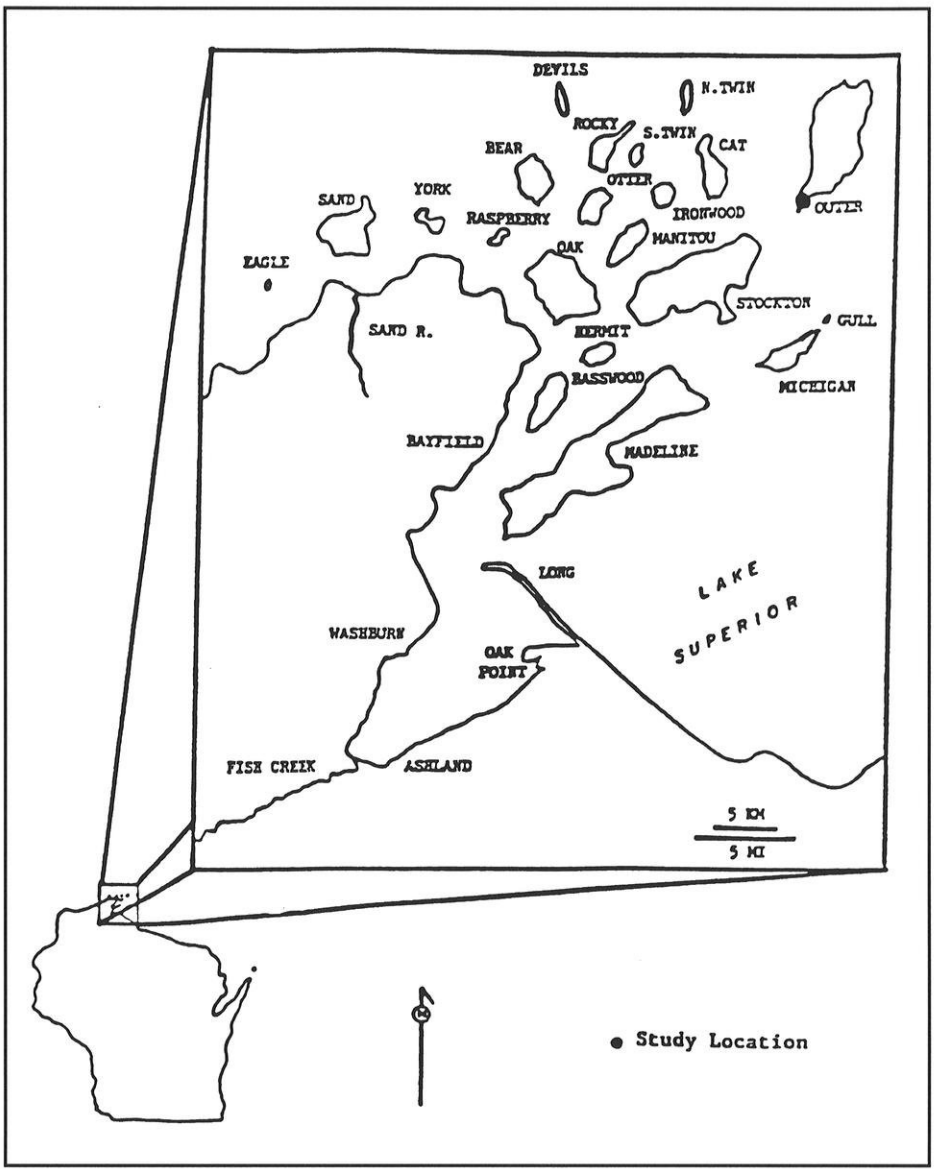

Figure 1. Map of Apostle Islands National Lakeshore

repeatability needed for this long-term monitoring program. Raspberry Island, Outer Island hemlock stand and the Mainland Unit did not lend themselves to the use of trails. Therefore, off-trail transects were used and their locations were documented. A Global Positioning System (GPS) was used to digitize survey routes and sampling points. (See NPS Monitoring Guidelines, 1995, for point description and maps of transect locations.)

Surveys were conducted from 12 June to 29 June 1995, during the peak breeding season for most forest birds within the Lakeshore. Surveys began ½ hour before sunrise and ended by until 0900. Location, point number, vegetation type, date, time, temperature, wind speed and direction, and sky condition were recorded for each sampling point. Weather conditions were recorded prior to and at the end of each survey. Surveys were not conducted under high winds (>10 knots) or heavy precipitation. Weather conditions and windspeed were recorded as follows:

Sky Cover	Windspeed
0 Clear (<10%)	0 No wind
1 Scattered (10–50%)	1 Leaves barely move
2 Broken (60–90%)	2 Leaves rustle, small twigs move
3 Overcast (>90%)	3 Leaves, twigs in constant motion
4 Fog	4 Small branches move
5 Light mist	5 Large branches, small trees sway
	6 Large branches in continuous motion
	7 Whole trees in motion

Data recording began immediately upon locating the point center. Point counts were taken for 10 minutes, and all birds heard or seen during this period were recorded. In addition, the 10 minute survey period was broken into two 5 minute periods. Following the bird's abbreviation a superscript 1 was used to designate birds recorded in the first 5 minutes (0–5 minutes), and a superscript 2 used to designate the second 5 minutes (5–10 minutes). The separation of the 10 minute period into two 5 minute periods allow for comparison with 1991–1993 survey years when data was only recorded for 5 minutes.

Birds that were heard or seen outside of the survey point or between survey points, and species that are not adequately sampled by the method described above (ie., colonial birds, waterfowl, swallows and loons) were recorded as miscellaneous. Miscellaneous birds were not included in data analysis. However, total species recorded for 1995 reflect miscellaneous records.

Description of Habitat Types

Forest composition maps developed by Ventura and He (1993) were used to determine acreages for each habitat type and percentages were calculated to determine habitat type composition throughout the park. These percentages were used to proportionately establish sampling

points so that all habitat types were equally surveyed. The delineations of habitat types are as follows:

Aspen/birch forests (AB)—cover 16.75% of the Lakeshore, and are dominated by trembling aspen (*Populus tremuloides*) and white birch (*Betula papyrifera*). These forests occur in areas which had past human disturbances (logging and associated fires) and in some coastal areas which are subject to windthrow. Aspen forests increased after logging and are now mature and in decline. However, white birch is dominant along the coasts of most the islands.

Bog wetlands (BOG)—comprise 1.86% of the Lakeshore, are found on many of the islands and are often associated with sandscape dune ridges and poorly-drained summit plateaus. Large inland bogs can be found on Devils, Outer and Stockton Islands.

Boreal forests (BOREAL)—cover 3.11% of the Lakeshore, and are dominated by white spruce (*Picea glauca*), black spruce (*Picea mariana*), balsam fir (*Abies balsamea*), tamarack (*Larix laricina*), white cedar (*Thuja occidentalis*), white birch and trembling aspen. They can be found on Devils, North Twin, Raspberry, South Twin, York, Rocky and Sand Islands.

Clearings or open areas (CLEAR)—cover 0.32% of the Lakeshore, are primarily the result of historic logging, farming, quarrying and lighthouses. Navigational light stations are on six of the islands. Many clearings are being reclaimed by encroaching vegetation from the surrounding forest. Other areas are kept open for their cultural significance or are the locations of park facilities (ie. buildings, campsites).

Conifer forests (CON)—cover 21.86% of the Lakeshore, and are dominated by northern white cedar and are located on the western islands and mainland unit. These forests have a well developed.

Northern hardwood hemlock forests (NHHE)—cover 10.80% of the Lakeshore, consist of forests dominated by eastern hemlock. Within the Apostles, hemlock is at its northern and close to its northwestern range. This forest type can be found on Bear, Oak, Outer and Stockton Islands.

Northern hardwood mixed forests (NHMI)—comprise 15.81% of the Lakeshore, and are dominated by white and yellow birch (*Betula alleghaniensis*), red maple (*Acer rubrum*) and balsam fir (*Abies balsamea*). This forest type is quite variable depending in its successional stage and the species which were selectively logged. The shrub layer usually has many saplings of the dominant trees and ground cover of woody shrubs and ephemerals. On islands that have not had high deer populations on them, there is often a well-developed understory of Canada yew (*Taxus canadensis*).

Northern hardwood sugar maple forests (NHSU)—cover 21.68% of the Lakeshore, and are dominated by sugar maple (*Acer saccharum*). The shrub layer is abundant with saplings

of sugar maple and appears similar in structure to the NHMI forests.

Oak forests (OAFO)—cover 2.99% of the Lakeshore, and are dominated by red oak (*Quercus rubra*) and hill's oak (*Quercus ellipsoidalis*). This forest is not abundant in the lakeshore and primarily occurs on upland areas and dune ridges on Oak and Long Islands, respectively.

Old-growth conifer forest (OGCON)—is limited to Devils and Raspberry Islands. The forest on Devils Island is generally dominated by balsam fir, white cedar, white and black spruce, and white birch with a scattered super canopy of white pines (*Pinus strobus*). The Raspberry Island forest is dominated by white cedar, balsam fir and white and yellow birch, with a well-developed understory of Canada yew. Devils and Raspberry Islands were designated as a lighthouse reservation in 1891 and 1864, respectively.

Old-growth northern hemlock forest (OGHE)—comprising 3.00% of the Lakeshore, is primarily limited to a 200 acre stand at the northern end of Outer island. This forest is dominated by hemlock and yellow birch. The understory is well developed and abundant with Canada yew.

Pine forests (PF)—comprise 0.57% of the Lakeshore and are dominated by white pine, red pine (*Pinus resinosa*) and jack pine (*Pinus banksiana*). Pine forests are found on sandy soils and can be found on the Stockton Island tombolo and Long Island. The shrub layer in these forests is generally sparse and the ground cover is scant and patchy. Jack pine, unique for the Lakeshore, is dominant on the stabilized dunes on the western 1/3 of Long Island.

The Lakeshore has a rich assemblage of dunal features including **sand spits, cuspate forelands, tombolos, a barrier spit (Long Island) and beaches** which comprise the (SASH) category. These areas are some of the most diverse lands throughout the lakeshore. They are dominated by dunal vegetation, beach grass (*Ammophila breviligulata*) and beach pea (*Lathyrus japonicus*), as well as a shrub and a forested component of speckled alder (*Alnus rugosa*), quaking aspen and white birch.

Results

1995 Survey—Including miscellaneous species, a total of 101 species were recorded in 1995; 127 species have been recorded since 1991. The total of 101 species was the highest number recorded in a single year since the beginning of the survey. This is probably because the primary bird surveyor spent a considerable amount of time recording bird species after the official surveys were completed. Miscellaneous species which were heard during the survey period, but *not* at sampling points, and species that were not representatively sampled (Barn Swallow, Cliff Swallow, Caspian Tern, Common Merganser, Red-breasted Merganser, Herring Gull and Ring-billed Gull), were not included in the data analysis. Thirty-eight miles (61 km) of trails were surveyed on seven islands and the mainland unit. Lengths of transects ranged from 1 mile (1.6

km) on Devils Island to 9 miles (14 km) on Stockton Island. The longest single transect was 7 miles (11 km) on Outer Island (Table 1).

The ten most abundant species for the 1995 breeding bird survey accounted for 697 of the 1184 total birds recorded (Table 2). Ovenbird, Red-eyed Vireo and Black-throated Green Warblers accounted for more than 30% of the total number of birds recorded.

Results by Island for 1995—To adjust for the variable number of samples taken and to allow comparisons to be made between islands and habitats, the number of birds per stop was calculated. In 1995, Devils Island had the highest number of birds per stop, followed by Raspberry and Sand islands. Oak and Outer islands had the lowest, with nine and seven birds per stop, respectively (Table 3).

The largest island surveyed was Stockton Island (10,000 A), which had the highest number of birds and species. It also had the highest number of points surveyed. Sand Island (2,949 A) and Long Island (297 A) had the next highest numbers of

Table 1. Breeding bird survey location information, 1995.

