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T H E *PASSENGER* *PIGEON*

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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.

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Honey Creek

The 1996 "walk to the waterfall" at Honey Creek occurred on May 19th. A few days later the mail brought Noel Cutright's verbal portrait of the event. As I read this account of the day, which he sends each year to all those who pledge to the WSO Birdathon/Bandathon, I decided that Honey Creek would be the topic of my next President's Statement.

The Wisconsin Society for Ornithology owns 300 acres in a beautiful valley in the Baraboo Hills of Sauk County. The centerpiece of the two-mile long valley is the North Branch of Honey Creek, thus our land is referred to as Honey Creek. This beautiful stream makes its way through the valley from a lovely waterfall to a lively marsh near our nature center, at times pausing in placid pools, at times gurgling merrily over the stones. As you make the walk to the waterfall, you are never far from the music of the stream.

In places, the hills, still clothed in a variety of towering trees, close in along the creek, in other areas the valley widens into small meadows. Along one stretch of the creek, a sandstone bluff covered with majestic hemlocks creates a small pocket of northern microhabitat, in an otherwise southern deciduous forest.

When the WSO walk is conducted each May the floor of the valley is covered in woodland wildflowers; erect Bishop's Caps, fruiting Bloodroots, budding May Apples, blooming Dentaria, Solomon's Seal, and Jack-in-the-Pulpits. In one very moist area, not too far from the waterfall, there is a wonderful stand of Twin-leaf, a fairly rare plant in Wisconsin.

Louisiana Waterthrushes attempt to out-burble the stream. Blue-winged Warblers greet the hikers with their raspberry welcome. Some years Acadian Flycatchers and Cerulean Warblers add their voices to the more common species. There is almost always a pair of Blue-gray Gnatcatchers nesting near the creek.

The Honey Creek valley has been used by humans, cattle have been allowed to roam in areas, and some are still pastured on adjacent private land. There was once a homestead in the valley, and some logging has occurred. It is not pristine, but it is still a green, growing, lovely place, and home to many species of birds.

It is also a very special place because it has been allowed to recover from man's touch. As I drive along the roads of the Baraboo Hills, I see many other valleys that probably once were very much like Honey Creek. Today they are cleared for agriculture or have had homes built in them. Honey Creek valley could have gone that way too, but some people who cared made the effort to see that it was protected.

WSO began acquiring land in the valley in 1960. I don't know for sure

just who first introduced the idea of WSO buying land in this valley, but I do know Harold Kruse played a major role in making it happen. Harold, who lives in the Baraboo Hills, understands and appreciates the value of the Hills as an ecosystem as well as anyone. He also loves the Hills, and has worked with WSO and The Nature Conservancy to see that the area is preserved and respected. Harold serves on the WSO Honey Creek Management Committee and continues to lead the walk to the waterfalls each spring.

Two other individuals who have given a great deal of service to Honey Creek are Ed and J.J. Peartree. They have been banding birds at Honey Creek for many years, even moving to Sauk City in 1991 so that they could band each week from mid-May to mid-November. Besides banding they watch over the Nature Center, noting when maintenance needs to be done.

Eleven years ago, Noel Cutright began the annual Birdathon/Bandathon at Honey Creek as a way to help pay for our commitment to this area. While this event is lots of fun for those who participate, it is also a very important component in providing for WSO's stewardship of this land. Noel continues to do the paper work involved each year, as well as make the hike up the valley.

Under the leadership of Randy Hoffman, past WSO President, a committee was appointed to create a master plan for managing Honey Creek. The plan was completed and adopted in 1993. Since then a management committee has served to recommend to the WSO Board the things that need to be done for WSO to be good stewards of our land. The current committee is chaired by Becky Isenring and Ken Lange. Steve Richter, a committee member, has headed a work crew to build boardwalks, repair fences, cut brush, and make repairs where needed. Ken Lange also is responsible for conducting a breeding bird survey at Honey Creek, which he has done for 26 years.

WSO owes a great deal of thanks to all of the above-mentioned individuals for their years of commitment to the well-being of our land at Honey Creek. All who have contributed their time to a Honey Creek work party, or pledged money to the Birdathon/Bandathon, or made a donation to Honey Creek with their membership renewals are gratefully acknowledged and thanked for their support of Honey Creek. As members of WSO we can be very proud of the organization's efforts to protect and preserve this very special valley.



Betty Harmon
President

A Study of Bird Mortality at a West Central Wisconsin TV Tower from 1957–1995

This study is of birds killed by colliding with a television transmission tower in West-Central Wisconsin over a period of 38 years. Prior to 1960, the tower was inspected only on nights of extraordinary “kills”. Thereafter, it was checked on an almost daily basis. Birds were collected, identified, and recorded. A discussion and analysis of Wisconsin birds that are affected follows. There were 9496 records of 121,560 birds counted through 1994. A total of 123 species was encountered.

The greatest casualties occurred among long distance neotropical migrants. Historical perspective and causal factors are considered along with a discussion of possible conservation or mitigating measures that might be used to avoid this loss of bird life. The author examines the species composition of the total numbers to see how the percentages may have changed over the years. While there have been numerous previous reports of bird casualties, to the author’s knowledge long term studies of this duration have not been published.

by Dr. Charles Kemper

It has been known that migrating birds can suffer mortality by collision during migration. Light-houses, tall buildings such as the Empire State Building in New York City, the Washington Monument, airport ceilometers and even tall bridges such as the Mackinaw bridge in Michigan have been known to be

hazards to birds. Ludwig Kumlien, a pioneer Wisconsin ornithologist, over a hundred years ago described in 1888 bird fatalities that befell birds flying into the old Milwaukee Exposition building in the fall of 1887. “The tower in the center of the building rose over 200 feet above the street and was illuminated by

four electric lights of 2000 candle power each . . . from 6:00 P.M. . . . and turned out at 11:30 P.M.” (Auk, 5, (3), 325–8). Birds were killed as they passed over the tower. There were fifty odd species and many times that number of specimens.

Overing, in a series of articles in the *Wilson Bulletin* reported the high mortality of birds in fall migration at the Washington monument. Walter Spofford in June, 1949, writing in the same journal, called attention to the mortality of birds at the Nashville Airport ceilometer. Numerous accounts followed of substantial numbers of birds killed at various locations: the Empire State Building in New York City, the 491 foot Philadelphia Savings Fund Building and the WBAL Television tower (450 feet) in Baltimore in 1948. Other accounts were documented by Tennessee observers: Tanner, Ganiem, West, Dunbar, Herndon, Coffey, etc. Tordoff and Mengel in 1956 reported in the *University of Kansas Publication, Museum Natural History*, an outstanding study. Herb Stoddard began his studies at Tall Timbers Research station near Tallahassee, FL.

Having been exposed to some of this literature, particularly that of Amelia Laskey, I visited ceilometers and the Eau Claire TV tower site from 1949 to 1955 time to time without any notable findings. Before 1957, the TV tower was a 500-foot triangular structure. In mid or early 1957 a 1000-foot tower was erected along side the original tower. The 1000-foot tower was a perpendicular structure, supported by guy wires and cables. The erection of this

tower set the state for ensuing disasters.

Unfortunately, I was out of town on August 29, 1957, when the first local “mega-collision” occurred. I described this in the *Passenger Pigeon*, in 1958, and I quote from that article, “An account in the *Eau Claire* newspaper makes interesting reading. About 10–11 P.M. a lady living close to the TV tower noticed that it was raining birds. They were coming down on her roof, garage, and lawn. Her neighbors reported the same phenomenon. The birds were reported to be mostly orioles, thrushes, and canaries.” The local health officer, a physician, was notified and he made a perfunctory investigation. Mystified, he collected a few specimens and sent them to the State Laboratory of Hygiene for analysis—for what, I don’t know—and I suspect they were never heard from again. He also ordered a detail of street department employees to bury the dead birds at the city dump. Apparently, he feared some sort of avian plague that might be transmissible to humans. The local authorities also consulted biologists at the University of Wisconsin-Eau Claire but did not receive much enlightenment. One faculty member suggested that poisoning must have been involved. An estimated 300–500 birds were lost. Another person, a radio and television wholesale parts distributor with a store under the tower insisted publicly and privately that the birds had been roosting on the tower and were killed by the high voltage emitted by the tower. There was no way I could convince him otherwise, and I remember he was angry with me for disputing him. Not long after that

another collision occurred. I heard about it on September 3, 1957, in the mid-morning. I reached the scene by early afternoon. This and subsequent disasters were reported in the *Passenger Pigeon* (Kemper 1959a,b).

METHODS

Initially, specimens were gathered at the base of the tower only on mornings of suspected large numbers of casualties, not every morning. I discussed this with Herb Stoddard, an eminent ornithologist with Wisconsin roots, who had been studying the TV tower phenomenon at Tallahassee, Florida. He graciously visited me in 1959 for several days. He informed me that birds were likely hitting the tower on a nightly basis, even on clear nights, and throughout the year. He put me wise to the fact that if you don't get to the tower at dawn you will miss out on the "lesser" casualties. He said his experiments showed that if there are fewer than 50–100 birds killed in a night, crows, owls, and other predators would consume these by one-half hour after dawn. With that knowledge I began checking the tower area on a daily basis early in the morning and I am still continuing that study. About eight years into this work I was fortunate enough to find an enthusiastic assistant, Paul Rudahl, who lives just one block from the tower site. He has been a tremendous help and has been checking the area daily and picking up the birds for me.

Before 1957 in Eau Claire there was a 500-foot tower and no casualties were recorded. They may have occurred without having been noted.

It was only after a 1000-foot tower was erected that we first recorded casualties. For about 3 years, both towers existed side by side. Thereafter, the 500-foot tower was removed. At about the time that the 500-foot tower was removed, the managers of the station put up a 2000-foot tower, 40 miles away in Fairchild. This tower was located in a wooded area. Surveillance of this tower did not have much success except to verify that birds did hit this tower also. The surrounding trees and under brush made discovery of the specimens very difficult. I have made only sporadic attempts to monitor this tower. It is an 80-mile round trip for me and I was unable to do it on a regular basis.

As a licensed wildlife rehabilitator, I had the necessary permits for the handling and preservation of these specimens. I have donated thousands of specimens to various museums throughout the country and have kept an extensive daily log listing the dates and species. These data make up the heart of this paper.

RESULTS

Figures 1 and 2 show the dates in spring and fall of major collisions when more than 100 specimens were salvaged. The spring period is relatively narrow, spanning a period of about 75 days, from April to June. The autumn period is dispersed over considerable longer time, mid-July into as late as November 12. The bulk of the species were neo-tropical migrants.

Table 1 lists rarely found birds: species that strike the tower on average of less than one individual per

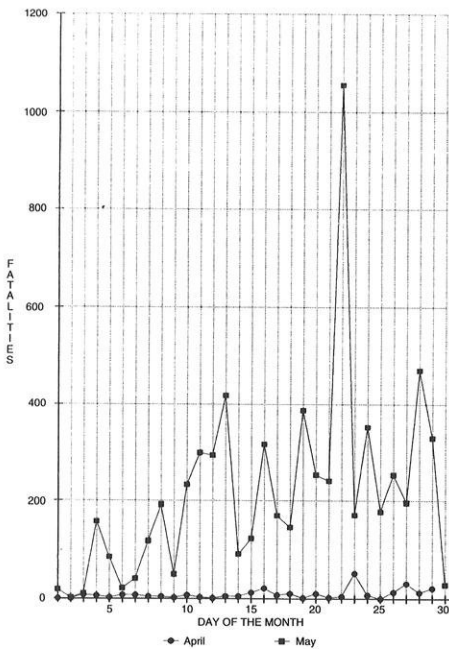


Figure 1. Spring Bird Fatalities from 1958–1995. Compiled totals per day of month.

year. The species that are killed in greater numbers have been separated into short distance migrants (Table 2) and long distance or neotropical migrants (Table 3). For these three groups I have listed the number of spring dates, the earliest arrival and also the latest spring arrival date. I consider the late spring arrival date as especially significant. Observation of the first arrival is an indication of the beginning of migration, but after that there is no way in the field to determine the last date of spring migration. The TV tower specimen is almost certainly a migrant. Thus, this is one of the best tools we have to determine the length of the migration. The same logic applies in fall. We can tell more precisely the phenology of migration by the early and late fall dates.

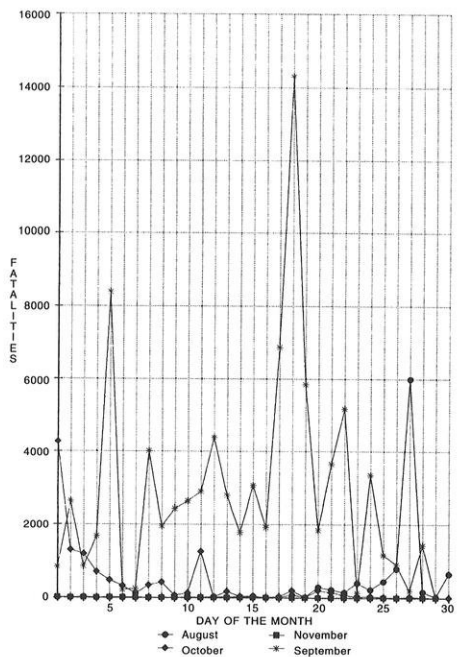


Figure 2. Fall Bird Fatalities from 1958–1995. Compiled totals per day of month.

For the 42 species for which I salvaged over 100 specimens over the 38 years of this study, I have prepared graphs showing relative abundance. The percentage of a given species, compared with the total kill, is shown for each three-year period of the study (four-year interval for 1957–1960). The last bar in each graph gives the percent for the entire 1957–93 period. While the fluctuations between intervals may be influenced more by the timing of the mega-kills than by true population totals, there are occasional instances where population declines are strongly suspected (e.g. Least Flycatcher).

In Table 4 the relative abundance is shown for those species that represent 2.0+ % of the total sample.

Table 1. Extreme first and last dates, spring and fall, for species that seldom strike the tower (1957–1994) (Total individuals under 40, or under average of 1 per year) .

SP = Number of spring dates FA = Number of fall dates T = Total number of birds collected

Species	SP	Extreme spring dates	FA	Extreme fall dates	T
Pied-billed Grebe	1	4/29	12	8/29–10/6	19
Least Bittern			1	9/5	1
Green Heron			1	9/23	1
Virginia Rail	5	5/4–5/19	11	9/1–10/12	22
Yellow Rail			6	9/1–10/1	12
American Coot	2	3/3–5/28	19	9/1–10/12	21
Killdeer			1	9/28	1
Spotted Sandpiper	1	6/10			1
Solitary Sandpiper			1	9/14	1
Semipalmated Sandpiper			1	8/27	1
Common Snipe			3	9/6–9/25	3
Yellow-billed Cuckoo			4	9/4–10/5	4
Common Nighthawk			4		4
Whip-poor-will	4	4/29–5/22	1	9/21	5
Chimney Swift			1	9/27	1
Belted Kingfisher	1	5/1			1
Red-headed Woodpecker	5	4/27–5/22	13	9/8–10/9	23
Downy Woodpecker	2	4/27–4/29	1	9/1	13
Hairy Woodpecker			2	9/22–9/24	3
Common Flicker	4	4/6–5/28	9	9/8–10/5	15
Olive-sided Flycatcher			4	8/13–9/26	4
Acadian Flycatcher	1	5/13	3	9/9–9/16	6
Eastern Phoebe			3	9/7–10/10	4
Great Crested Flycatcher	3	5/7–5/30	17	8/3–9/21	28
Eastern Kingbird	1	5/31	2	9/8–9/9	4
Cliff Swallow			1	8/23	1
Winter Wren	4	3/28–5/6	7	9/14–11/4	11
Sedge Wren	7	4/29–5/25	11	8/28–10/22	29
Eastern Bluebird			1	8/25	1
American Robin	1	3/28	5	9/15–10/22	6
Brown Thrasher	11	4/19–5/23	2	9/10–9/24	13
Cedar Waxwing	1	5/1	16	8/6–10/10	21
European Starling	2	3/29–4/14	3	9/11–9/24	5
Blue-winged Warbler	17	5/4–5/22	3	8/26–9/8	26
Brewster's Warbler			1	9/4	1
Pine Warbler	4	4/28–5/12	6	7/18–10/1	11
Prothonotary Warbler	1	5/23			
Louisiana Waterthrush	2	5/24			1
Kentucky Warbler	1	5/14			1
Hooded Warbler	1	5/11			
Yellow-breasted Chat	2				2
Dickcissel	5	5/1–5/25	4	8/26–9/23	10
Rufous-sided Towhee	2	4/21–4/27			2
American Tree Sparrow	4	3/16–4/17	8	10/20–11/16	36
Field Sparrow	6	4/29–5/18	11	9/6–10/12	23
Vesper Sparrow	5	4/8–5/17	3	9/20–10/21	8
Grasshopper Sparrow	24	4/28–5/4	15	7/8–10/28	38

(continued)

Table 1. *Continued*

Henslow's Sparrow	1	5/18			1
Sharp-tailed Sparrow	2	4/28-5/4	15	9/20-10/19	24
White-crowned Sparrow			8	9/20-10/19	9
Harris' Sparrow			1		
Snow Bunting			1	10/28	1
Bobolink	9	5/4-6/6	16	8/25-9/30	37
Red-winged Blackbird	1	5/7	4	8/24-10/14	5
Western Meadowlark	1	4/14	1	8/8	2
Brown-headed Cowbird		4/16-4/19		7/10-9/8	20
Pine Siskin	1	5/19	8	9/16-11/11	14
American Goldfinch	1	5/8	1	10/25	2
House Sparrow	4	4/5-5/14	1	9/8	5

DISCUSSION

Characteristics of the spring flight—

Nearly all the casualties in spring are compacted into a 65-day period between April 2 and June 12. Most are neo-tropical migrants, with Red-eyed Vireo, Gray Catbird, Ovenbird, Tennessee Warbler, and Common Yellowthroat the chief victims.

Although I have 20 dates when over 100 individuals were collected during the spring period—all in prime time for occasional overshoots of southern species—I have records of only one Acadian Flycatcher, one Prothonotary Warbler, one Kentucky Warbler, and two Yellow-breasted Chats that were north of normal breeding range. Nearly all the dates fall within the pattern suggested for this area in Robbins (1991), but there were a few surprises—such as a Lincoln's Sparrow on April 11, an early Dickcissel on May 1, an early Veery on April 16, and early Palm Warbler on April 6, and such late migrants as a Gray Catbird (June 22) and Red-eyed and Yellow-throated Vireo (June 24).

Characteristics of the autumn flight—

The autumn flight is spread out over a much longer interval. A trickle of fall migration has been detected by July 10 and mega-kills have occurred between August 24 and October 14. The seven most affected species in fall are the Red-eyed Vireo, Ovenbird, Tennessee, Bay-breasted, Magnolia and Chestnut-sided Warblers, and American Redstart. Exceptional were early July arrivals for the Tennessee Warbler (6th), Ovenbird (10th), and Savannah Sparrow (13th), and a late migrant Grasshopper Sparrow on October 28th. November 12, 1995 is presumed as an arrival (not departure) date for Common Redpolls.

Composition of spring and fall casualties—Red-eyed Vireos (REV), are the most numerous for all seasons. In fall, Ovenbirds (OVEN) and Tennessee Warblers (TEWA) almost equal the numbers of Red-eyed Vireo. The fourth most common fall warbler, the Bay-breasted Warbler (BBWA) almost disappears from the spring chart. The Gray Catbird (GRCA) almost least in the fall

Table 2. Timing of spring and fall migration for species that overwinter primarily in the southern United States. Number Spring and Number Fall are for number of dates.