Island	Total acreage	Habitat types*	Transect length (miles)
Devils	318	AB, BOG, BOREAL, CLEAR, OCCON, SASH	1.0
Long	297	OAFO, PF, SASH	6.0
Mainland	2,592	AB, BOREAL, CON, PF, SASH	4.0
Oak	5,078	AB, NHSU, OAFO, SASH	6.5
Outer	8,000	BOREAL, CLEAR, BP, NHHE, NHMI, NHSU, OGHE	7.5
Raspberry	295	AB, CLEAR, OGCON, SASH	2.0
Sand	2,949	BOREAL, CLEAR, CON, NHMI, PF, SASH	1.5
Stockton	10,054	AB, BOG, CON, NHHE, NHMI, NHSU, PF, SASH	9.0

* AB = aspen/birch; BOG = bogs; BOREAL = boreal forests; BP = beaver ponds; CLEAR = clearings; CON = conifer forests; NHHE = northern hardwoods hemlock; NHMI = northern hardwoods mixed forest; NHSU = northern hardwoods sugar maple forest; OGCON = old-growth conifer forest; OGHE = old-growth hemlock forest; PF = pine forest; SASH = shrub/beach/dune.

Table 2. Ten most abundant bird species recorded for the 1995 breeding bird survey.

Bird species	Total recorded	Percent of total in 1995
Ovenbird	125	10.6
Red-eyed Vireo	122	10.3
Black-throated Green Warbler	114	9.6
American Redstart	97	8.2
Nashville Warbler	75	6.3
Cedar Waxwing	54	4.6
Song Sparrow	41	3.5
Yellow-rumped Warbler	37	3.1
Black-capped Chickadee	32	2.7
Winter Wren	30	2.5

Table 3. Analysis of bird abundance by island, 1995.

Island	No. birds (5 Min.)	No. birds (10 Min.)	Total no. of Species*	No. of Stops	No. of birds per Stop**
Devils	91	122	29(33)	8	15
Long	121	145	25(30)	12	12
Mainland	88	117	34(50)	10	12
Oak	111	120	21(26)	13	9
Outer	101	139	33(46)	20	7
Raspberry	86	116	26(33)	9	13
Sand	104	151	33(33)	12	13
Stockton	221	274	46(66)	22	12
Totals	923	1184		106	

*Numbers in parenthesis include miscellaneous bird species.
**Birds per stop were calculated using 10 minute survey totals.

birds, however, the Mainland Unit was next in species abundance. Oak Island, the third largest island in the study, had the lowest species diversity. This is probably due to the largely monotypic vegetation cover of northern hardwoods sugar maple, which comprises the majority of the island.

Results by Habitat for 1995—Bog, pine forest and beaver pond habitats contained the highest number of birds per stop (Table 4). However, because of the small number of points sampled in bogs and beaver pond habitats, the results should be interpreted with caution. If habitats with sample sizes less than 5 are not included, pine forest, boreal forests and shrub/dune/beach would have the highest number of birds per stop.

Pine forests had the highest number of both total birds and species. Northern hardwoods sugar maple and boreal forests had the next highest numbers of birds, whereas brush/dune and boreal forest habitats had the next highest number of species.

Results by Island (1991–1995)—The number of survey stops varied between study years, therefore the data had to be equalized in order to compare data from year to year. In 1994, the fewest number (86) of stops were surveyed, so the 1991–1993 and 1995 data were all reduced to 86 survey points. In addition, only data collected during the first five minutes for 1994 and 1995 were used so that data could be compared to 1991–1993's data.

Throughout the survey period, Stockton Island consistently had the highest number of total birds and species, and also the greatest number of stops (Table 5). The data shows a slight decline in species on Stockton Island, from 48 in 1991 to 43 in 1995. Long, Outer, Raspberry and Sand Islands also exhibit a slight downward trend in species abundance. With the exception of Devils and Oak Islands, total bird abundance was lower in 1995 than the five-year mean. Outer Island and the Mainland Unit showed the greatest decrease. Total bird abundance in 1995 was down 42% and 28% from

Table 4. Analysis of bird abundance by habitat using 10 minute counts, 1995.

Habitat	Total birds	No. of Stops	No. of SPP*	Birds per Stop
Aspen/Birch (AB)	131	11	31(28)	12
Bog (BOG)	36	2	19(18)	18
Boreal Forest (BOREAL)	138	11	34(23)	13
Beaver Pond (BP)	14	1	9(7)	14
Clearing (CLEAR)	12	2	7(6)	6
Conifer Forest (CON)	93	8	28(22)	12
Northern Hardwoods Hemlock (NHHE)	60	8	19(18)	8
Northern Hardwoods Mixed (NHMI)	74	7	24(19)	11
Northern Hardwoods Sugar Maple (NHSU)	145	17	28(26)	9
Oak Forest (OAFO)	39	4	15(13)	10
Old Growth Conifer (OGCON)	78	7	23(16)	11
Old Growth Hemlock (OGHE)	38	5	15(12)	8
Pine Forest (PF)	221	15	40(33)	15
Brush/Dune/Beach (SASH)	105	8	36(30)	13
Totals	1184	106		

*Numbers in parenthesis indicates values for 5 minute counts.

Table 5. Total number of birds per island, for 5 minute counts, 1991–1995.

Island**	1991*	1992*	1993*	1994*	1995*	Mean 1991–95
Devils—5	76(20)	70(25)	32(17)	39(20)	65(26)	56
Long—8	93(27)	67(20)	94(30)	65(26)	71(24)	78
Mainland—8	116(36)	100(30)	67(26)	71(31)	60(31)	83
Oak—12	108(21)	82(17)	85(19)	86(17)	105(21)	93
Outer—18	203(42)	176(39)	111(32)	146(42)	84(30)	144
Raspberry—9	140(38)	63(21)	90(32)	101(34)	86(26)	96
Sand—9	119(33)	154(32)	102(30)	68(32)	80(29)	105
Stockton—17	185(48)	229(43)	185(47)	149(46)	176(43)	185
Totals	1040	941	766	725	727	840

*Numbers in parenthesis represent number of species recorded.
**The numbers following the habitat type indicate the number of survey points for each island.

the study mean, and 59% and 52% from 1991 totals on Outer Island and the Mainland Unit, respectively. Outer Island results for 1995 need to be interpreted with caution, however, because survey conditions for the north-south trail were marginal.

Total numbers of birds in 1995, was down 13% from the mean and 30% from 1991's total. Since 1991, total bird numbers have decreased by 10%, 26%, 30% and 30% in 1992, 1993, 1994 and 1995, respectively. Only 1991 and 1992 surveys years have totals above the survey mean (Table 5).

The number of birds per stop was quite variable between islands and years. The largest and most consistent declines were seen on the Mainland Unit, Outer Island and Sand Island. Comparing the number of

birds per stop in 1995 to the five-year mean, there was a 38% decline on Outer Island, a 27% decline on the Mainland Unit, and a 25% decline on Sand Island. As noted above, 1995 survey results for Outer Island need to be interpreted with caution. On Oak and Devils Islands birds per stop were greater in 1995 than the five-year mean (Table 6).

Results by Habitat (1991–1995)— Due to the difficulty of interpreting results from habitats with very small sample sizes, habitats with fewer than five observation points will not be used in this discussion. Pine forest and northern hardwoods sugar maple forests had the highest mean number of total birds during the survey period (Table 7). These habitat types also had the highest number of stops. Aspen/birch forest was the only habitat that had a higher number of birds recorded in 1995 than its five-year mean. The largest declines were in boreal forest, northern hardwood mixed, old-growth hemlock and shrub/dune habitats. For example, 1995 results for old-growth hemlock forest were 43% below the five-year mean and 65% below 1991 results. Shrub/dune habitats showed a 37% decline in 1995 from the five-year mean and a 60% decline from 1991 results (Table 7).

The highest mean number of species was found in pine and boreal forests. Trends in species abundance appear to be more variable than total bird numbers. The largest decline in species abundance was in northern hardwood mixed forests and shrub/dune habitats. Aspen/birch forests had a higher abundance of species in 1995 than either the five-year mean or the 1991 results (Table 7).

In comparing number of birds per stop, shrub/dune, pine forest and boreal forest had the highest number of birds (Table 8). Aspen/birch forests had more birds per stop in 1995 that the five-year mean, northern hardwoods sugar maple and pine forests were equal to the mean, while the rest of the habitats fell below the mean. The largest declines in birds per stop were in old-growth hemlock forests, boreal forests and shrub/dune habitats.

Trends in abundance by individual species were also analyzed. Of the 127 birds recorded since 1991, 81 declined in abundance in 1995 from the five-year mean, 13 remained the same, 23 increased and 10 species were recorded for the first time in 1995. Of the 23 species that in-

Table 6. Number of birds per stop by island for 5 minute counts, 1991–1995.

Island	1991	1992	1993	1994	1995	Mean 1991–95
Devils	15	14	6	8	13	11
Long	12	8	12	8	9	10
Mainland	15	13	8	9	8	11
Oak	9	7	7	7	9	8
Outer	11	10	6	8	5	8
Raspberry	16	7	10	11	10	11
Sand	13	17	11	8	9	12
Stockton	11	14	11	9	10	11

Table 7. Total number of birds by habitat for 5 minute counts, 1991–1995.

Habitat**	1991*	1992*	1993*	1994*	1995*	Mean
Aspen/birch Forest—9	56(23)	61(18)	72(29)	54(24)	91(31)	67
Bog—2	42(18)	22(11)	22(11)	19(13)	35(19)	28
Boreal Forest—10	152(39)	128(34)	95(35)	88(34)	84(35)	109
Beaver Pond—1	18(12)	15(13)	26(12)	9(7)	10(9)	16
Clearing—4	47(14)	60(24)	36(21)	34(21)	37(27)	43
Conifer Forest—4	47(18)	30(13)	25(10)	36(20)	32(19)	34
No. Hardwoods Hemlock—2	9(5)	19(7)	4(3)	11(10)	5(5)	10
No. Hardwoods Mixed—9	95(38)	145(36)	59(25)	64(36)	61(20)	85
No. Hardwoods Sugar Maple—15	130(25)	140(29)	127(32)	105(22)	115(22)	123
Oak Forest—2	19(9)	18(7)	14(9)	14(11)	12(9)	15
Old-growth Conifer—6	88(25)	48(18)	59(23)	61(26)	51(20)	61
Old-growth Hemlock—5	82(17)	56(24)	33(15)	54(18)	29(15)	51
Pine Forest—11	135(41)	122(40)	131(36)	111(42)	118(37)	123
Shrub/beach/dune—6	120(39)	77(22)	63(27)	67(26)	47(27)	75
Totals	1040	941	766	727	727	840

*Numbers in parenthesis represent number of species recorded.
** The numbers following the habitat type indicate the number of survey points for each habitat.

Table 8. Number of birds per stop by habitat for 5 minute counts, 1991–1995.

Habitat	1991	1992	1993	1994	1995	Mean
Aspen/birch Forest	14	7	8	6	10	9
Bog	21	11	11	10	18	14
Boreal Forest	15	13	10	9	8	11
Beaver Pond	18	15	26	7	10	15
Clearing	12	15	9	9	9	11
Conifer Forest	12	8	6	9	8	9
No. Hardwoods Hemlock	5	10	2	6	3	5
No. Hardwoods Mixed	11	16	7	7	7	10
No. Hardwoods Sugar Maple	9	9	9	7	8	8
Oak Forest	10	9	7	7	6	8
Old-growth Conifer	15	8	10	10	9	10
Old-growth Hemlock	16	11	7	11	6	10
Pine Forest	12	11	12	10	11	11
Shrub/beach/dune	20	13	11	11	8	

creased in 1995 from the mean, 13 were neotropical migrants, 8 were short-distance migrants (wintering within the United States boundaries) and 2 were residents.

Discussion

The overall trend in both bird and species abundance is downward. In 1995, downward trends in bird abundance partially recovered on Devils, Oak, Sand and Stockton Islands, however, 1995 results still lagged behind the numbers of birds that were recorded in 1991. Outer Island and the Mainland Unit have shown the largest and most consistent declines in bird abundance. By habitat type, the largest declines in bird abundance occurred in boreal, northern hardwood mixed and hemlock for-

ests, and shrub/dune habitats. Overall numbers in 1995 are down 13% from the five-year mean and 30% from 1991 results. Species abundance has also decreased, but trends are not as consistent or strong as with bird abundance.