Species	# SPR	Extreme spring dates	APR	MAY	JUNE	# FALL	Extreme fall dates	AUG	SEPT	OCT	Total
Sora	4	4/30-6/10	1	2	1	83	8/03-10/23	14	54	15	221
Mourning Dove	11	3/28-6/16	5	4	1	23	8/28-10/19	2	7	14	55
Yellow-bellied Sapsucker	7	4/16-5/23	3	4		32	9/16-10/28		16	16	78
Red-breasted Nuthatch	3	5/18-5/25		3		73	8/16-10/23	6	53	14	325
Brown Creeper	2	4/22	2			49	9/19-10/31		16	33	151
House Wren	34	4/24-6/01	4	29	1	18	8/15-10/12	4	10	4	61
Marsh Wren	17	5/04-5/28	1	16		39	9/08-10/23		16	23	98
Golden-crowned Kinglet	17	3/27-5/04	13	1		94	9/21-11/18		19	71	831
Ruby-crowned Kinglet	64	3/28-5/29	20	43		89	9/10-10/25		32	57	965
Hermit Thrush	3	4/12-4/27	3			15	9/10-10/22		4	11	54
Yellow-rumped Warbler	39	4/15-5/22	5	34		112	9/01-10/31		55	57	1670
Savannah Sparrow	19	4/06-5/30	10	9		29	7/13-10/28	2	13	13	68
Fox Sparrow	7	3/28-4/23	6			20	9/22-11/07		7	11	47
Song Sparrow	17	3/21-4/28	11			17	8/06-10/25	3	6	8	48
Lincoln's Sparrow	5	4/11-5/24	1	4		75	9/04-10/28		50	25	249
Swamp Sparrow	21	3/21-5/19	6	14		55	9/15-11/06		22	32	237
White-throated Sparrow	13	4/24-5/16	3	10		44	9/18-10/22		22	22	144
Dark-eyed Junco	28	3/13-4/29	22			22	9/30-11/07		1	19	89
Purple Finch	9	4/06-5/08	5	4		31	9/01-11/01		14	15	57

Table 3. Timing of spring and fall migration for species that overwinter primarily in Mexico, Central America, or South America

Species	# SPR	Extreme spring dates	APR	MAY	JUNE	# FALL	Extreme fall dates	AUG	SEPT	OCT	Total
Black-billed Cuckoo	13	5/02-6/08		12	1	18	7/14-9/30	5	10	1	52
Eastern Wood-Pewee	8	5/22-5/30		8	1	29	8/15-9/30	9	20		106
Yellow-bellied Flycatcher	9	5/19-5/02		7	2	35	8/07-10/03	12	21	26	149
Trail's Flycatcher	25	5/08-6/09	1	21	1	99	7/29-10/01	39	5	44	547
Least Flycatcher	25	5/04-5/31		25		53	8/13-10/10	15	35	33	253
Veery	25	4/16-6/01	2	22	1	63	7/18-10/11	16	44	2	659
Gray-cheeked Thrush	8	5/08-6/01		7	1	56		1	46	9	401
Swainson's Thrush	19	5/08-6/01		18	1	119	8/22-10/07	11	91	17	1339
Wood Thrush	7	5/01-5/23		7		16	9/06-10/12	1	12	3	45
Gray Catbird	113	5/17-6/22	1	105	7	57	8/21-10/05	5	44	8	561
Solitary Vireo	15	4/18-6/01	1	12	2	115	8/28-10/28	4	91	20	964
Yellow-throated Vireo	48	5/04-6/24		47	1	108	8/27-10/12	7	86	15	459
Warbling Vireo	23	5/01-5/23		23		13	8/15-09/26	3	10		86
Philadelphia Vireo	45	5/04-6/08		43	2	171	8/20-10/15	13	138	20	4130
Red-eyed Vireo	136	4/18-6/24	1	125	10	268	—10/19	2	62	204	18255
Golden-winged Warbler	37	4/18-5/24	1	36		89	8/19-10/01	29	59	15	428
Tennessee Warbler	95	4/30-6/10	1	91	3	364	7/06-10/20	82	226	56	14435
Orange-crowned Warbler	8	5/03-5/12		8		62	9/11-10/28		33	29	363
Cape May Warbler	9	5/11-5/30		9		155	7/16-10/09	28	119	7	1813

Black-throated Blue Warbler	2	5/15-5/29		2		60	8/15-10/20	5	44	11	104
Black-throated Green Warbler	14	5/01-5/29		14		118	8/20-10/12	12	93	13	652
Blackburnian Warbler	21	5/08-5/26		21		186	8/13-10/12	60	115	11	1718
Palm Warbler	9	4/06-5/08	5	4		31	9/01-11/01		14	15	57
Bay-breasted Warbler	44	5/08-6/01		43	1	243	7/24-10/23	30	187	35	8074
Blackpoll Warbler	50	5/08-6/08		49	1	207	8/08-10/17	22	163	22	4353
Black-and-white Warbler	30	4/18-5/26	1	29		247	8/13-10/12	51	171	25	4487
American Redstart	51	5/08-5/31		51		250	8/16-10/21	49	174	27	5612
Ovenbird	105	5/03-6/03	5	101	4	319	7/10-10/19	70	212	29	15987
Northern Waterthrush	19	5/04-5/23		19		174	8/07-10/23	49	108	17	1957
Connecticut Warbler	16	5/14-6/02		14	2	225	8/15-10/22	38	165	22	2605
Mourning Warbler	26	5/14-6/17		23	6	139	8/14-10/04	61	741	45	558
Common Yellowthroat	88	4/29-6/11	1	82	5	172	8/15-10/23	14	129	28	2195
Wilson's Warbler	13	5/08-6/01		12	1	65	8/15-10/12	13	47	5	231
Canada Warbler	13	5/17-6/02		12	1	86	8/15-10/14	32	52	2	477
Scarlet Tanager	37	5/01-5/24		37		64	8/28-10/22	3	45	16	374
Rose-breasted Grosbeak	60	5/04-5/28		60		98	8/05-10/04	17	74	7	1068
Indigo Bunting	14	5/07-6/06		13	1	27	8/09-10/19	2	12	13	146
Clay-colored Sparrow	18	4/29-6/06	1	16	1	12	9/01-10/14		6	6	41
Baltimore Oriole	17	5/08-5/25		17		33	8/15-10/01	14	18	1	157

Table 4.

Species which appear to be in fairly clear-cut decline:	Species which appear to be fairly clear-cut increasing:
Eastern Wood-Pewee Yellow-bellied Flycatcher Veery Swainson's Thrush Solitary Vireo Philadelphia Vireo Scarlet Tanager	Northern Parula Nashville Warbler Common Yellowthroat Rose-breasted Grosbeak
Volatile group with erratic and abrupt rise and fall off (no clear-cut trend):	Volatile but showing overall increase in numbers:
Red-breasted Nuthatch Brown Creeper Golden-winged Warbler Black-throated Green Warbler Canada Warbler Ovenbird Palm Warbler Connecticut Warbler Mourning Warbler Traill's Flycatcher Gray-cheeked Thrush American Redstart	Ruby-crowned Kinglet Golden-crowned Kinglet Gray Catbird Yellow-throated Vireo Tennessee Warbler
Generally steady or consistent:	Volatile but showing overall decline in numbers:
Bay-breasted Warbler Red-eyed Vireo (slight overall decline) Chestnut-sided Warbler (slight down trend)	Least Flycatcher Orange-crowned Warbler Wilson Warbler Northern Waterthrush
Steady but with occasional upward spikes and drop-offs	Generally steady and consistent without discernible rise or fall:
Blackburnian Warbler Yellow-rumped Warbler Blackpoll Warbler	Magnolia Warbler Black-and-White Warbler Cape May Warbler Northern Waterthrush Black-throated Blue Warbler Yellow Warbler

comes in 4th in the spring. Another relatively inconspicuous bird in spring and relatively common in fall is the Common Yellowthroat (COYE) (Figures 3 and 4).

Figure 5 shows the composite make-up of the species for the entire period, 1957–1994 and includes spring and fall.

It is interesting that spring and fall do not mirror each other but are quite different. Actually, the fall distribution chart is quite similar in

composition shown by the overall chart.

Also, note that the Ruby-crowned Kinglet (RCKI) is quite numerous in spring, not in fall, while the reverse is true for the Golden-crowned Kinglet (GCKI).

There are 12 species that make up 77.7% of all the birds killed. The seven most affected species at this tower are the: Red-eyed Vireo, Ovenbird, Tennessee Warbler, Bay-breasted Warbler, Magnolia Warbler,

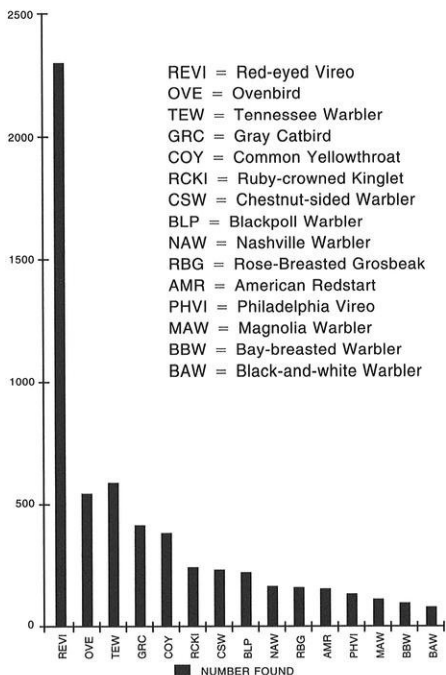


Figure 3. Fifteen Most Common Spring Species

Chestnut-sided Warbler, and the American Redstart. Over the years, it is interesting how consistent these relevant numbers are. The Red-eyed Vireo, Ovenbird, and Tennessee Warbler dominate almost every time frame chart. In the period between 1967–1969 there was an unusual contraction of Red-eyed Vireos and Ovenbirds but these numbers rebounded 5 fold between 1970–1972 and remain typical on all the remaining charts. I don't think may avid bird watchers would ever guess that the Connecticut Warbler and Philadelphia Vireo would be so prominently represented.

The figures showing population changes, as expressed in percentage occurrence in relation to overall population, are subject to varying in-

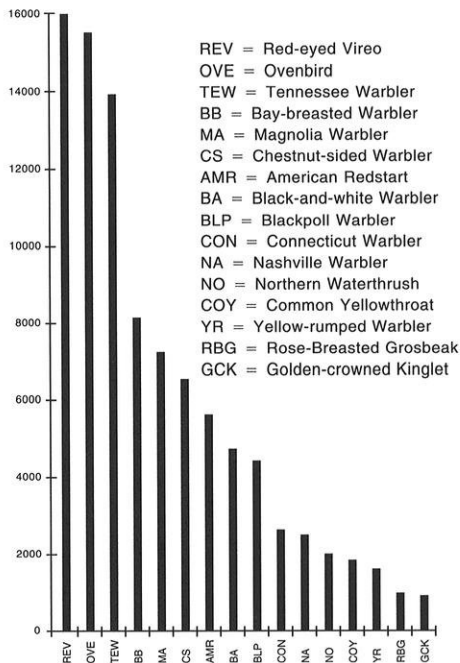


Figure 4. Fifteen Most Common Fall Species

terpretations. A minority show clear cut patterns of either overall decline or overall increase. The majority are erratic with abrupt rises and fall-offs with no overall clear-cut trends. Some are fairly consistent with perhaps exceptional three-year spans of rise or fall. I have tried to categorize these into the following groups. Admittedly, these variations are subject to different interpretations.

In my previous papers (*Passenger Pigeon* 1959, a,b) (Audubon Magazine, 1964) I have reviewed the theories and possible causes of this phenomenon. I have discussed how we have considered such things as magnetic fields of energy converging around tall structures, weather, etc. I was very confused at first about the weather because some nights which seemed to be at high risk for birds

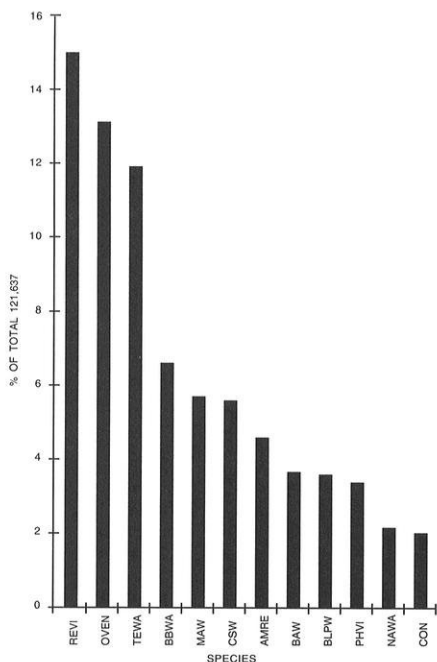


Figure 5. Most Commonly Encountered, Spring and Fall 1957–1994

and perfect for collisions produced no collisions. Other nights, when I did not expect to find birds, proved to be deadly. Was it just due to foggy nights and poor visibility? Answers were hard to come by. By now I have figured it out—at least I think I have. A number of factors all have to happen to produce a large kill. These are the major factors:

1. The right time of the year of major migration—which is usually mid-August to mid-October in the fall and mid-May in spring.

2. A good tail wind—south in fall, north in spring.

3. It has to be clear weather where and when the birds take off on their nocturnal flight.

4. As the birds are flying at elevations up to 10,000 feet, they are

overtaken or intercepted by a weather front. This forces the birds who are already aloft to come down closer to the ground.

5. If it rains early in the evening before the birds are flying, they won't take off in the rain. This could explain why we don't always see birds on rainy or cloudy nights.

6. The tower has to be at least 400 feet tall to cause severe problems. The guy wires supporting the tower are the major danger factors. As the birds swirl around the tower they crash into the cables.

7. This has nothing to do with why birds hit the tower, but it is a factor in trying to determine the extent of the casualties. The ground beneath the tower has to be easily observable and accessible.

8. If the tower is 2000-foot tall, of course the guy wires will stand out further. This would kill more birds than a 1000-foot tower. The ground area where birds fall is more extensive and therefore the birds are less concentrated and harder to find.

All and all my theory is as follows and I have not found a better explanation. As birds are migrating they use celestial and stellar navigation. When they are overtaken by a weather front they lose their stellar map. They have no stars by which to navigate. Then they see on the horizon a white light which they mistake for a star. Only this star is not a million light years distant. It is stationary and only a few miles distant. The birds try to keep this "star" at a fixed angle to their direction of flight. But after a few minutes the angle changes. To compensate the bird has to change its direction of flight in order to keep its direction

the same and what had been a linear flight now becomes a circular flight. As the birds fly in flocks of maybe thousands or more they communicate by chipping. Apparently this is an audible mechanism to keep the flock together. As the birds come near the light they are soon interrupted by a wire. I have heard them strike the wire and hit the ground as I have stood under the tower all night on one occasion.

One time on a cloudy night birds were falling steadily at 2–3 per minute and suddenly there was a break in the overcast and real stars broke through. Like magic the steady downfall of birds ceased. As the clouds vanished and the sky lit up with stars the birds apparently became reoriented. How birds have learned to utilize celestial navigation is one of the grandest evolutionary mysteries of this planet. It is indeed mind boggling that a bird whose brain can fit inside a thimble can accomplish easily what a human pilot requires almost a roomful of technological modalities and maps to achieve. I think this fantastic achievement by itself has been enough to rivet my attention for over 50 years.

There are many unresolved questions. And all of what I have described is not yet proven. One of the oddities of my long study at this tower is the occasional presence of bats, several different species. One wonders why should bats with their sophisticated sonar collide with a TV tower? Someone suggested that bats are programmed to distinguish moving objects such as other flying bats, birds, or insects—not stationary objects such as TV towers. Or could it be that they are asleep when they are

on their migration journey and they are not exercising their sonar?

Another feature of this study is the occurrence of unexpected rarities. In all my years only once have I ever seen a live Yellow Rail, although I have acquired a dozen at the TV tower. In fact, on September 23, 1974, I collected four. Other rarities include Acadian Flycatcher, Brewster's Warbler, Kentucky Warble, Yellow-breasted Chat, and Sharp-tailed Sparrow. These make up only 45 individuals out of a total of 121,560.

This study has also produced some very unusual dates: Dickcissel, May 1; Grasshopper Sparrow, October 28; Lincoln's Sparrow, April 11; Veery, April 16; Red-eyed Vireo, April 18; Golden-winged Warbler, April 15; Parula Warbler, July 10; Magnolia Warbler, July 10; Cape May Warbler, July 16; Ovenbird, July 10; and Sora, June 10. Please note that these dates are of migration, not of residents.

This study also revealed some species that were unusually numerous at the tower, but are not that common in the field, such as the Philadelphia Vireo and the Connecticut Warbler and to a lesser extent the Black-throated Blue Warbler.

A few observations can be made about population trends. The figures seem to show that there are declines in flycatchers although most other species do not show any detectable trends. Many of the figures show one or two spectacular leaps in numbers for a particular three year-span. Some show definite maintenance of percentage totals that would not reflect any decline in populations. Some reveal an increase, as in the Yellow-throated Vireo. (The data show an increase in the number of

occurrences, but this does not necessarily mean an increase in the population. It simply means the percentage of this species is increasing when compared to the total.) Some of the charts show volatility and chaotic activity with no recognizable trends.

Are TV towers a serious drain on the total population of birds? One of the most difficult problems in the study of birds is estimating populations. While numbers of birds killed may seem very high, we still do not know whether it is a significant total of the population. We can suspect it must be at least a moderate drain of the total population. With more and more TV towers being built it does seem ominous for birds which have plenty of other pressures on them. It is estimated that there are 600–1000 Kirtland's Warblers in existence. One could visualize that all of these could be wiped out on a single night. This isn't likely, but somewhere, sometime between Michigan and the Bahamas how can one guarantee that it will not happen at some date?

If one looks at the bibliography, it will be seen that there has been almost nothing in the literature regarding this issue since the mid 1980's. The problem seems to have been largely ignored and forgotten, but the problem has not gone away. This paper, covering encounters over a 38-year span, is perhaps the only long span study of its kind to be published as of this date.

CONCLUSION

Is there something that can be done about reducing these casualties? One thing that could be done

theoretically is to dismantle the existing towers. With present day satellite technology, broadcasting from tall towers is not necessary. The problem is, as soon as these tall TV towers are no longer used to transmit TV signals, they are generally converted for radio broadcasting and transmission for cellular telephones and beepers.

The size of the towers could be reduced. The higher the tower the greater risk of mega-collisions. My own experience suggests that if we put a ceiling of 300 feet on all towers this would definitely reduce casualties though not eliminate them.

It may help to illuminate the towers with flood lights so as to get rid of the blinking light-star illusion. It might help to use moving marque type blinking sequential lights or strobe lights instead of a fixed light. Some have suggested using fluorescent tape on the guy wires. As far as I know no experiments of this nature have been attempted.

The best, easiest, and least expensive would be to turn the lights off altogether on the nights of heavy migration. When an airplane is scheduled to fly in the vicinity, the lights could be turned on for a brief interval. In order to do this one would have to convince the FAA. They are not likely to do this.

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Tree Sparrow by *Robert A. Kleppin*

Ruby-throated Hummingbirds Observed Following Yellow-bellied Sapsucker: Evidence for Keystone Bird Species in Northern Hardwood Forests

The authors document an observed association between Yellow-bellied Sapsucker and Ruby-throated Hummingbird. They conclude that the hummingbirds' feeding at sapsucker wells may effect the timing of hummingbird migration.

by David Flaspohler and David Grosshuesch

Several species of hummingbirds are known to feed at the sap wells created by Yellow-bellied Sapsuckers (*Sphyrapicus varius*; hereafter referred to as 'sapsucker'). Hummingbird-sapsucker associations have been reported in a variety of locations including: New Hampshire (Bolles 1891, Kilham 1953), Michigan (Nickell 1956, 1965, Southwick and Southwick 1980, Foster and Tate 1966), Virginia (Freer and Murray 1935), and California (Sutherland et al. 1982; involving Red-naped Sapsuckers, *Sphyrapicus nuchalis*). Though the phenomenon of hummingbirds feeding at sap wells is well known, few, and often conflicting observations of hummingbird-sapsucker following behavior have been reported (Freer and Murray 1935; Foster and Tate 1966). For example, Bolles (1891) did not observe hum-

mingbirds following sapsuckers, indeed, he reported that hummingbirds were often driven from active sap wells by sapsuckers. Here we describe Ruby-throated Hummingbirds (*Archilochus colubris*; hereafter referred to as 'hummingbird') feeding at sap wells and following sapsuckers as they move from tree to tree. Our observations support the theory that the sapsucker plays an important and potentially keystone role in the hardwood forests of northern Wisconsin.