The five-year trend in abundance by species shows a decline in 81 species out of a total of 127. Thirteen species remained the same in abundance, 23 have increased and 10 were first occurrences. Out of the 81 species indicating declining numbers, forty-seven were neotropical migrants and 27 were short-distance migrants.

In 1995, observation points were permanently marked and modified to provide better habitat relationship data. In the future, ten minute counts will be continued to enable direct comparisons with other breeding bird surveys being conducted in the Lake Superior region. In order to understand trends occurring in the Apostle Islands, it is necessary to place the lakeshore in a regional context.

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Julie F. Van Stappen
and
Matthew E. Dallman

50 Years Ago in *The Passenger Pigeon*

With the Wisconsin Breeding Bird Atlas underway and with interest in finding nests probably at an all-time high in Wisconsin, it is interesting to note that nesting was the focus of several items in this issue of *The Passenger Pigeon*.

Howard Young was studying at UW-Madison and was requesting members to report positive evidence of nesting from around the state. He was especially interested in the northern-most records.

Clara Hussong wrote about the Clay-colored Sparrow in the Green Bay area and noted that the species "appears to be almost as common as the Vesper or Savannah Sparrows who often share its haunts." Nest sites included a cut-off gooseberry bush, a cut-off wild plum, 4 in clumps of goldenrod, 2 in grass clumps, sweet clover, nettle, and a cultivated rose bush.

Dixie Larkin wrote about spending time with about 50 species in July at Pelican Lake. She describes searching for sapsucker, vireo, warbler, sparrow, waxwing, grosbeak, thrush, and flycatcher nests and discusses cowbird parasitism in a redstart's nest. After searching for a Mourning Warbler nest to no avail, she finally gave up with "torn clothes, scratched hands and face and a torrid disposition." (Excerpts from Vol. 8, 1946)

Canada Geese *by Gerald H. Emmerich, Jr.*

Migrant Water Birds, Including Gulls and Terns, on Devil's Lake, Sauk County, Wisconsin

This paper discusses records of migrant water birds including gulls and terns on Devil's Lake, Sauk County, Wisconsin. 39 species are recorded excluding nesting waterfowl.

by Kenneth I. Lange

Mountainous Devil's Lake in Sauk County, south central Wisconsin, is the showplace of Devil's Lake State Park (Figure 1). Bordered by three 500 ft. bluffs, its dimensions are as follows: length—1.3 miles, width—½ mile, circumference—3.55 miles, water area—approximately 369 acres, and greatest depth—approximately 47 ft. Freeze-up usually occurs around mid December and break-up in early April, but there is much variation.

A total of 39 species of migrant water birds—2 species of loons, 4 of grebes, Double-crested Cormorant, 2 swans, 2 geese, 6 dabbling ducks, 15 diving ducks, American Coot, 4 gulls, and 2 terns—was noted on Devil's Lake during the 30 year period, 1966 through 1995. These species are listed in Table 1 (Wood Duck, Mallard, and Blue-winged Teal are excluded since they nest in Devil's Lake State Park). This paper is a discussion of these records.

The Red-throated Loon was represented by single birds in fall 1990 and spring and fall 1991; possibly these sightings were all of the same bird. The Common Loon was noted every spring (the lone record for 1966—5 May—is not included in Table 1) and in all falls except 1969 and 1993. Birds generally appeared on the lake in spring at or soon after ice-off; sometimes one was seen before the lake was completely open. Numbers in spring varied from 1–6 and in fall from 1–3; usually just 2–3 birds were on the lake at any one time.

Generally just 1–2 Pied-billed Grebes were noted in spring, but up to 10 in the fall; peak numbers in fall occurred from mid September to about mid November. The Horned Grebe was usually represented by 1–2 birds; rarely up to 5 were seen in spring or fall. The Red-necked Grebe was noted only in 1983 and 1984, and the Eared Grebe only in 1991 and 1992.

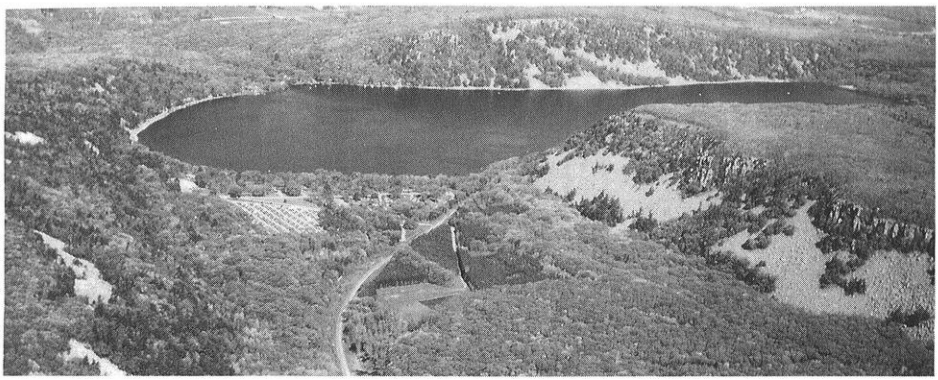

Figure 1. Devil's Lake and the surrounding country as seen from an airplane. The west bluff is in the upper part of the picture, the east bluff to the right, and the south bluff to the left.

Another rare bird on Devil's Lake was the Double-crested Cormorant; it was seen only in 1984 and 1994 (1–3 birds).

Tundra Swans migrate regularly over the Devil's Lake State Park area in spring and fall, but were noted on the lake only in fall; from 1 to 70 birds rested briefly in 7 different years. This species sometimes stayed on the lake overnight: in 1991 on 31 October a flock of approximately 70 departed the lake at 8 A.M., and in 1992 a flock of 46 left the lake at 7:20 A.M.

From 1–175 Canada Geese were seen on the lake; they usually stayed just a day or so.

Dabbling ducks were represented mainly by the Northern Shoveler (especially in spring), Gadwall, and American Wigeon. Often these species were seen in pairs or in pairs with another drake; maximum numbers were 9 shoveler, 7 Gadwall, and 40 wigeon.

The highest numbers of any duck were of Lesser Scaup in certain springs, for example approximately 500 on 25 April 1992. Lesser Scaup generally numbered less than 100, and usually peaked in spring in mid to late April and in fall in November. The Greater Scaup, a species mainly of the Great Lakes in Wisconsin, was rare; usually just 1–5 were noted. Maximum numbers for the Ring-necked Duck were 70 in spring and 100 in fall; this species was usually represented by fewer than 10 individuals in spring, and approximately 10–30 in fall. Canvasback numbers ranged from 1–20, usually 1–3, and Redhead from 1–6, usually 1–3.

The Common Goldeneye and the Bufflehead are regular migrants on Devil's Lake. Goldeneyes in spring numbered from 1–75, usually around 20, and generally peaked from late March–mid April; in fall they numbered from 20–170, usually around 50, and generally peaked from mid November–mid December. Buffleheads peaked in April and November; their numbers in spring and fall were comparable (usually around 10), although in recent falls

Table 1. Migrant water birds on Devil's Lake, Sauk County, Wisconsin, for the 30 year period, 1966 through 1995.*

Species	Spring	Fall
Red-throated Loon	[1]8 May	[2]30 Oct-13 Nov: 1–4, 3
Common Loon	[29]17 Mr-31 May: 2–59, 31	[28]3 Aug-27 Dec: 1–121, 24
Pied-billed Grebe	[20]26 Mr-27 May: 1–59, 14	[28]23 Aug-11 Dec: 1–87, 39
Horned Grebe	[15]3 Ap-16 May: 1–28, 2	[23]11 Sep-15 Dec: 1–50, 5
Red-necked Grebe	[1]4 May	[1]7–15 Dec
Eared Grebe	[1]15 May	[2]11 Nov-2 Dec: 1–16, 9
Double-crested Cormorant	—	[2]2 Nov-14 Dec: 2, 2
Tundra Swan	—	[7]30 Oct-14 Dec: 1–6, 2
Mute Swan	[1]22 Mr-25 Ap: 35	—
Snow Goose	—	[2]Oct into Dec
Canada Goose	[5]11 Mr-28 May: 1–2, 1	[9]15 Sep-25 Dec: 1–64, 1
Green-winged Teal	[5]17 Mr-2 May: 1, 1	[2]10 Sep-2 Oct: 1–7, 4
American Black Duck	—	[4]25 Aug-11 Dec: 1–102, 2
Northern Pintail	—	[1]Aug
Northern Shoveler	[8]7–29 Ap: 1–3, 1	[1]19 Nov
Gadwall	[5]4 Ap-2 May: 1, 1	[5]18 Oct-2 Dec: 1–35, 1
American Wigeon	[8]4 Ap-2 May: 1–5, 1	[6]8 Sep-2 Dec: 1–54, 1
Canvasback	[4]3 Mr-18 Ap: 1–13, 5	[8]4 Oct-8 Dec: 1–28, 2
Redhead	[6]30 Mr-23 Ap: 1–7, 1	[4]30 Sep-12 Dec: 1–13, 1
Ring-necked Duck	[15]15 Mr-2 May: 1–42, 1	[24]14 Oct-20 Dec: 1–48, 23
Greater Scaup	[2]11–20 Ap: 1–6, 4	[4]31 Oct-5 Dec: 1–36, 1
Lesser Scaup	[28]15 Mr-18 May: 1–65, 18	[26]22 Sep-1 Jan: 1–82, 39
Oldsquaw	—	[2]25 Nov-14 Dec: 1, 1
Black Scoter	[1]30 Mr	[6]26 Oct-3 Dec: 1–16, 1
Surf Scoter	—	[10]14 Oct-15 Dec: 1–28, 15
White-winged Scoter	—	[6]22 Oct-15 Dec: 1–23, 1
Common Goldeneye	[26]10 Mr-7 May: 1–43, 21	[30]12 Oct-10 Jan: 20–65, 43
Bufflehead	[25]17 Mr-5 May: 1–50, 9	[26]3 Oct-28 Dec: 1–58, 30
Hooded Merganser	[10]11 Mr-9 May: 1–41, 2	[14]12 Oct-18 Dec: 1–57, 21
Common Merganser	[12]13 Mr-26 Ap: 1–34, 4	[22]22 Oct-29 Dec: 1–48, 14
Red-breasted Merganser	[24]26 Mr-12 May: 1–41, 20	[8]6 Oct-20 Dec: 1–65, 1
Ruddy Duck	[7]27 Mr-30 Ap: 1–21, 5	[14]11 Oct-21 Dec: 1–52, 5
American Coot	[18]28 Mr-23 May: 1–37, 11	[26]31 Aug-1 Jan: 1–97, 39
Bonaparte's Gull	[8]10 Ap-10 May: 1–24, 7	[4]6 Oct-3 Nov: 1, 1
[a]Ring-billed Gull	[16]13 Mr-21 May: 1–68, 23	[19]22 Jun-15 Dec: 47–153, 120
[a]Herring Gull	[11]23 Mr-6 May: 1–23, 3	[12]23 July–21 Dec: 1–130, 40
Glaucous Gull	—	[1]4 Sep
Caspian Tern	[2]2–15 May: 1, 1	[1]19 Sep
Common Tern	[6]11 Ap-23 May: 1–11, 1	[6]15 Aug-13 Oct: 1–15, 1

*The following information is given, whenever possible, for each species in spring and fall: the range in the dates of observation, the range in the number of days, and the median number of days. A superscript number indicates the number of springs or falls (maximum 30) that the given species was noted. [a] 1976 through 1995 only.

(since 1988) the numbers of this species totaled 15–50.

All scoter records, with the exception of a Black Scoter on 30 March 1981, were from the fall; the most common species was the Surf Scoter. From 1–7, usually 1–2, scoters of a given species were noted. The Oldsquaw was represented by lone birds on 14 December 1979 and 25 November 1991.

The Hooded Merganser was found nearly as often in spring as in fall, whereas the Red-breasted Merganser

was primarily a spring migrant and the Common Merganser mainly a fall visitor. Hooded Merganser numbers in spring varied from 1–5, and in fall from 1–20. The numbers of Red-breasted Merganser in spring ranged from 2–45, usually 6–30, and in fall from 1–15, usually 1–5. Red-breasted and Hooded Mergansers peaked in April and November. Common Merganser numbers in spring varied from 1–12, and in fall from 1–25; only several were generally noted in either season. This species peaked from approximately late March–21 April, and mid November–mid December.

The Ruddy Duck in spring was noted mainly in the latter half of April, and in fall mainly from approximately mid October to early December. Just 1–2 were usually seen; a total of 35 on 14 October 1986 was unusual.

The highest number of any species of water bird on Devil's Lake during the 30 year period was approximately 600 American Coot in November 1995. The number of coots in fall varied from 1–600, usually 10–80, and in spring from 1–26, usually 1–10. Coot numbers, particularly in fall, varied more than any other species. Peak numbers were generally in the latter half of April and from October–late November.

Coots were often harassed by Bald Eagles, and on 20 November 1995 an adult eagle was seen catching a coot and flying off with it in its talons.

From 1–6, usually 1, Common Terns were noted in spring, and 1–15, usually 2–6 in fall. The Caspian Tern was represented by sightings of 1, 2, and 3 birds.

The gull most likely to be seen at Devil's Lake is the Ring-billed Gull. This species was found for a period of up to approximately 2½ months in spring and up to 5 months in fall. Its numbers fluctuated between 1 and 130; often they varied markedly from day to day as individuals flew between the lake and nearby farm fields and the Wisconsin River. The Herring Gull was usually seen singly or in groups of 2 or 3; the maximum count was 20 on 17 April 1979. The Glaucous Gull was represented by just one record, an adult on 4 September 1991. In contrast, from 300–350 Bonaparte's Gulls congregated on Devil's Lake in 4 of the last 5 springs.

A spectacular and unheralded natural event at Devil's Lake is the concentration of water birds feeding on lake flies. Sometimes this involves mainly one species, for example Bonaparte's Gull in April 1991, April 1994, and April 1995 (300–350 birds in all 3 years), and sometimes a variety of species. On the afternoon of 21 April 1990, the assemblage included 7 species of diving ducks (300 Lesser Scaup plus 42 individuals of 6 other species), 7 species of puddle ducks totaling 28 individuals, an American Coot, a Pied-billed Grebe, 6 Bonaparte's Gull, and 11 Ring-billed Gull. Another congregation lasted for a week in April 1992, culminating on the 25th when Lesser Scaup peaked at approximately 500 and Bonaparte's Gull at approximately 350. Smaller numbers of water birds were noted feeding on lake flies in other springs.

These concentrations correspond with the emergence of chironomid gnats from the lake. At least several species comprise the "midge

smoke'' (Donald W. Webb, Illinois Natural History Survey). The peak in numbers is usually in the last week of April, but it has been as early as mid April and as late as mid May (Lange 1989:58). Conditions must be ideal. Since the birds pick the flies off the water surface, the lake must be calm or virtually so. A massive hatch would also seem to be critical. Yet questions remain, especially about the 1990 concentration, which was so brief. Why did the ''feeding frenzy'' last only a few hours? And, more basically, how did so many individuals of so many species appear on Devil's Lake so quickly? What were their cues?

For more information on migrants and migration in the Devil's Lake area, see Lange (1986) and Mossman and Lange (1982:30–32).

Baraboo, WI 53913

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Kenneth I. Lange
1530 East Street

Sandhill Cranes *by Gerald H. Emmerich, Jr.*

The Summer Season: 1995

by Thomas K. Soulen

"Hot and dry" was the verdict of most observers who commented on the weather. Although the heat waves were not as sustained as in 1988, several people were reminded of that record summer. Most parts of the state experienced very uncomfortable heat June 14–25, with strings of days in the 90's, some highs in the 100's, and lows sometimes in the 70's. July hot spells were shorter, at least in some areas, but hotter. Highs of 110 were recorded in several locations! Although humidities sometimes were high and there was some rain, much precipitation tended to be brief and not heavy. Some areas became very dry; one observer reported river levels to be "down 70% from normal."

The entire season was not hot, however. In most weeks, temperatures in at least some northern areas reached down into the 40's, and there were occasional below freezing temperatures, even after that often chilly first part of June. Madison recorded a record low of 44 on July 2.

Few observers related weather to bird abundance, except to comment that dry conditions might have contributed to lower numbers in wetlands. Besides there being very poor shorebird or even waterfowl habitat in some areas (but not all), several passerine species may also have been affected. For example, some people commented on the scarcity of Sedge Wrens. Dry conditions might have accounted for some of this, but it is hard to imagine how they could explain Domagalski not being able to find a single bird of this species in Washington County. There were other reports of scarcity of this species without accompanying comments on the scarcity of other species in those same locations.

The 57 observers who submitted summer reports this year represent one of the smallest groups of contributors in recent years. It may be that the Atlas project cut into the time observers might have used for submitting their usual reports. We can take comfort in knowing that whatever its impact on current field notes contributor numbers, the Atlas project will be invaluable in increas-

ing our knowledge of Wisconsin's breeding birds.

Despite the smaller number of reports, observers found a total of 252 species during the season. The report that follows gives information on 139 of them. An additional 71 that are not mentioned were common and widespread enough to be reported from over 25 counties. The remaining 42 species, generally noted in 10–25 counties, are listed here along with the number of counties in which each was recorded: Pied-billed Grebe (17), Double-crested Cormorant (20), Black-crowned Night Heron (10), Green-winged Teal (16), American Black Duck (10), Blue-winged Teal (25), Hooded Merganser (17), Bald Eagle (17), Northern Harrier (22), Cooper's Hawk (22), Ring-necked Pheasant (21), Ruffed Grouse (19), Wild Turkey (14), Virginia Rail (10), Sora (15), Upland Sandpiper (13), Common Snipe (12), American Woodcock (14), Herring Gull (18), Black-billed Cuckoo (24), Yellow-billed Cuckoo (19), Great Horned Owl (19), Barred Owl (20), Whip-poor-will (14), Red-headed Woodpecker (24), Red-bellied Woodpecker (18), Yellow-bellied Sapsucker (17), Pileated Woodpecker (23), Alder Flycatcher (23), Horned Lark (24), Hermit Thrush (10), Brown Thrasher (24), Golden-winged Warbler (15), Nashville Warbler (15), Chesnut-sided Warbler (19), Black-and-white Warbler (20), Northern Waterthrush (11), Grasshopper Sparrow (18), White-throated Sparrow (14), Western Meadowlark (17), Yellow-headed Blackbird (13) and Brewer's Blackbird (14).

The summer produced several noteworthy rarities. After several years of no reports, a Kirtland's Warbler was found again in Jackson County. Quite remarkably, a Rufous Hummingbird was photographed in Price County, about 20 miles from where a *Selasphorus* hummingbird was photoghraphed last year. An adult male Blue Grosbeak was seen very well in Adams County. American White Pelicans attempted to nest again in Green Bay. Other species of note, some because they normally are rare here in summer, were Snowy Egret, Snow Goose, Spruce Grouse, Piping Plover (the first in summer in seven years), Willet, Western Sandpiper, Buff-breasted Sandpiper, Laughing Gull, Little Gull, Iceland Gull, Glaucous Gull, Common Barn Owl, Great Gray Owl, Black-backed Woodpecker, Carolina Wren, White-eyed Vireo, Yellow-throated Warbler, Prairie Warbler, Worm-eating Warbler, and Le Conte's Sparrow.

One of the consequences of this year's lower than normal number of observers was that there were fewer people commenting on the relative abundance of various species. Whereas in past years at least 3 observers have agreed on trends for dozens of species, this year we can report on only twelve. Ring-billed Gulls, Mourning Doves and House Finches were said to be more common than usual. Species said generally to be in lower than normal numbers were Northern Harrier, Broad-winged Hawk, Spotted Sandpiper, Common Nighthawk (no less than 8 people indicated this), Belted Kingfisher, Red-headed Woodpecker, Sedge Wren, Marsh Wren and Yellow Warbler.

A further result of fewer observers was our coverage of counties in 1995. Not only were there less reports from individuals who cover their home counties, but there were fewer from those who report on multiple counties they visit in birding (or other) trips. However, given the magnitude of effort required for the Atlas project, this situation is not surprising. The 12 counties from which no reports were received were Barron, Calumet, Clark, Crawford, Green, Iron, Lafayette, Lincoln, Marinette, Racine, Rusk, and Sawyer. Heartening was the fact that even though the list of regulars was down, several observers new to the summer season submitted reports, some from areas not normally well covered.

Reports
(1 June 1995–31 July 1995)

Common Loon.—Among the 11 counties in which this species was noted, Juneau (Robbins) and Portage (Berner) were the southernmost.

Red-necked Grebe.—After reporting very small numbers in Winnebago Co. last year, Ziebell found 56 birds on June 16, including 6 nests and 29 young. Also observed in Dane, Columbia and Green Lake Counties (Robbins).

American White Pelican.—Nine nests were found in Brown Co. (with one young about to fledge in August; Tom Erdman fide Tessen). At least 35 birds were present in the area through the summer. Numbers (25–90) were also reported again along the Mississippi River in Buffalo (Dankert), La Crosse (Dankert, Lesher) and Trempealeau (T. Wood) Counties. Also observed in Dane (Burcar), Dunn (Polk) and Marathon (many observers) Counties.

American Bittern.—Reported only from these counties: Dunn, Douglas, Marathon, Oconto, Portage, Price, Vilas and Winnebago.

Least Bittern.—Noted in almost as many counties: Columbia, Dodge, Douglas, Iowa, Marathon, Oconto and Winnebago.

Great Egret.—Over 100 were seen in Winnebago Co. June 16 (Ziebell). Observed also in Brown, Dane, Dodge, La Crosse, Oconto, Outagamie and Waukesha Counties.

Snowy Egret.—The only observations came from Brown Co. (Nussbaum, Tessen). Tom Erdman (fide Tessen) reported 2 nests there.

Cattle Egret.—Found by several observers in Brown Co., as is usual, with 29 nests being reported there (Tom Erdman fide Tessen). Noted also in Dane Co. June 7 (Burcar) and Oconto Co. July 20 (the Smiths).

Tundra Swan.—One bird, possibly sick, lingered in Eau Claire Co. through June 4 (Polk).

Trumpeter Swan.—Observers reported birds from two reintroduction areas, in Burnett (T. Wood) and Marathon (Ott) Counties.

Mute Swan.—Noted this summer in Dane, Douglas, Portage, Washington and Waukesha Counties.

Snow Goose.—Observed throughout the period in Winnebago Co. (Nussbaum), where there have been reports in 3 of the past 4 summers.

Northern Pintail.—Noted only in Dane Co. July 7 (Robbins) and Winnebago Co. through the season (Ziebell).

Northern Shoveler.—Present in June in these counties: Dane (Ashman, Burcar), Douglas (the LaValleys), Marathon (Ott), Outagamie (Tessen) and Waukesha (Strelka). Also noted in Oconto Co. July 9 (the Smiths) and in Winnebago Co. through the season (Ziebell).

Gadwall.—Observers found these in only 5 counties: Columbia (Ashman), Door (Stover), Douglas (the LaValleys), Oconto (the Smiths) and Winnebago (Ziebell).

American Wigeon.—Noted through the season in Winnebago Co. (Ziebell; maximum of 14 on July 1) and in July in Dane (Ashman, Burcar), Douglas (Johnson) and Oconto (the Smiths) Counties.

Canvasback.—This species was present in Manitowoc Co. June 21–24 (Sontag, M. Peterson), Marathon Co. through June 12 (Ott), Milwaukee Co. July 9 (Domagalski) and Winnebago Co. June 16 (Ziebell).

Redhead.—Observed in Dane, Dodge, Dunn, Manitowoc, Oconto and Winnebago Counties.

Ring-necked Duck.—Recorded in these counties: Columbia, Dane, Douglas, Dunn, La Crosse, Marathon, Oneida and Vilas.

Greater Scaup.—Present in Chippewa Co. June 1 (Polk) and Manitowoc Co. June 13–July 7 (Sontag).

Lesser Scaup.—Noted in these counties: Columbia, Door, Dunn, Manitowoc, Oconto, Washington and Winnebago.

Common Goldeneye.—Observed through June 5 in Winnebago Co. (Nussbaum) and in Door Co. July 12 (Nussbaum, female and 3 young; Stover, different bird).