STUDY AREA AND METHODS

All observations occurred in upland forests of Forest County, within the Eagle River and Florence Districts of the Nicolet National Forest. The three forest stands in which we made the observations are typical of northern mesic forest (Curtis 1959,

Hoffman 1989) and are dominated by sugar maple (*Acer saccharum*), yellow birch (*Betula alleghaniensis*), red maple (*Acer rubrum*), and aspen spp. (*Populus tremuloides*, *P. grandidentata*). Northern hemlock (*Tsuga canadensis*), balsam fir (*Abies balsamea*), and white pine (*Pinus strobus*) make up 2–10% of the canopy within these stands.

Our observations were made incidental to a study of metapopulation dynamics of neotropical migrant songbirds. On four occasions during May–July, 1995 we observed hummingbirds following foraging sapsuckers. We also observed hummingbirds feeding at sap wells created by woodpeckers. The following text summarizes our observations:

27 May; 1015 hrs.—I observed a sapsucker pecking at a sugar maple and calling while a hummingbird flew around it. As the sapsucker “hitched” up the tree, the hummingbird followed it. The sapsucker then flew to a nearby tree (unknown sp.) and called. The hummingbird followed and circled within 3–5 m of the sapsucker. As the sapsucker continued pecking at the tree, the hummingbird perched on a nearby branch, appearing to observe the sapsucker’s activities. When the sapsucker changed positions in the tree, the hummingbird flew to the sapsucker’s prior location and appeared to inspect the sapsucker’s “work.” It never appeared that the hummingbird consumed any sap or insects from the pecked holes. After the hummingbird visited the sapsucker’s recently created holes, it again flew toward the sapsucker and hovered near it. The sapsucker then called

and flew to a nearby tree (unknown sp.) with the hummingbird following it. Similar behavior continued at this new tree. The sapsucker did not remain at any one tree for more than 90 sec. and the hummingbird followed the woodpecker to each of the trees. On three occasions, the hummingbird perched and appeared to watch the sapsucker peck at a tree; once, the hummingbird went to an area that the sapsucker was pecking after the sapsucker had left, and twice, the hummingbird left its perch to follow the sapsucker to a different tree. *D.G.*

31 May; 0915 hrs.—I heard a sapsucker calling in the sub-canopy/canopy and when it landed on a tree, I observed a hummingbird circling it. The sapsucker called and “hitched” up the tree but never pecked at it. The hummingbird hovered near the sapsucker during this time. After about 25 seconds, the sapsucker flew from view with the hummingbird following close behind and the sapsucker calling in flight. *D.G.*

12 June; 1030 hrs.—I observed a sapsucker flying through the sub-canopy with a hummingbird following it. The sapsucker landed in an unknown species of tree, and the hummingbird perched on a branch 0.5–1.0 m away and faced the sapsucker. The sapsucker then pecked the tree, and, after a few seconds, the hummingbird flew toward the sapsucker and hovered near it. The sapsucker then called and flew from view with the hummingbird following behind. *D.G.*

26 July; 0729 hrs.—Four field assistants and I observed a male hummingbird perched on a tree branch 7 m away from another tree (*Quercus rubra*) where a male sapsucker was pecking holes. The hummingbird flew toward the sapsucker and hovered above it for 5–10 sec., and then it was lost from sight. The sapsucker landed in an adjacent tree and began to feed from previously drilled sapsucker holes, then flew north and was lost from sight. About 10–20 sec. following its departure, a male hummingbird (presumably the same individual) began to feed at the sap wells that the sapsucker had just left. The hummingbird appeared to feed on sap from these wells and then flew to an adjacent paper birch (*Betula papyrifera*) and fed on the exuding sap of old sapsucker wells. About 10–15 sec. later, we heard a sapsucker call from the north, and we then saw the hummingbird fly toward the calling sapsucker. *D.F., D.G.*

DISCUSSION

The importance of Yellow-bellied Sapsuckers to other species of birds, mammals, and insects in the forests of Wisconsin has been poorly explored. While making the above observations, we also observed the following species feeding at sapsucker sap wells: dark-phase Gray Squirrel (*Sciurus carolinensis*), wasps (Vespidae), ant species (Formicidae). Of at least 35 species of birds reported to associate with sapsucker trees (Foster and Tate 1966), 20 occurred in or near our study plots during the breeding season. In Michigan, Foster and Tate (1966) found that about 30 groups (species

and families) of arthropods and six species of mammals were associated with sapsuckers and their wells. The keystone role of the closely related Red-naped Sapsucker in the forests of western United States is well documented (Ehrlich and Daily 1988, Daily et al. 1993).

The Ruby-throated Hummingbird is the only member of the family Trochilidae to breed in the forests of northern Wisconsin (Robbins 1991). Because sapsuckers are a common bird of forested areas of northern Wisconsin (Temple and Cary 1987), their sap wells may provide an important source of food to hummingbirds during times when flower nectar is scarce. In North America, the diversity of flowers utilized by hummingbirds shows an inverse correlation with latitude (Austin 1975, Grant and Grant 1967, Miller and Nero 1983). Although little data are available on species of flowers used by Ruby-throated Hummingbirds in northern mesic forests of the Great Lakes, few flowers with the potential to be major nectar sources were noticed on our study plots (approx. 40 ha) during 20 May–15 July. Sapsucker wells may allow hummingbirds to arrive at the breeding grounds earlier and to depart later. Such wells may also contribute to biogeographic patterns of hummingbird distribution, particularly at the margins of their breeding range (Miller and Nero 1983).

As a tree cavity excavator, the sapsucker creates potential nest and den sites for a variety of secondary cavity users in northern forests and may influence the population dynamics of several species of cavity and sap-well utilizing organisms. Howe et al.

(1992) discuss the importance of primary cavity nesters as keystone species (Gilbert 1980) in the forests of northern Wisconsin and classified the Yellow-bellied Sapsucker as a source/core species in this region. Source/core species are those whose geographic range is centered in the Upper Great Lakes region. No data are available on levels of recruitment for sapsuckers in northern Wisconsin. Such reproductive data are essential for understanding a species' population dynamics and are of particular importance for a potential keystone species such as the sapsucker. More research is needed to clarify the community role of sapsuckers in the forests of the Upper Great Lakes, including their interaction with hummingbirds.

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The Status of Black Terns in Wisconsin, 1995

The authors find BBS data shows decreasing trends in Black Tern abundance in Wisconsin. This is probably due to habitat loss, human disturbance, and wetland inundation.

by Jennifer L. Graetz and Sumner W. Matteson

According to the U.S. Fish and Wildlife Service's Breeding Bird Survey (BBS), Black Tern (*Chlidonias niger*) numbers declined by nearly 4% per year in Iowa, Minnesota, and Wisconsin between 1966 and 1987 (Hands et al. 1989). In Wisconsin, a survey was initiated in 1979 to determine the statewide abundance, distribution, and habitat requirements of Black Terns (Tilghman 1979). At over 300 wetland sites, state and federal agency personnel and volunteers conducted roadside surveys or by searched wetlands with a boat or on foot. Based on these data, permanent road survey transects and nest-search study areas were established in 1980 and surveyed from 1980 to 1982. Although these data are valuable as baseline indices to the abundance of Black Terns, data from follow-up surveys are essential to document population trends of this "special concern" species in Wisconsin. As a Federal category two species, information on population trends is needed to de-

termine if Black Terns should be listed as a federally threatened or endangered species.

This study represents the first year of a planned three-year follow-up survey of Black Terns in Wisconsin. Primary objectives were to: 1) repeat Black Tern baseline surveys conducted in 1980–1982, 2) determine preliminary population trends by comparing abundance indices estimated in 1980–1982 with indices estimated in 1995, and 3) provide recommendations for future monitoring.

STUDY AREA

All survey work was conducted at wetlands within 19 counties in Wisconsin. The majority of these wetlands were marshes, but wetland sites also included stream edges, flooded sedge meadows, and areas of open water (Tilghman 1979). The primary emergent vegetation associated with these wetlands was roundstem bulrush (*Scirpus* spp.), river bulrush

(*Scirpus fluvialtilis*), cattails (*Typha* spp.), burreed (*Sparganium* spp.), sedges (*Carex* spp.), grasses (Poaceae), water plantain (*Alisma plantago*), and arrowhead (*Sagittaria* spp.) (Tilghman 1979, Mossman 1980).

METHODS

Roadside Surveys—Nineteen roadside transects, surveyed in 1980–1982, were surveyed in 1995 employing the protocol established by Mossman (1980). Transects were first set up in 1980 within 15 counties and included a range of marginal to high-quality breeding habitat. The quality of habitats was determined from pilot survey data (Tilghman 1979) and on the subjective judgments of the project coordinator and local cooperators in 1980 (Mossman 1980).

In 1995, as in 1980–1982, the distance between survey points for each transect varied according to the abundance and distribution of tern habitat. Each transect consisted of 15, five-minute stops at sites where the majority of a wetland could be seen. Most stops were located on the shoulders of secondary roads, but several required access on foot, along railroad tracks and through old fields, cropland, and woodland. Transects were surveyed once between 0600 and 1900 hours during the breeding season, between 25 May and 24 June by volunteers or Department of Natural Resources personnel. Transects were not surveyed when wind speeds were consistently above 32 km per hour or during rain.

Each cooperator was sent a package of materials that included a gen-

eral explanation and instructions for conducting the survey, data sheets, verbal and legal descriptions of all stops on the transect, a county road map illustrating the locations of stops, and photocopies of 7.5' or 15' topographic maps delineating stop locations and areas to be viewed. Total numbers of Black Terns detected per 15 roadside stops were used as abundance indices for year-to-year comparisons. If more than one count was made during the survey period, the highest estimate was used.

Nest-Search Surveys—Four study areas, all surveyed in 1980 and 1981 and two in 1982, were searched for nests in 1995 using the protocol established by Mossman (1980). Two study areas in Columbia and St. Croix/Polk counties, were surveyed by searching all wetlands where Black Terns were observed during three roadside transects within each of these counties. In the Vilas/Oneida and Ashland county study areas, nest searches were conducted within wetland sites designated in 1980 as suitable Black Tern habitat. Munninghoff's Marsh, Black Tern Bog, and Phil's Bog were searched in the Vilas/Oneida county study area as was Fish Creek Sloughs in the Ashland county study area.

All nest searches were conducted during incubation, which varied by study area depending on the location in Wisconsin. The Columbia county study area was searched during the first week of June, St. Croix/Polk counties the third week of June, and the Vilas/Oneida and Ashland county study areas during the last week of June. Wetlands were thoroughly searched by two to four people in one to three canoes de-

pending on the size of the area and Tern colony. To locate nests in wetlands with only a few suspected nesting pairs, observed watched an area for five to 10 minutes in hopes of detecting terns flying down to their nest site. To avoid double-counting, nests were "marked" by knotting a piece of nearby vegetation. The total number of nesting pairs detected per wetland site were used as abundance indices for year-to-year comparisons.

Data Analysis—All data gathered in 1995 were summarized and compared with the baseline data collected from 1980 to 1982. Wetland sites searched for nests in 1980–1982 but not in 1995 (i.e. Little Shishibogoma and Kakagon Sloughs within the Oneida and Ashland county study areas respectively), however, were excluded from the data comparisons. The road survey and nest search data from 1980–1982 were averaged for a general comparison with the 1995 data. Chi-square analyses were used to determine if the total number of Black Terns for each roadside survey and Black Tern nesting pairs by study area was evenly distributed among the years. The distribution of terns from each roadside survey was then compared to the overall pattern using chi-square tests, with columns representing years and rows representing the road survey being tested vs. the total number of Black Terns detected per year. Chi-square tests were also performed on the nesting data, with columns representing years and rows representing the study area being tested versus the total number of nesting pairs detected per year. The 1982 nest search data were incomplete (i.e. the wet-

lands on the Columbia county and St. Croix/Polk county road surveys were not searched) and were excluded from the chi-square analysis.

RESULTS

Roadside Surveys—The abundance indices of Black Terns from each roadside survey are summarized by year in Table 1. The distribution of Black Tern indices was not similar among years ($\chi^2 = 387$, 54 df, $P < 0.0001$). Abundance indices for thirteen routes differed significantly from the overall distribution, with ten routes declining, two increasing, and one remaining stable when comparing the early 1980s to 1995. Black Tern indices from the remaining six routes, although not significantly different from the overall distribution, indicate declining trends. The 1995 abundance indices from four routes within Burnett, Oconto, Marathon/Mead, and Juneau counties declined by more than 80% from the average indices detected in 1980–1982.

Figure 1 illustrates the total number of roadside stops on which Black Terns were detected and the total number of individuals recorded for roadside surveys run during 1980–1982 and 1995. The number of individuals detected in 1995 declined by 65% from the average number detected in 1980–1982. The number of roadside stops where Black Terns were detected in 1995 decreased by 53% compared with the average number of stops in 1980–1982.

Nest Search Surveys—The number of Black Tern nesting pairs by study area, wetland site, and year are summarized in Table 2. The number of

Table 1. Black Tern abundance indices, defined as the number of individuals detected per 15 roadside stops, by route name and year. Surveys were conducted in 1980, 1981, 1982, and 1995 from roadside survey routes set up within 15 counties in Wisconsin, one to three routes per county.

Route Number	Route Name	Number of Black Terns				χ^2 Value ¹
		1980	1981	1982	1995	
1	Bayfield	14	3	0	3	18.8*
2	Douglas	26	43	42	41	43.4*
3	Burnett	78	62	70	14	5.9
4	St. Croix/Polk North	9	18	5	0	12.7*
5	St. Croix West	6	13	11	17	34.5*
6	St. Croix South	12	24	6	0	17.8*
7	Oconto	132	100	166	14	35.5*
8	Brown	76	41	50	11	15.3*
9	Marathon/Meed	122	164	158	20	22.9*
10	Juneau	82	104	87	20	6.2
11	Winnebago	30	47	30	19	7.6
12	Dodge	93	74	32	21	28.5*
13	Columbia North	30	22	32	15	4.2
14	Columbia East	50	63	91	39	18.3*
15	Columbia South	37	48	37	18	2.6
16	Dane	15	10	11	18	30.2*
17	Jefferson	10	2	0	4	15.7*
18	Waukesha	21	23	31	7	2.4
19	Kenosha	10	3	4	18	62.9*
TOTALS		853	864	863	299	

¹Chi-square values (χ^2) marked with an asterisk indicate a significant difference in the abundance of Black Terns among years at $P < 0.05$.

nesses recorded from all study areas in 1995 was similar to numbers recorded in 1980 and 1981. Like the road survey indices, however, the distribution of Black Tern nesting pairs was not similar among years ($\chi^2 = 79.8$, 6 df, $P < 0.001$). The number of nesting pairs differed significantly from the overall distribution in the Oneida/Vilas and Ashland county study areas. In the Oneida/Vilas county study area, only three breeding pairs were detected within one of the three wetland sites. No nesting terns were detected in Fish Creek Sloughs in the Ashland study area.

Although the number of nesting pairs in the Columbia county study area indicated an increase when comparing 1980–1981 to 1995, the

number of wetland areas where tern nests were detected decreased by 60%. The same trend occurred in the St. Croix county study area, where the number of wetland areas occupied by tern decreased by 80%. The total number of occupied wetland sites in all study areas decreased by 70% (Figure 2).

DISCUSSION

Preliminary results from this study suggest decreasing trends in Black Tern abundance and in the number of wetland sites occupied by breeding Black Terns in Wisconsin since 1980–1982. The suggested population decline could be attributed to one or more of the following

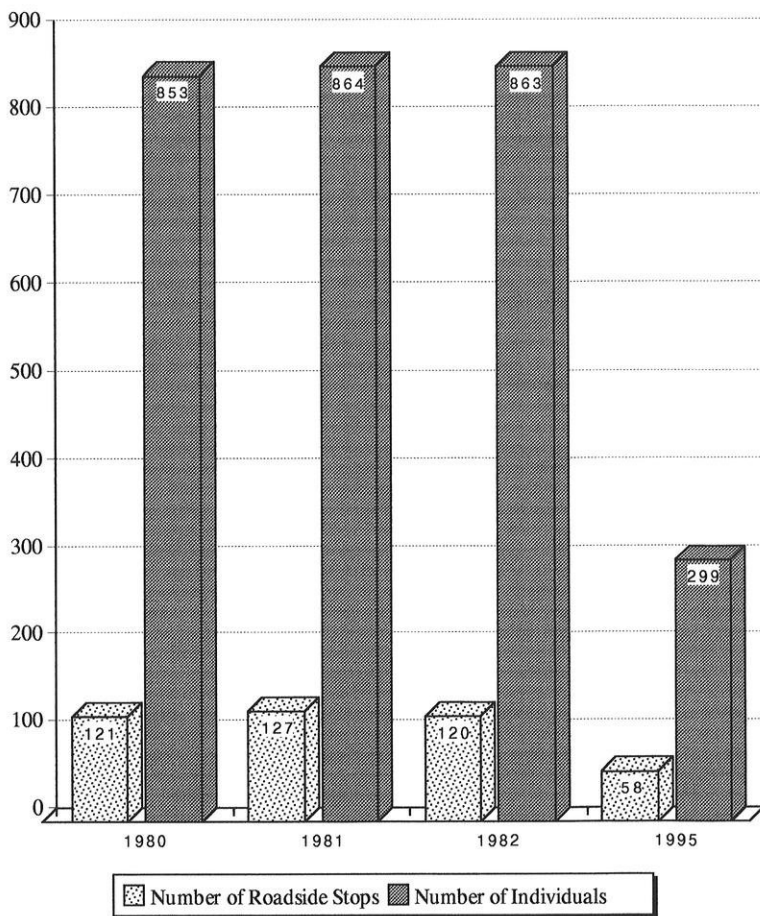


Figure 1. The total number of roadside stops on which Black Terns were detected and the total number of individuals recorded, by year. Determined from 19 road survey routes run once between the third weeks of May and June in 1980–1982 and in 1995. The combined number of stops for roadside surveys is 285.

factors: 1) loss of suitable habitat, 2) human disturbance, 3) inter- or intraspecific competition, and 4) effects of contaminants or disease on birds on the breeding and/or wintering grounds and 5) nest and/or chick losses to predation, adverse weather, or water level fluctuations on the breeding grounds (Alcorn 1942, Cuthbert 1954, Manuwal 1967, Bergman et al. 1970, Zaret and Paine

1973, Fox 1976, Bailey 1977, Faber and Nosek 1985, Hands et al. 1989).

Although specific data on the quality of Black Tern habitat, disturbances to tern colonies, or on tern productivity were not collected during the 1995 survey, some general observations could explain the decrease or absence of terns on several surveyed areas. The most obvious was the loss of habitat, with many of the

Table 2. Number of Black Tern nesting pairs by study area, wetland site, and year. Determined from nest searches on designated wetlands within each study area in 1980–1982, and in 1995.