Bufflehead.—A bird in Winnebago Co. June 5–24 was unusual (Nussbaum).

Common Merganser.—Reported from these counties: Door, Florence, Forest, Oneida, Vilas and Winnebago.

Red-breasted Merganser.—Two females remained in Eau Claire Co. through June 3 (Polk). Also noted in Door, Manitowoc and Oconto Counties.

Ruddy Duck.—Observers found these in Columbia, Dane, Dodge, Dunn, Manitowoc, Washington and Winnebago (Ziebell; 59 on June 16) Counties.

Osprey.—These are the southernmost of the 14 reporting counties: Dane (June 18 on, Burcar), Manitowoc (one through the season, Sontag), Outagamie (through the season, Nussbaum and Tessen) and Winnebago (June 12, Ziebell). A July 25 bird in Waukesha Co. (Strelka) may have been a migrant.

Sharp-shinned Hawk.—Berner reported 3 nests of this species in Portage Co. Noted in 14 counties overall.

Northern Goshawk.—Observed throughout the period in Door Co. (the Lukes) and until June 13 in Douglas Co. (Johnson). Successful nests were found in only 4 counties: Ashland, Bayfield, Taylor and Vilas (Tom Doolittle fide Tessen).

Red-shouldered Hawk.—Reported from fewer counties than in some years: Chippewa, Door, Dunn, Eau Claire, Juneau, Outagamie, Portage, Richland, Waushara and Vilas.

Broad-winged Hawk.—Observed in Dane Co. July 9 (Burcar) and Washington Co. June 3 (Diehl), as well as in 13 considerably more northern counties.

Merlin.—Noted in Door (the Lukes), Douglas (Benson, the LaValleys), Langlade (Bill Lazarz fide Gibson) and Vilas (Spahn) Counties.

Peregrine Falcon.—Birds were seen near reintroduction sites in Dane and Milwaukee Counties and also in Douglas Co. June 6 (the LaValleys).

Gray Partridge.—Reported only from these 5 counties: Door (the Lukes), Outagamie (Nussbaum), Rock (Robbins), Vernon (Dankert) and Washington (Domagalski).

Spruce Grouse.—Single males were observed in Forest Co. June 8 (T. Wood) and Vilas Co. June 29 (Spahn).

Greater Prairie-Chicken.—Found in Marathon (Ott) and Portage (Berner) Counties.

Sharp-tailed Grouse.—The LaValleys provide this summer's only report, from Douglas Co.

Northern Bobwhite.—Noted this year in Dane, Dunn, Eau Claire, Iowa, Monroe, Richland, Rock, Sauk, Vernon, Walworth and Washington Counties.

Common Moorhen.—Observed in Brown, Columbia, Dane, Dodge, Oconto, Waukesha and Winnebago Counties.

American Coot.—The following counties provided records: Chippewa, Columbia, Dane, Dodge, Douglas, Dunn, Eau Claire, Jefferson and Winnebago.

Black-bellied Plover.—The only report came from Dane Co. June 1 (Burcar).

American Golden Plover.—Noted in Burnett Co. June 5 (T. Wood) and Manitowoc Co. June 19–22 (Sontag).

Semipalmated Plover.—Lingered until June 4 in Dane Co. (Robbins). Fall migrants appeared in 8 locations the last week in July, earliest in Manitowoc Co. July 25 (Sontag).

Piping Plover.—Observations June 8 in Manitowoc Co. (Sontag) and June 27 in Oconto Co. (Tom Erdman fide Tessen) provided Wisconsin's first summer records since 1988.

Greater Yellowlegs.—Noted in Douglas Co. June 3 (the LaValleys). Observed in Winnebago Co. July 1 (Ziebell) and in Dane Co. July 2 (Ashman), with no other reports until close to a week later.

Lesser Yellowlegs.—Recorded June 3 in Waukesha Co. (Strelka) and June 4 in Outagamie Co. (Tessen). Early fall migrants were noted June 29 in Waukesha Co. (Strelka) and in several other locations within a few days, but most birds did not appear until a week or more later.

Solitary Sandpiper.—Reports from Dane Co. July 2 (Burcar) and Columbia Co. July 3 (Robbins) were the earliest, with the next observations coming July 8–11.

Willet.—Noted July 3 in Manitowoc Co. (Sontag).

Ruddy Turnstone.—Lingered in 3 locations into June, latest June 22 in Winnebago Co. (Ziebell). Fall migrants appeared July 17 in Manitowoc Co. (Sontag) and in several other locations before the end of the month.

Sanderling.—Observed from July 16 on in La Crosse Co. (Dankert, Lesher) and July 28 in Dane Co. (Ashman).

Semipalmated Sandpiper.—Less than a week separated the latest reported departure (June 22 in Manitowoc Co., Sontag) and the earliest reported arrival (June 28 in Oconto Co., the Smiths). Most fall migrants were not noted until July 9 or later.

Western Sandpiper.—The only report was of a single bird, seen and described well, in Manitowoc Co. June 18 (Sontag).

Least Sandpiper.—Observed in Dane Co. June 26 (Robbins) and Oconto Co. June 28 (the Smiths), with other reports coming in early July.

White-rumped Sandpiper.—Noted in 4 locations into June, the latest Ozaukee Co. June 15 (Green). Reported from Dane Co. July 9 (Ashman).

Baird's Sandpiper.—Present in Dane Co. June 1 (Burcar). The first fall migrants were noted in Marathon Co. July 9 (Ott), with other reports coming from Dane Co. July 14–20 (Robbins) and La Crosse Co. July 30 (Dankert, Lesher).

Pectoral Sandpiper.—Fall birds appeared July 8–9 in Dane (Burcar), Oconto (the Smiths) and Washington (Domagalski) Counties, but others were not reported until the last week of the month.

Dunlin.—Lingered into June in 6 locations, latest June 24 in Manitowoc Co. (Sontag).

Stilt Sandpiper.—Noted July 9 in Manitowoc Co. (Sontag) and from July 16 on in Dane Co. (Ashman).

Buff-breasted Sandpiper.—Several Marathon Co. observers saw up to 40–50 birds first reported by Ott on July 29.

Short-billed Dowitcher.—Only one report (of 12 total) this year provided documentation of dowitchers as to species. Short-bills were observed beginning July 2 in Dane Co., with 3 more locations reporting within the next week.

Long-billed Dowitcher.—The only report was from Oconto Co. June 14, a most unusual date (Tom Erdman fide Tessen).

Wilson's Phalarope.—Observed through June 25 in Portage Co. (Berner) and also on July 28 in Dane Co. (Robbins).

Laughing Gull.—There were 3 reports this year: Portage Co. June 27 (Berner), Ozaukee Co. July 7 (Uttech) and Manitowoc Co. July 21 (Sontag). Accepted by the Records Committee. See By the Wayside.

Franklin's Gull.—Noted in Chippewa Co. June 1 (Polk), Winnebago Co. through June 8 (Ziebell), Manitowoc Co. June 10–12 (Sontag) and La Crosse Co. from July 16 on (Dankert, Lesher).

Little Gull.—Seen by several observers in Manitowoc Co., earliest (June 5) and latest (July 24) by Sontag, who reported a maximum of 3 birds there this season. Single birds also were observed in Oconto Co. June 10 (the Smiths) and Milwaukee Co. July 15 (T. Wood).

Bonaparte's Gull.—In addition to reports from 6 counties bordering Lake Michigan, observers found these in Dodge, La Crosse, Marathon, Oneida and Portage Counties.

Iceland Gull.—One was present in Manitowoc Co. June 13 (Sontag). Accepted by the Records Committee. See By the Wayside.

Glaucous Gull.—Noted in Manitowoc Co. June 5 (Sontag).

Caspian Tern.—All 9 counties in which this species was observed border Lake Michigan except for Marathon and La Crosse.

Common Tern.—Recorded this summer only in Douglas, La Crosse, Manitowoc, Oconto and Sheboygan Counties.

Forster's Tern.—Reported from these counties: Dodge, Iowa, La Crosse, Manitowoc, Oconto, Washington, Waushara and Winnebago (where Ziebell counted 240 on June 16).

Black Tern.—Ziebell counted 214 in Winnebago Co. June 16. Noted in 22 counties overall.

Common Barn Owl.—The remains of 2 dead chicks were found June 5 in Langlade Co. near the spot where an adult had been seen in April (Gibson). See By the Wayside.

Eastern Screech-Owl.—Reported only from Dane (Burcar), Jefferson (Hale), Richland (Duerksen) and Winnebago (Ziebell) Counties.

Great Gray Owl.—A pair was present during the summer in Bayfield Co. (Betsy Barfelt and Tom Doolittle, fide Tessen). One was photographed at close range in Douglas Co. July 8 (Hays).

Rufous Hummingbird.—A bird was photographed July 24 in Price Co., barely 20 miles from where a *Selasphorus* hummingbird was seen and photographed in July 1994 (Grace Flagstad, the Greggs). Accepted by the Records Committee. See By the Wayside.

Black-backed Woodpecker.—Reported from Forest Co. June 8 (Reardon).

Olive-sided Flycatcher.—There were the usual stragglers reported during the first week of June. It is likely that a Walworth Co. report July 9–10 (Parsons) represents a very early migrant. The other 5 reporting counties were within normal breeding range.

Yellow-bellied Flycatcher.—Present until June 6 in Iowa (Robbins) and Manitowoc (Sontag) Counties and June 10 in Milwaukee

(Gutschow) County. Noted later in Douglas, Forest and Vilas Counties.

Acadian Flycatcher.—Very interesting was the report of a nest with 2 young in Marathon Co. July 11, as well as Portage Co. reports of a singing male June 14–29 and (second hand) of a nesting pair (Berner). The other 9 reporting counties were within usual range.

Willow Flycatcher.—A June 5 report from Oneida Co. (the Fishers) comes from considerably north of this species' usual range. Recorded in 22 counties overall.

Gray Jay.—Observed in Douglas, Forest, Langlade, Oneida, Price and Vilas Counties.

Common Raven.—Of the 17 reporting counties, these were the most southern: Kewaunee (Tessen), Outagamie (Nussbaum), Portage (Berner) and Waushara (Nussbaum, Tessen).

Boreal Chickadee.—Observers found these in Forest (M. Peterson, T. Wood), Oneida (T. Wood), Price (Hardy) and Vilas (Baughman) Counties.

Tufted Titmouse.—Noted in Chippewa, Dane, Dunn, Eau Claire, Iowa, Richland and Rock Counties.

Red-breasted Nuthatch.—Among the 22 counties in which observers found these were the following southern ones: Dane, Iowa, Jefferson, Milwaukee, and Ozaukee.

Brown Creeper.—Reported from 14 counties, with nests in Washington (Domagalski) and Waushara (Nussbaum). Other southern locations were Iowa (Burcar) and La Crosse (Lesher) Counties.

Carolina Wren.—Noted in Manitowoc Co. June 29 (Sontag), Milwaukee Co. June 23 (Gutschow) and Richland Co. from July 14 on (Duerksen, 2 birds).

Winter Wren.—Nested in Waushara Co. (Nussbaum). Also noted in Outagamie (Tessen) and Portage (Berner, up to 6 birds) Counties, as well as in 6 more northern counties.

Sedge Wren.—As commented on earlier, some observers reported numbers to be down drastically. Noted in 26 counties overall.

Marsh Wren.—Over 420 were reported from Winnebago Co. June 16 (Ziebell). Recorded in 22 counties overall.

Golden-crowned Kinglet.—A nest with nestlings being fed and fledglings was found in Portage Co. June 25, and a female carrying food was seen in another location in the bog July 21 (Berner). Noted in Marathon Co. (fide Ott) and in 5 counties further north.

Ruby-crowned Kinglet.—Observed in Douglas (Benson, Johnson), Forest (Reardon), Oneida (M. Peterson, Spahn) and Vilas (Baughman, Spahn) Counties.

Blue-gray Gnatcatcher.—Reported from Chippewa (Polk), Door (the Lukes), Marathon (fide Ott) and Oconto (the Smiths) Counties, as well as from 17 more southern counties.

Swainson's Thrush.—Still present in Milwaukee Co. June 2 (Zehner), with a returning bird there by July 31 (Bontly). Also observed in Oneida Co. June 7 (the Fishers) and in usual locations in Forest Co. (Spahn, T. Wood).

Loggerhead Shrike.—In the past few years this species has done well in Pierce and/or St. Croix Counties. No reports were received for summer 1995 from individuals who normally report on the status of this species in that part of the state. Up to 2 birds were observed in Door Co. June 5–15 (M. Peterson, Tessen).

White-eyed Vireo.—Noted in Iowa Co. June 2 (Robbins), with 3 birds there June 4 (Burcar). Also reported from Sauk Co. June 19 (Robbins).

Bell's Vireo.—Two birds were in Grant Co. June 2, with one carrying nesting material (T. Wood). Two pairs were present in Trempealeau Co. July 5, in an area where they have nested in recent years (Kirk). Single

birds were observed in Dane Co. June 7–10 (Cederstrom), Milwaukee Co. July 9 (Domagalski), and Iowa Co. June 4–13 (Burcar, Cederstrom, Robbins).

Solitary Vireo.—Noted through June 14 in Outagamie Co. (Anderson, Petznick, Tessen). Also reported from 6 more northern counties.

Yellow-throated Vireo.—Recorded in Douglas (Johnson, the LaValleys), Florence (Strelka) and Vilas (Baughman) Counties, as well as in 23 more southern ones.

Brewster's/Lawrence's Warblers.—Several of these hybrids were observed this year. A Brewster's singing a Golden-winged song was in Iowa Co. June 4 (Burcar). Two Brewster's, both singing Blue-winged songs, were in Washington Co.; one was on territory through June 27, and the other appeared to be paired with a female Blue-winged (Domagalski). Burcar saw a Lawrence's singing a Blue-winged song in Baxter's Hollow, Sauk Co. on June 29.

Blue-winged Warbler.—A report from Douglas Co. June 7–12 is unusually far north (the LaValleys). One also noted in Oconto Co. July 14 (the Smiths). Other observations were in 14 more southern counties.

Tennessee Warbler.—June stragglers were observed in several counties: Eau Claire June 3 (Polk), Oneida June 4 (the Fishers), Outagamie June 13 (Tessen), Sauk (Burcar). Two in Milwaukee Co. June 14 were unusually late (Bontly). Could three birds in Forest Co. June 19 have been resident (the Smiths)? Present from July 14 on in Douglas Co. (Johnson).

Northern Parula.—As sometimes happens, one lingered very late (through June 21) in Milwaukee Co. (Bontly). Present through June 20 in Manitowoc Co. (Sontag). Other reports came from 5 counties within the usual more northern range.

Magnolia Warbler.—Still present June 5 in Waushara Co. (Nussbaum). Reported also from Door, Douglas, Forest, Oneida and Vilas Counties.

Cape May Warbler.—Noted June 1 in Outagamie Co. (Anderson, Petznick) and also in Forest Co. June 28–July 2 (Spahn), Oneida Co. June 7 (the Fishers) and Vilas Co. June 4 (Baughman).

Black-throated Blue Warbler.—Spahn found over 20 in Forest Co. June 28-July 2. He estimates that this Atlas block—an area not previously explored—easily might harbor at least 50. Also noted in Door Co. July 2–19 (Stover) and in Oneida Co. June 15–18 (the Fishers, the Smiths) and Vilas Co. through mid-July (Baughman).

Yellow-rumped Warbler.—Reported from 2 locations in Waushara Co. June 4–27 (Nussbaum) and again in good numbers (13 birds) from a bog in Portage Co. (Berner). Noted in the west in Chippewa and Dunn (Polk) and St. Croix (Soulen) Counties. The remaining 10 reporting counties were more northern.

Black-throated Green Warbler.—Birds observed in 3 southern counties into the first week-plus of June may well have been migrants, but later reports from Iowa (June 20, Burcar), Ozaukee (through the period, Uttech), Sauk (June 29, Burcar) and Sheboygan (June 17, the Brassers, T. Wood) Counties likely represent residents. Also noted in 9 considerably more northern counties.

Blackburnian Warbler.—Present at two sites in Portage Co. through June 15 (Berner) and also through June 23 in Milwaukee Co. (Gutschow). Also noted in Chippewa Co. (Polk), as well as in 7 more northern counties.

Yellow-throated Warbler.—The only report was of a bird (possibly 2) in Wyalusing State Park, Grant Co. June 3 (T. Wood).

Pine Warbler.—The only southern location was Iowa Co. (June 20, Burcar). The other 12 reporting counties were considerably further north.

Kirtland's Warbler.—A singing male was photographed well in Jackson Co. June 4, near where a bird had been present several years ago (Polk). Accepted by the Records Committee. See By the Wayside.

Prairie Warbler.—A bird was heard and seen well through June 4 in Iowa Co. (Burcar).

Palm Warbler.—Present again in a bog in Portage Co., where Berner observed a pair feeding fledglings July 21. Also noted in Douglas (Johnson), Forest (T. Wood), Oneida (the Fishers) and Vilas (Baughman) Counties.

Blackpoll Warbler.—Lingered in Milwaukee Co. through June 9 (Gutschow).

Cerulean Warbler.—This species seldom gets as far north as Forest Co., but the Smiths reported 3 birds there June 19. Noted in Marathon (fide Ott) and Price (Hardy) Counties, as well as in 10 more southern counties.

Prothonotary Warbler.—Noted in Buffalo, Iowa, Monroe, Pierce, Richland and Rock Counties.

Worm-eating Warbler.—This species was reported from both Baxter's Hollow (June 19, Robbins) and Hemlock Draw (June 1, Burcar) in Sauk County.

Louisiana Waterthrush.—Noted only in Dunn, Eau Claire, Iowa, Sauk and St. Croix Counties.

Kentucky Warbler.—A bird was heard in Door Co. June 6–7 (the Lukes, S. Peterson).

Connecticut Warbler.—Reported only from Douglas (Hays, T. Wood), Forest (T. Wood) and Vilas (Baughman, Spahn) Counties.

Mourning Warbler.—Nine singing males were found in 5 locations in Washington Co.; 3 nests were located (Domagalski). As usual, present in several southern locations, but most of the 25 reporting counties were central or northern.

Hooded Warbler.—The northernmost reports were of 2 males in Door Co. (the Lukes), a male and female in Marathon Co. (Dan Belter, Mike Plant, and Walt Tamminen fide Ott), and a male in St. Croix Co. (Soulen). Also noted in Dane, Iowa, Milwaukee, Sheboygan, Walworth and Waukesha Counties.

Wilson's Warbler.—Present in early June in Door (the Lukes) and Milwaukee (Gutschow, Zehner, until June 5) Counties.

Canada Warbler.—Present in Milwaukee Co. through June 16 (Bontly). Noted also in Door, Douglas, Forest, Oneida, Outagamie and Vilas.

Yellow-breasted Chat.—Present again at the Bong Recreation Area in Kenosha Co. (at least 3 birds this year on June 18; T. Wood).

Blue Grosbeak.—A male was seen very well in Adams Co. June 22 (C. Wood). Accepted by the Records Committee. See By the Wayside.

Dickcissel.—Despite the lower number of observers submitting seasonal reports this year, this species was noted in more counties (25) than since 1992. Several observers commented on good numbers. Only a few areas reported birds before mid-June, and several observers commented on late arrivals, in some cases not until the last week of the month. Although birds did not blanket as much of the state as they sometimes have, they were observed as far north as Eau Claire and St. Croix Counties in the west and Marathon, Oconto and Shawano Counties in the east.

Clay-colored Sparrow.—Berner counted 40 in Portage Co. on June 11. Noted in 18 counties overall.

Lark Sparrow.—Two present in Portage Co. through June 18 apparently did not nest (Berner). Noted also in Dunn (Polk), Iowa (Burcar) and Sauk (Burcar, Robbins) Counties.

Henslow's Sparrow.—Reported from 4 counties this year: Iowa (Burcar, Robbins), Marathon (Dan Belter fide Ott), Portage (Berner) and Richland (Duerksen).

Le Conte's Sparrow.—Up to 3 present June 1–26 in Oconto Co. (the Smiths). Also reported from Douglas Co. June 12 (the LaValleys) and Oneida Co. July 4 (Spahn).

Lincoln's Sparrow.—A bird that first appeared in a bog in Waushara Co. in mid–May remained there until at least June 4 (Nussbaum). Seven were present (5 of them carrying food) in a Portage Co. bog on July 21 (Berner). Also noted in Douglas, Forest, Oneida and Vilas Counties.

Dark-eyed Junco.—Reported from Forest, Price and Vilas Counties. Spahn recorded no less than 12 in Vilas Co. June 30.

Orchard Oriole.—Observers found these in Dane and Iowa (Burcar, Robbins), Dunn and Eau Claire (Polk), La Crosse (Dankert) and Milwaukee (Zehner) Counties.

Purple Finch.—Southernmost among the 11 reporting counties were Chippewa, Manitowoc and Portage.

Red Crossbill.—Reported from Douglas Co. June 13 (Johnson) and Oneida Co. July 31 (the Fishers).

Pine Siskin.—There were relatively few reporting counties: Door, Douglas, Marathon, Oneida, Outagamie, Price and Vilas.

Evening Grosbeak.—Noted in Douglas, Florence, Forest, Oneida, Price and Vilas Counties.

CONTRIBUTORS

James S. Anderson, Philip Ashman, Jim Baughman, David Benson, Murray J. Berner, Marilyn Bontly, David and Margaret Brasser, Kay Burcar, David Cederstrom, Jeff Dankert, Diana David, Scott Diehl, Bob Domagalski, Barbara Duerksen, Bob and Karen Fisher, Jim Frank, Marge Gibson, Bob Green, Larry Gregg, Ron Gutschow, Karen Etter Hale, Maybelle Hardy, Judy Haseleu, L. R. Hays, Robbye Johnson, Kathryn Kirk, Laura and Steve LaValley, Fred Lesher, Charlotte and Roy Lukes, Don Nussbaum, Lynn Ott, Patricia Parsons, Mark Peterson, Sue Peterson, Steven J. Petznick, Janine Polk, Bill Reardon, Sam Robbins, Carol Schumacher, Jerry and Karen Smith, Charles Sontag, Tom Soulen, Robert Spahn, Barbara R. Stover, Jean Strelka, David Swartz, Daryl Tessen, Tom Uttech, Christopher L. Wood, Thomas C. Wood, Norma Zehner, Thomas Ziebell.

Thomas K. Soulen
1725 W. Eldridge Ave.
St. Paul, MN 55113

"By the Wayside"

Observations of rarities include Spruce Grouse, Laughing Gull, Iceland Gull, Common Barn Owl, Rufous Hummingbird, Kirtland's Warbler, and Blue Grosbeak.