Study Area (County) Wetland Site	Number of Nesting Pairs				χ^2 Value ²
	1980	1981	1982 ¹	1995	
Oneida-Vilas					
Munninghoff's Marsh	13	28	16	0	
Black Tern Bog	5	9	5	0	
Phil's Bog	5	10	7	3	
TOTAL	23	47	28	3	28.9*
Columbia ³					
Grassy Lake	31	60	—	90	
Schoenberg's Marsh	23	19	—	0	
Mud Lake	15	28	—	29	
Rowe's Marsh	10	24	—	0	
Keyeser Marsh	10	4	—	41	
Skogen's Slough	12	2	—	0	
Longcrossing Ponds	1	3	—	0	
Erdman Marsh	1	0	—	0	
Benzine's Pond	1	0	—	0	
Henning Marsh	2	3	—	0	
Bankert's Pond	1	1	—	0	
Hartley's Meadow	0	0	—	2	
TOTAL	107	144	—	165	4.9
St. Croix/Polk ³					
Hatfield Lake	1	0	—	0	
Unnamed Pond (South #8)	1	0	—	0	
Boardman Marsh	8	9	—	0	
Unnamed Pond (West #9)	2	1	—	0	
St. Croix/Polk ³					
Unnamed Pond (West #10)	6	0	—	0	
Larson's Pond	1	5	—	22	
East Three Lakes	2	0	—	0	
Unnamed Pond (North #12)	0	5	—	0	
Oakridge Lake	0	5	—	0	
TOTAL	21	25	—	22	.1
Ashland					
Fish Creek Sloughs	19	2	7	0	35.4*
GRAND TOTAL	170	218	—	190	

¹Several study sites not sampled therefore 1982 is not included in the Chi-square analyses.

²Chi-square tests only performed on the total number of nesting pairs for each study area. Chi-square values (χ^2) marked with an asterisk indicate a significant difference in the total number of Black Tern nesting pairs among years at $P < 0.05$.

³Only wetlands on which Black Terns were found during the roadside surveys were searched for nests.

smaller wetlands surveyed by the roadside transects completely dried up, drained, or filled. Human disturbances noted were the widening of and the heavy traffic on, the highway near Fish Creek Sloughs in the Ashland study area, and the new

houses built in the area adjacent to Phil's bog in the Oneida/Vilas county study area. Three dogs were also observed swimming through Phil's bog while the nest search was conducted. In addition, wetlands that were suitable for Black Terns

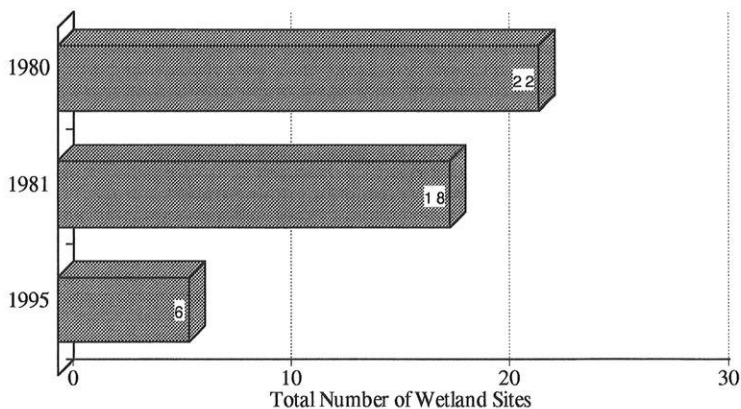


Figure 2. Total number of wetland sites where Black Tern nests were found by year. Determined from nest search surveys at designated wetlands within four study areas in Wisconsin in 1980, 1981, and 1995.

when the survey was initiated in 1979, may be presently unsuitable due to normal wetland succession past the "hemi-marsh" stage (Hands et al. 1989). Weller and Spatcher (1965) identified a wetland as a "hemi-marsh" when the ratio of emergent vegetation to open water was roughly 50:50. Water depths also may have fluctuated above or below suitable levels, between 0.3 and 1.4 meters (Mossman 1980, Hands et al. 1989). It is possible that nesting Black Terns, once present on the surveyed wetlands, moved to other, more suitable wetlands. More research is needed to determine the distribution and status of nesting terns in potential habitat. The decline of Black Terns on their breeding and/or wintering grounds also needs to be investigated in order to successfully manage this species.

RECOMMENDATIONS

We strongly recommend that the road and nest-search surveys be re-

peated for two more years to equal the sampling effort of the baseline survey. This will allow for a more discriminant statistical comparison between baseline and follow-up surveys. Habitat variables such as water depth and vegetation type and the amount and type of "disturbance" within wetlands should be measured on wetlands currently and historically occupied by nesting Black Terns in the nest search study areas. Habitat data should be collected every year terns are surveyed to describe the specific habitat needs of Black Terns, monitor the quality of available habitat, and to help determine if suitable wetland habitat is a limiting factor in Wisconsin. This information could also be used to support management decisions regarding the alteration of wetlands to higher quality tern habitat.

Depending on available time and funding, the following research needs could also be addressed (Hands et al. 1989):

1. Describe the size and intersper-

- sion of wetlands preferred by Black Terns using road survey and nest search data with aerial photos in a GIS system.
2. Investigate the causes of nest and chick losses and if or how management could reduce these losses (e.g., through predator management or control of water levels).
 3. Monitor the levels of contaminants in Black Terns and their eggs and investigate the effects of contaminants on nesting success and on juvenile and adult survival.
 4. Investigate the effects of human disturbance on nesting Black Terns.

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Temporal Alteration and Coordination of Calls by Paired Canada Geese in Duetted Calling of Aggression, Territorial and Triumph Behavior

The complex coordination of alternating male and female calls during duetted call series of Canada Geese appears to be based on changes made by the male that permit him to accommodate to the female's call rate. By reducing both call duration and interval between calls, the male effectively adapts his call rate to the females' when duetting.

by Philip C. Whitford

By definition avian duets are mutual acoustic displays involving precise (Thorpe 1961) or moderately precise temporal coordination by the participants (Farabaugh 1982) and generally considered to be limited to members of a mated pair. Canada Geese (*Branta canadensis*), White-fronted Geese (*Anser albifrons*), Snow Geese (*Chen caerulescens*) and Brant (*Branta bernicula*) all evidence true duets between mates "Cackling the Triumph Ceremony" (Farabaugh 1982: 94; Johnsgard 1965). Farabaugh also includes the extended family group as potential participants in duetting. Using her definition one may view many calling displays of Canada Geese, e.g. group aggression, territorial calling and

perhaps even preflight calling, as forms of duets.

Radesater (1974) sonographed individual components of triumph calls, publishing single examples each of "Honking," "Contact," and "Snore" Calls of *B. c. canadensis*. His "Snore call" lacked the initial descending syllable typical of "Snore calls" defined for triumph displays by Whitford (1987), thus is more typical of a "G" or threat call in form. (A short description of relevant calls of Canada geese and their usage can be found at the end of the methods section. No quantitative data on calls, duetted or given singly in displays, was reported by Radesater for any of the calls used in triumph displays.

Many questions about duetted calling of Canada Geese remained unanswered when I began this study. Were these call sequences true duets in the sense that they alternated calls and, if so, what was the precise nature of their duetting structure? Was the duet antiphonal with precise alternation of calls, or was it simultaneous with extensive overlap of calls by the two birds? Which bird determined call rates during duetted calling? Are the same calls used in all these behaviors? Does interval, duration, or relative frequency of like calls change in different displays to help clarify the sender's message? What parameter of the call is used to coordinate the calls of the two birds?

With so many unknowns existing with regard to duetted calls of geese, I decided to attempt to answer some of these questions using quantified vocal behavior data I had acquired as part of my dissertation study of Canada Goose behavior. Emphasis of my dissertation was on sonographic analysis of vocalizations of the Giant Canada Goose (*B. c. maxima*) correlated with detailed behavioral descriptions (Whitford 1987). As such, I had an ample collection of sonographed calls from marked individual birds and known pairs that could be drawn upon to analyze the nature of duetted calls. The collection included duetted calls used in a number of different discrete behaviors, aggression, territorial and triumph calling.

METHODS

Research was conducted at the Milwaukee County Zoological Park,

Milwaukee, Wisconsin, within a 49.0 ha (hectare) enclosure which confined my free-roaming, pinioned, geese to zoo grounds. A 2.0 ha man-made lake and two smaller ponds surrounded by mowed grass (Kentucky bluegrass, *Poa pratensis*) were observation/vocal recording sites for behaviors.

Zoo grounds opened at 0930 CST daily, permitting undisturbed observation from 0600 to 0930. Observation was conducted 8 August 1981, to 15 August 1982; four hours per day, either 0600–1000 or 0800–1200, three to four days/week. During the March–May territorial and nesting season geese stayed near the water. Observations were increased to 5–6 days per week and extended to 1500 hours two days per week during this period. Observation was via “obtrusive field observation” (Burghardt 1973) with no attempt to conceal myself from the study birds as I followed and recorded them.

Principle geese used in this study were captured 7 July 1981, at Silver Lake, Rochester, Minnesota. This flock was used by Hanson (1965) to establish the existence of, and define the giant Canada goose subspecies. Geese were aged and sexed by cloacal examination (Hanson 1965), and 15 yearling birds were obtained (birds in their second summer, Balham 1954). They were pinioned and triple banded with numbered, colored leg bands. Individual geese were identifiable on land by band color sequence. In addition, there were 18 resident “zoo geese” I had measured and weighed [also *B. c. maxima* using Hansen's (1965) criteria], aged, sexed and banded with

numbered metal leg tags in September 1980.

Calls and verbal descriptions of behavior were tape-recorded with a Uher Report model 4200 stereo tape recorder, tape speed 9.6 cm/s, with an Electrovoice model 644 directional microphone. Descriptions included date, time of day, identity, posture and behavior of the birds involved. Tapes were transcribed and calls subsequently sonographed with a Kay Elemetrics model 6061B sonograph using a 150 Hz filter and 80–8000 Hz setting.