SPRUCE GROUSE
(*Dendragapus canadensis*)

8 June 1995, spruce bog north of FR2182 and 1.5 miles east of FR2176, Forest County—As I worked my way into the bog I came across a male spruce grouse about seven feet up in a tree, and approximately twenty feet from my location. We stared intensely at each other for about five minutes, and during this time I noted the thick red eyebrow, a large solid black breastband, a mostly black throat and a white belly streaked irregularly with black. The dark tail had a chestnut-colored terminal band. The back was irregularly colored with black and brown areas. Apparently annoyed with my presence, the bird eventually flew out of sight back into the bog.—*Thomas C. Wood, 8895E N. 91st St., Milwaukee, WI 53224.*

LAUGHING GULL (*Larus atricilla*)

27 June 1995, McDill Pond, Stevens Point, Portage County—The gull had a pearly, dark grey mantle and wing. Minimal white tip to at least one scapular. Larger, obvious white tips to the tertials. Folded primaries solid black with three (sometimes two) minute white spots visible. Primaries narrow and appearing quite long and pointed, extending far past the tail. Head with a shadowy hood. Darkest, almost black at the nape and the crown. Very pale face, only slightly dusky. Margin of the hood from the nape across the neck to the throat a darker line. Entire hood well defined, only "not there" in large part. Dark eye. Bill red, blackish terminally, drooped. White neck, tail, underparts. Very dull, dark red legs. In flight, the gull displayed dark grey wings with generally the outer one-half of the primaries solid black. The contrast between the black of the primaries and the rest of the wing not great. White trailing edge. Very thin white leading edge to inner wing. Underwing mostly white with black primary tips. Flight style not noticeably different than ring-billed, flying among that species, twice picking bits from the water surface in a rapid, swooping fashion. Returning to the sandbar on two occasions, the LAGU landed aggressively among the RBGUs, striding about a bit before clearing a place

to stand. LAGU the aggressor in two additional encounters among the flock. During one vocal chorus of RBGU, LAGU joined in, head and neck outthrust, bobbing slightly, bill open wide. Its voice could not be distinguished in the general noise. A robust individual.—*Murray J. Berner, 31 Park Ridge Dr., Stevens Point, WI 54481.*

7 July 1995, Port Washington Harbor, Ozaukee County—This gull was standing on the rip-rap section of the south Breakwall with Ring-billed & Herring Gulls. It was standing alertly and didn't move very often. Once it did open its wings & show the wing pattern. The bird stuck out because of its dark mantle & wings and its black head. I could see that it had black unmarked primaries and dark (blackish) legs & a dark bill. Because of the light & distance I couldn't determine if the bill was reddish. I could see the smallish eye "rings." The bill was clearly larger than the Franklin's I had seen a few days earlier in Green Bay, and I could see the drooping of its end. When the wings were stretched I could easily see that there was no white separating the primary tips & the grey portion of the wings. Since it wasn't doing much I continued to pan the wall with my scope, and failing to find anything else unusual I returned to this bird only to find it gone. Should I need to mention that the neck, breast, belly & tail were white.—*Tom Uttech, 4305 Hwy O, Saukville, WI 53080.*

21 July 1995, Manitowoc, Manitowoc County—A single, subadult bird is found standing with about 30–40 Ring-billed Gulls. The smaller size and dark mantle quickly attracted my attention to the bird. The bird was probably a first summer bird as the nape area was dark and the remnants of a tail band existed. The bill was dark, long and gave the appearance of being "drooped." This is never a characteristic of Franklin's Gulls. The legs were dark as was the iris. The bird was not observed in flight, but the primaries were not invaded with white as is characteristic of Franklin's Gull.—*Charles Sontag, 801 N. 4th Street, Manitowoc, WI 54220.*

Iceland Gull (*Larus glaucoides*)

13 June 1995, Silver Creek Park, Manitowoc, Manitowoc County—This individual bird spent the winter and spring in the Manitowoc harbor area, but I didn't catch up with the bird until the 13th of June. Others that had seen the bird reported it to be in the presence of Herring Gulls, and this is how it was found on the beach of Silver Creek Park. The bird was first winter, early 2d summer in plumage. While standing the gull was about the same size as the Herring Gulls in the immediate vicinity but giving a general light buffy . . . appearance. The bill was dark, but the base was 1/3 lighter, and gave the illusion of being somewhat smaller. The head was smaller and more dome shaped as opposed to the chiseled appearance of the Herring Gull. The legs/feet were light pinkish gray but more gray than pink. In flight, the tail retained the barring or banding pattern. The primaries were uniform in colour and light in flight, but appeared to be darker when the bird was standing. The iris was dark

and I was unable to see the colour of the eye lids. Although I have had only limited experience with the Thayer's Gull in the first or second year, the first year Thayer's Gull seen two years ago in the Two Rivers harbor had much darker primaries especially in flight, and the tail had a distinctly dark appearance. The first year Iceland Gulls that often appear in March and April have given me the same general appearance, but usually seemed to be slightly smaller although the birds used in the comparison at that time are usually all adult birds moving further north to nesting areas.—*Charles Sontag, 801 N. 4th Street, Manitowoc, WI 54220.*

Common Barn Owl (*Tyto alba*)

5 June 1995, Antigo, Langlade County—On June 5, 1995 I was returning from the Merrill office of the DNR via Highway 64 and noticed 2 white spots in the road. I recalled having seen them on my way to Merrill, but mentally assumed they were pigeons or young chickens hit by a car as the location was near a farm house just outside the city limits of the town of Antigo. I realized then that I was in the same area as I had seen the Barn Owl adult on the night of 4-18-95. The white spots in the road then looked all too familiar. I went back to the spot and stopped to examine the feathers that were left. The birds were Barn Owl chicks, recently fledged, not quite hard pinned. The primary measured 16 and 16.4 respectively. Both birds appeared to be very light in color and most probably were male chicks. They appeared to be between 8–9 weeks of age.

I contacted our local Wildlife Management people, Eric Brochard, Mike Winski and Carl McIlquan to confirm the location and the bodies. They collected the scant remains of the chicks. They appeared to be hit by a large truck as they weren't actual remains but more accurately grease spots and a few wing feathers. The location was 1/4 m. north of the field where I had observed the female in April of this year.—*Marge Gibson, N2160 W. Rollwood Rd., Antigo, WI 54409.*

Rufous Hummingbird (*Selasphorus rufus*)

24 July 1995, Round Lake, Price County—On July 24, 1995, Maybelle Hardy called me to report that Grace Flagstad had just identified a Rufous Hummingbird at a feeder near her home in Northeastern Price County. My wife and I headed to the Flagstad residence after work where we discovered a very enthusiastic birder and a very cooperative bird. The bird was guarding "his" feeder when we arrived and allowed me to approach within about 10 feet as I observed and photographed him over the next hour. The bird was nearly the same size as a ruby-throat, but perhaps somewhat stockier. His appearance was nothing like a ruby-throat, however, and his rufous color made him easy to distinguish from the ruby-throats he was frequently fending from the feeder. The bird was an adult male, exhibiting a brilliant reddish-orange throat, white breast, and green crown and wings. Although the enclosed photos are adequate to confirm the species identification, they fail to do justice to this spec-

tacular little bird. Mrs. Flagstad reported seeing the bird again on the following day, but he disappeared after that.—*Larry Gregg, 829 Atwood Avenue, Park Falls, WI 54552.*

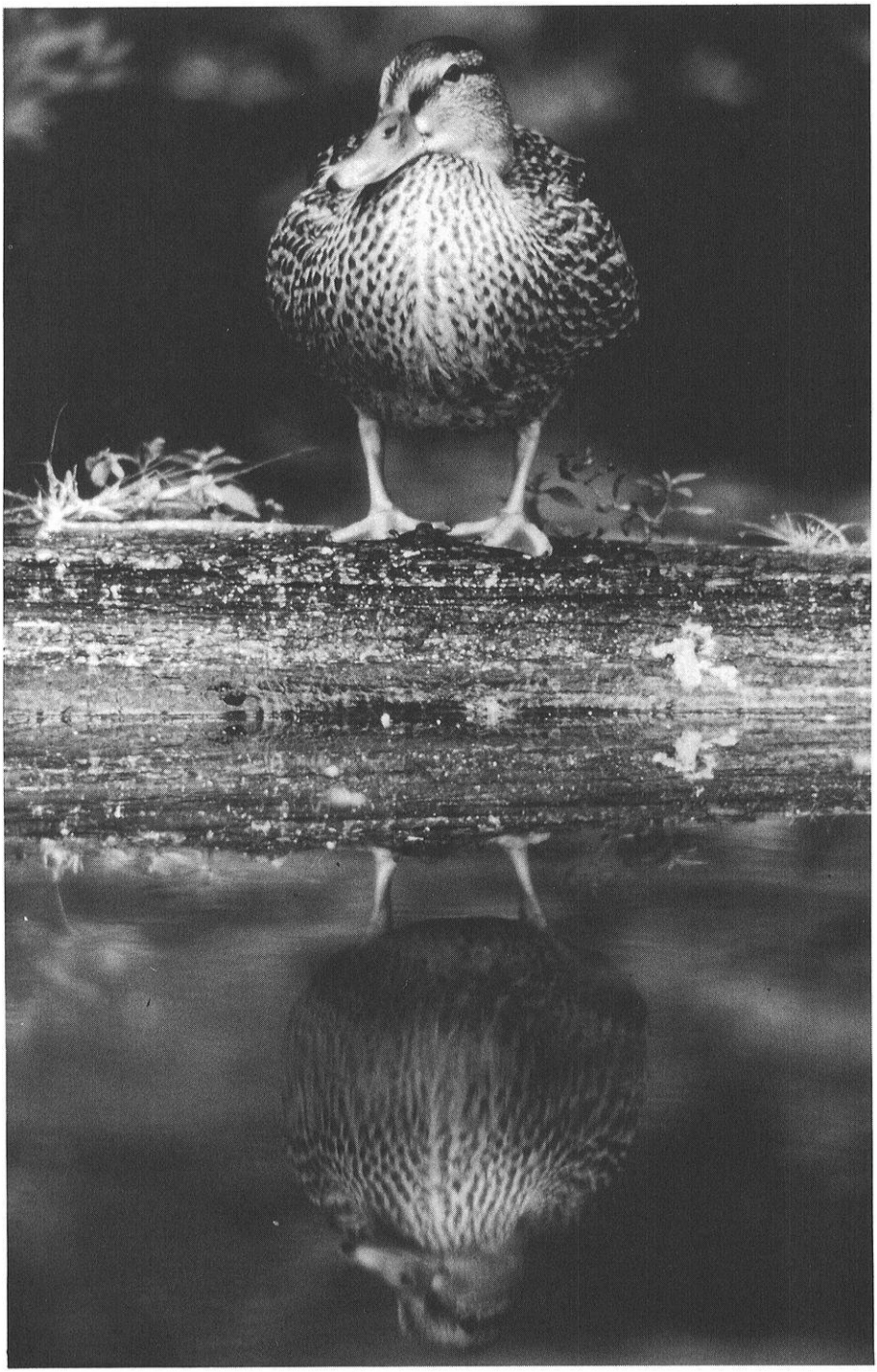
KIRTLAND'S WARBLER (*Dendroica kirtlandii*)

4 June 1995, W. Staffon Rd., Jackson County—On June 4, 1995, I made my annual trek down to Jackson County to look for Kirtland's Warblers. Unlike the past few years, I was successful this time and found a singing male at a location where a bird was banded in 1990 and found again in 1991. As soon as I got out of my car, I could hear the bird singing about a quarter of a mile away. The song was typical: loud, throaty, and low-pitched for a warbler, and consisting of several "chirps" on a low pitch, followed by several more on a somewhat higher pitch, and ending with two or three on an intermediate pitch. For most of the hour that I was there the bird sang persistently from the tops of two or three short jack pines, pausing occasionally to drop down to feed. The singing became more intermittent toward 8:00 when I left. As I observed and photographed the bird I noted the following field marks: large size for a warbler, bright yellow underparts, blue-gray upperparts, black streaks on back, dark tail, dark wings with pale feather edging, blackish lores, broken eye-ring (white crescents above and below eye), black streaks on sides of breast and belly, black bill and legs, occasional tail-wagging. The bird did not appear to be banded.—*Janine Polk, 1407 Frederic, Eau Claire, WI 54701.*

BLUE GROSBEAK (*Guiraca caerulea*)

22 June 1995, along Golden Avenue 1.5 miles west of the town of Big Spring, Adams County—I drove along Golden Avenue east of the Town of Big Spring for about a mile when I noticed a bird that appeared very large headed and sat erect on a telephone wire. So erect that its back almost formed a perpendicular line with the wire. "BLUE GROSBEAK!" I drove past the bird not wanting to scare it by stopping immediately next to it. I stopped the car I raised my binoculars to confirm my identification. What had been merely a silhouette as I drove by at thirty miles an hour transformed itself into a brilliant adult male Blue Grosbeak. The bird itself was fairly large and chunky. Its head was also large, an appearance that was only added to by the immense size of the bill. For the most part the head, back and underparts were a uniform blue, less deep than that of a male Indigo Bunting. The massive bill was bordered by a rich onyx that also enveloped the bird's dark eye. The bill itself, apart from being very large, was a dark slate-gray on the upper mandible, more silvery-gray on the lower. The blue back and scapulars were partially covered with blurry, very dark streaking. The wings were dark, except for a rich wide chestnut wing-bar on the median wing coverts, and a narrower, less rich bar on the tips of the greater coverts. The underparts became progressively darker blue towards the undertail coverts, which blended into an almost black tail. Feather wear over the entire bird was fairly minimal. The only marking not seen was a light white tip to the tail

that I have observed in some very fresh plumaged birds. Seeing that this tip is not comparable in width to that of the Eastern Kingbird or Lark Sparrow, or even that of a Cassin's Sparrow, I am not at all surprised that the tip was lacking due to feather wear. During the entire observation the bird did not vocalize or interact with any other species. Likewise, there was no evidence of a female in the vicinity. After observing the bird for about five minutes he flew into the sparse hedgerow below the wire. The bird was easily told from the Indigo Bunting (*Passerina cyanea*), and from any other Passerina species for that matter. Even when driving, the large bill and head, along with the Blue Grosbeak's atypical posture made identification easy. The wide rich cinnamon wing bars are also exemplified on this continent only by this species. While the Indigo Bunting may show some darker coloration near the face, it is never crisp and clear as in the Blue Grosbeak. Indigo Buntings are also more richly colored blue on the head. They do not show very dark streaking on either the scapulars or the back. Hybrid Indigo-Lazuli Buntings usually show a crisp white belly. They also never have cinnamon wing bars of any kind. I have extensive experience with Blue Grosbeaks in my home state of Colorado since I was twelve years old. My most recent sighting of Blue Grosbeaks was on my May 12 Big Day in Colorado this spring. Colorado has also been the location where I have seen many Indigo and Lazuli Buntings, as well as at least nine different hybrid Indigo-Lazuli Buntings. Additionally, Indigo Buntings are one of the most common species in every one of my fourteen atlas blocks in Adams County, which I see daily.—*Christopher L. Wood, 600 Campus Dr. Unit #583, Ripon, WI 54971.*



Mallard *by Gerald H. Emmerich, Jr.*

WSO Records Committee Report—Summer 1995

by Jim Frank

Ten documentations of eight different species were reviewed by the WSO Records Committee for the Summer 1995 season. Seven reports were accepted for an acceptance rate of 70%. Observers were notified of committee decisions by postcard in the case of accepted reports and by personal letter in the case of reports not accepted.

Accepted

Laughing Gull—

#95–019 *Portage Co.,* 27 June 1995, Berner.

#95–020 *Ozaukee Co.,* 7 July 1995, Uttech.

#95–021 *Manitowoc Co.,* 21 July 1995, Sontag.

The Manitowoc Co. bird was seen standing with a flock of Ring-billed Gulls exhibiting smaller size and a darker mantle. A long, dark bill with a drooped tip appearance was noted. The legs were also dark as were the primaries. Remnants of a dark nape and tail band were also noted.

The Ozaukee Co. bird was in adult plumage with a dark gray mantle, black head, black unmarked primaries, dark legs, dark bill, and white eye crescents. The bill was larger than a Franklin's Gull bill and had a drooping tip.

The Portage Co. bird was approaching adult plumage, but the dark hood was more shadowy than defined and extended farther down the neck than on a Franklin's Gull. The bill was red, becoming black at the drooped tip. The legs were also dull red. The mantle was dark gray almost blending into the solid black primary tips. Only the trailing edge of the wing was white. In size, the bird approached the adjacent ringbills, but was slightly smaller though somewhat longer-necked.

Iceland Gull—

#95–022 *Manitowoc Co.,* 13 June 1995, Sontag.

The bird was almost the same size as the Herring Gulls, but generally a light buffy color overall. The slightly smaller bill was dark, but lightening toward the basal 1/3. Greyish-pink legs were noted. The body and primaries were uniformly light buffy in

flight, but the primaries seemed slightly darker in a folded position. The tail appeared the same color as the rest of the bird in flight, in contrast to the slightly darker tones exhibited by the primaries and tail of a similarly plumaged Thayer's Gull. The head shape was more rounded than the "chiseled" look of the Herring Gull.

Rufous Hummingbird—
#95–026 *Price Co.*, 24 July 1995, Gregg.

A hummingbird similar in size, but sightly stockier than a Ruby-throated was seen at a feeder. It exhibited an orange-red throat, green cap, green wings, but rufous back and flanks. Of interest is the sighting in July, 1994, 20 miles from here, of a 1st year Selasphorus hummingbird. The Allen's and Rufous are indistinguishable in that plumage/age. This time the same photographer captured an identifiable plumage on camera for us.

Kirtland's Warbler—
#95–023 *Jackson Co.*, 4 June 1995, Polk.

The bird was large for a warbler, with gray upperparts, yellow underparts, black back streaking, a dark tail, dark wings, black lores, white eye crescents, and black streaks on the sides of the breast. Photos were submitted. It was located initially by a song described as loud and throaty, with several notes low pitched, several high pitched, and ending on several intermediate pitched notes. Photographs were submitted. The bird was at the same site a Kirtland's was banded in 1990 and seen again in 1991.

Blue Grosbeak—
#95–024 *Adams Co.*, 22 June 1995, Ward.

Noted sitting rather erect on a telephone wire, this bird was uniformly blue, though less deep than the shade of an Indigo Bunting. It had a proportionally larger head and bill than the similar Indigo Bunting. The bill was dark gray, the back and scapulars streaked with black. A wide chestnut wingbar was noted across the median covert edges and a narrow chestnut band was seen along the greater covert margin.

Not Accepted

Wood Stork—
#95–018 *Dodge Co.*, 3 June 1995.

The description of this bird most closely fits that of an immature Wood Stork. It was similar in size to a Great Egret, with a white body, black tail, and black edges to the wings. The bill was yellow-orange, long, and slightly decurved. Initially, it was seen taking flight at a distance of 35 feet, after which it flapped and soared upward with head and legs extended. The one characteristic the committee found difficult to explain was the white head. The literature suggests the head and neck of immature Wood Storks should be gray-brown, perhaps with a bit of whitish feathering on the crown. In general though, the head and neck should contrast significantly with the white body. Known breeding times of Wood Storks in Florida can be as early as November, so this could well be within the normal post-breeding dispersal time for the species.

Though no other species would seem to fit this description better

then a Wood Stork, the seemingly aberrant head coloration of this individual makes it uncomfortable to accept it given the rarity of this bird in this part of North America.

Lesser Black-backed Gull—
#95–017 *Manitowoc Co.,* 15 May 1995.

This bird was noted to be larger than the accompanying flock of Ring-billed Gulls, but although no Herring Gulls were present for a direct size reference, this bird was felt to be smaller than expected for a Herring Gull. The head was white with slight streaking, a dark eye, and a black bill that had faint light gray color at the base of the lower mandible. The gonys did not enlarge as much as that of a Herring Gull. A dark brown checkering was noted on the back and wings with some grayish feathers coming in. The observer described this as similar to the expected pattern of a 2nd year Herring Gull except the "gray was darker." The tail was white with a large dark terminal band. The primary feathers were blackish, with no white markings/windows. Finally, the legs were gray-pink.

Several factors were of concern in attempting to differentiate a 2nd year Lesser Black-backed Gull from a Herring Gull. Even the observers description of the mantle and wings stated this was similar to a Herring Gull's pattern. Grant's *Gulls, a Guide to Identification* suggests the mantle and wing pattern of a Lesser Black-backed Gull should be more uniformly dark in the brown checkering, a Herring Gull having contrast of darker wing tips and terminal secondaries to the lighter coverts and mantle. Also of note is the suggestion that the grayish feathers were darker than the mantle gray of a Herring Gull. Usually the mantle feathers of a Lesser Black-backed Gull are described as charcoal gray or almost black. It is possible the scattered entry of the feathers, rather than the uniform mantle color we normally see, could change the starkness of the charcoal gray color to something lighter. The dark band on the tail of a Herring Gull of this age is wider than that of a Lesser Black-backed. This description did not note this other than to say it was large. In addition, the legs were still flesh colored instead of yellowish. Finally, reliance on the smaller size and sleekness of profile when characterizing Lesser Black-backed Gulls (or Thayer's Gulls for that matter) is problematic. After closely examining a Herring Gull flock, the variability in size and head profile can be disconcerting. In this case, there were unfortunately no Herring Gulls for direct comparison of the profile, mantle shades, etc.

Trying to decipher the immature plumages of gulls is a challenge, complicated by variability from bird to bird in the speed at which it takes place. Some seem to moult earlier/later than others in addition to the individual variation in plumage among individuals of the species. This could have been a 2nd year Lesser Black-backed Gull, but a case can be made for a 2nd year Herring Gull as well.

Common Redpoll—
#95–025 *Door Co.,* 4 July 1995.

In this description, we are given a brief account of an apparently very short naked eye observation of a bird

seen at a thistle feeder 14 feet from the window of the house. It had a red cap, black chin, and a whitish breast. Unfortunately, there was no size reference, bill description, or suggestion of the general coloration of the bird. The committee's uneasy feeling is that this probably was a redpoll, but since the bird didn't allow enough of a look to describe it more completely, the identity is left in slight doubt.

Jim Frank

ABOUT THE AUTHORS AND ARTISTS

Bruce Bacon is a WDNR Wildlife Biologist working in Iron and Ashland counties. He has a B.S. in Wildlife Management from UW Stevens Point.

Matthew E. Dallman is Watershed Conservation Coordinator for the Wisconsin Chapter of The Nature Conservancy out of their northern office. He has a BS in Wildlife Management from UW Stevens Point and an MS in Conservation Biology from Central Michigan University.

Gerald H. Emmerich, Jr., is a serious amateur photographer who enjoys searching for the perfect nature photograph. He and his wife donated a portion of the Pickerel Lake Fen to The Nature Conservancy and he spends his time "hunting" for the perfect photo at the Fen, at Lulu Lake, and at his family's cottage near Eagle River. Gerry is also a 20-year member of the Image Makers Camera Club.

Jim Frank has been one of WSO's most active contributors to Seasonal Field-Notes. He now assists WSO by compiling and summarizing the annual May Day Counts, Big Day Counts and Migration Day Counts and is the Records Committee Chair. He is a veterinarian in Milwaukee with an interest in avian medicine.

Claire Gower has a BSC in Wildlife and Countryside Management from Wye College, University of London, Kent England. She is currently gaining work experience in all aspects of wildlife management as a volunteer technician under Bruce Bacon.

Bettie Harriman is current President of WSO and coordinator of the Wisconsin Breeding Bird Atlas.

William L. Hilsenhoff is a recently retired Professor in the UW-Madison's Department of Entomology. He has been summarizing Wisconsin's Christmas Bird Counts each year since 1966. He has received WSO's Silver Passenger Pigeon Award for these contributions.

Kenneth I. Lange has recently retired as the Naturalist at Devil's Lake State Park. He has a master's degree from the University of Arizona. Ken has been a frequent contributor to WSO publications: as a field-note compiler

and author of articles and the book, *Breeding Birds of the Baraboo Hills.* He formerly worked at the Smithsonian Institution's U.S. National Museum. He is the 1993 recipient of WSO's Silver Passenger Pigeon award.

Thomas K. Soulen is one of WSO's hard working Field-Note Compilers and a frequent contributor to WSO activities. An expatriate Wisconsinite, now a Professor in the University of Minnesota's Botany Department, Tom has remained active in Wisconsin ornithology.

Julie F. Van Stappen is a Supervisory Resource Management Specialist with the National Park Service and is stationed at Apostle Islands National Lakeshore.

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Membership*: Alex F. Kailing, W330 N8275 West Shore Drive, Hartland, WI 53029 (414-966-1072)

Publicity*: Bettie R. Harriman, 5188 Bittersweet Lane, Oshkosh, WI 54901 (414-233-1973)

Records*: Jim Frank, 4339 West Laverna Avenue, Mequon, WI 53092 (414-242-2443)

Research*: Robert W. Howe, Department of Natural and Applied Sciences, University of Wisconsin, Green Bay, WI 54311 (414-465-8263/2272)

Records Committee Archivist: John H. Idzikowski, 2558 S. Delaware Avenue, Milwaukee, WI 53207 (h. 414-744-4818, w. 414-229-6274)

Scholarships and Grants*: Janine Polk, 1407 Frederic, Eau Claire, WI 54701 (715-839-9265)

Youth Education Coordinator: Stephen J. Kupcho, 9344 West Goodrich Ave., Milwaukee, WI 53224 (414-354-0948)

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