Call duration and interval parameters were measured directly from sonograms using a transparent xerox overlay made from a Kay Elemetrics sonograph sheet marked in 100ths of second intervals. Measured call duration and interval aspects of calls of known individuals and/or pairs of geese were compared between times when they were calling alone and during duetted calling bouts observed in aggression, territorial, and triumph behaviors. Comparison of call parameters of the same individuals involved in different behavior was done to determine whether each behavior evidenced a distinctive temporal pattern that would help birds discriminate meanings of duetted calls. T-tests were used to determine whether significant differences ($P < .05$) in temporal patterns existed between the different duetted calling behaviors and/or between calls given by known individuals calling alone or as part of a duetted sequence with their mates. Descriptive statistics were calculated using the standard statistics and ANOVA functions of the minitab statistical package (Minitab Inc. 3081 Enterprise Dr. State

College, Pennsylvania 16801) on the IBM 360 mainframe computer at UW-Milwaukee. ANOVA and multivariate analysis were used to determine which interval and duration components of duetted calls had the strongest correlation to the timing of the partners' responses, and therefore which components were likely to be used as a basis for coordination of calls between pair members.

Definitions of calls follow those of Whitford (1987) and are briefly summarized below for phonetic description and usage. The first three calls, "A," "G" and "L" are given only by males, with the "A" and "G" calls being used in a number of different behaviors including aggression, territorial display, triumph displays and preflight calling. "A" calls have a duration of 0.13–0.22 sec, phonetically "hrEH," they are commonly translated as a "honk" call. "G" calls, phonetically "HURRRR," are longer (0.24–0.75 sec), harsher calls used in aggression and threat situations. "L" calls, phonetically "HRAaaaa" are 1.0–1.5 sec long, low rasping calls used only in triumph displays. The latter were referred to as "snore calls" by Collias and Jahn (1959) and Whitford (1987). "E" calls, phonetically "hrink" are short (0.09–0.13 sec) high-pitched honks given only by females. They are used in a wide array of different behaviors. The three major behaviors studied with regard to duetted calls may be briefly defined as follows: aggression—any physical approach or attack upon another bird, usually in a high or low coil neck posture (Klopman 1968); territorial display—any calling or posturing occurring within the se-

lected nesting territory and used to prevent entry by other geese into the area; triumph display—pair bond strengthening display following aggression where the male approaches his mate with the neck extended and she responds in kind with calls and weaving of the neck, defined in detail by Radesater (1974).

RESULTS AND DISCUSSION

Male Canada geese aggressive and territorial call series were restricted to the use of "A" and "G" calls; the "L," "A" and "G" calls were all observed in triumph series. Females used only the "E" calls in all observed duetting behaviors.

Visual inspection of sonograms from triumph, aggression and territorial call series evidenced no "gestalt" differences. It was clear from the pattern of male and female call alteration seen on the sonograms that the male and female were not simultaneously calling in a random pattern during duets. The alteration of calls was regular and predictable in overall form with little or no overlap in call production. When call and interval durations were measured and compared for each behavior and between call series by individual males calling with and without mates, it was obvious that these males evidenced different call intervals when calling with the female vs without. It was even more apparent that the male call interval changes even within a given call series when the female fails to call. Males decreased the interval between "A" calls by as much as 0.24 sec when calling with the female when this was compared to the between call intervals used

when calling alone. The result of reducing the interval between male calls was that no significant difference existed between the call rates of the pair members when calling together, a factor which permitted call coordination and an alternating call pattern. All males tested evidenced this pattern of longer call intervals when calling alone in a display (or when the female ceased to call during a bout). Male YGG showed this pattern clearly; when the female quit calling in an aggressive duet, he immediately resumed his solo rate of call (Fig. 1). Since one bird alters its call rate when the other calls thus avoiding simultaneous call production, the calls take the form of a coordinated alternating duet. The pattern of duration and interval change was found to be the same in aggressive and territorial calling as in triumph calling, which has previously been accepted as a true duet (Farabaugh 1982), so it follows that the other call forms are also true duets.

I used an ANOVA of measured duration and intervals within triumph displays of the pair for which I had the largest sample—YGG \times YBG—to determine whether the change in call rate was statistically valid (Table 1). Changes in the males call interval, calling alone versus duetted, were found to be significant in both aggression (2 d.f., $F = 79.38$) and triumph (2 d.f., $F = 37.39$) calling. Changes in call duration were also significant for these behaviors, 2 d.f., $F = 170.18$ and 2 d.f., $F = 132.47$, respectively. Male changes in "A" call duration and interval were not found to be significant during territorial calling, a factor which may

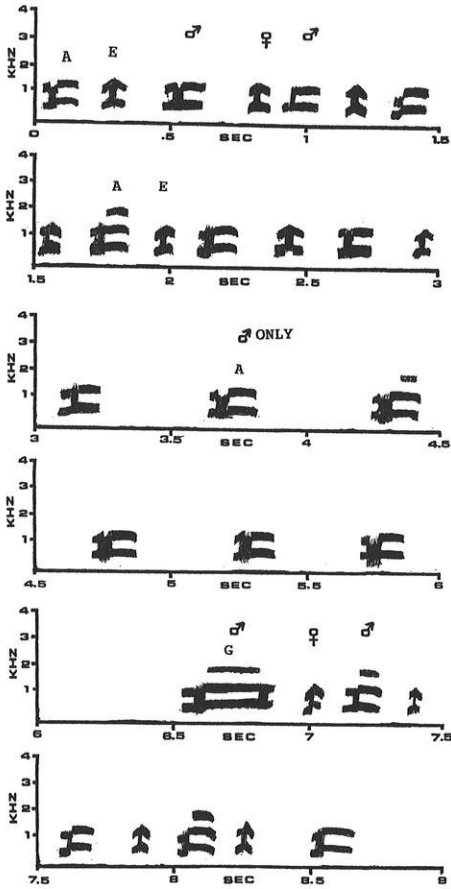


Figure 1. Paired aggressive calling by YGG and BGY, 19 April, 1982. Note that the males' call interval increases when the female fails to call, when compared to intervals in duetted portions of the call series.

help other geese distinguish this behavior from the others. Similar analyses were done for known pairs with smaller call sample size. Both interval and duration of male "A" calls differed significantly between call series with vs without the female, in triumph and aggressive displays for all males examined. Again, temporal differences were not found to be significant within territorial calls.

Pooled data from additional pairs were used to determine whether the longer interval of the male calling alone held for a larger sample. Mean aggressive call interval for all males calling alone was 0.468 sec ($N = 31$, $STD = 0.115$) and statistically differed from both the females' call interval, and from the male's call interval when calling with the female in aggression ($95\% \text{ CI}$, $N = 422$, 2 DF , $F = 90.47$). The mean male "A" duration (0.179 sec, $N = 32$, $STD = 0.030$) was significantly longer when calling without the female ($95\% \text{ CI}$, $N = 382$, 2 DF , $F = 119.77$). These results support a pattern of reduced male "A" interval and duration in duetting. Though significantly reduced from calling alone, male "A" duration still exceeds "E" duration by 0.04–0.07 sec in most cases. Thus for males to alternate calls with the female the males must also reduce interval to slightly below the "E" call interval to compensate. Since males reduce call interval and duration from solo call rate to one indistinguishable from the females, it is the female call rate that determines the overall call production rate in duets.

It is typical of the species that females rarely call in aggression, triumph or territory behavior without the male calling also. My sole example of a female performing aggressive calling without the male evidenced identical duration and interval as that she used when calling with her mate. This provides at least some evidence that females of the species do not significantly alter their call interval, duration, or overall call production rate when duetting versus calling alone. Therefore, once again, it appears to be the male

Table 1. Interval and duration characteristics (sec) of "A" and "E" calls as used in aggression, territory and triumph calling by YGG, (M) "A" calls when calling alone, (MF) "A" calls given with the female calling, and (F) the female YBG "E" calls given with the male. N = number, X = average, STD = standard deviation

	Interval in seconds								
	Aggression			Territory			Triumph		
	MF	M	F	MF	M	F	MF	M	F
N	106	18	98	49	13	60	51	49	47
X	.288	.492	.312	.340	.406	.289	.282	.410	.294
STD	.062	.102	.056	.093	.079	.072	.041	.120	.067
Max	.45	.68	.44	.60	.55	.54	.37	.70	.48
Min	.12	.28	.17	.22	.26	.17	.20	.22	.19
2 D.F., F = 79.38					2 D.F., F = 37.39				
	Duration in seconds								
	MF	M	F	MF	M	F	MF	M	F
N	114	16	84	58	25	60	59	53	39
X	.146	.173	.104	.162	.172	.100	.150	.168	.098
STD	.020	.032	.007	.032	.049	.017	.012	.029	.015
Max	.21	.27	.12	.22	.31	.13	.18	.23	.13
Min	.06	.14	.09	.06	.12	.08	.16	.08	.07
2 D.F., F = 170.18					2 D.F., F = 132.47				

who must accommodate to the females' calling pattern for the duet to be performed.

Determining the mechanism regulating the interplay of male and female calls is difficult. I believe males most frequently initiate calling, yet thereafter, call in response to the females' call. In this proposed pattern, once calling has begun the male calls as soon after the female as he perceives her call. As mentioned previously, the male hesitates or resumes his own call rate if the female does not call or when the female's calls overlap his. When the latter happens, he apparently fails to perceive her call and doesn't respond to it. The male response to female call hypothesis was derived in large part by visual review of numerous duetted call sonograms; the interval from female call to the next male call appeared to be much more constant than that between the males' call

and next female call. Correlation coefficients were derived overall and within pairs for relationships among call parameters using four pairs of geese. Regression data were plotted for male vs female intervals and durations to determine which parameter most strongly related to observed change in male call interval and duration during duetting. The matched pair call series, 20 serial calls per bird, produced correlations of within pair male to female interval, male to female duration, male duration vs female interval and male interval vs female duration. The highest correlations and R-square values were between male and female intervals (Table 2). This relationship was plotted for male LS and his mate, Fig. 2. Correlation coefficients would have been higher if GRY, who evidenced non-typical call intervals and duration, was omitted. Since the strongest correlation exists between

Table 2. Correlation between interval and duration components within four pairs of geese (GRY \times YBR, YRG \times BGY, YGG \times YBG, and LS \times LSX20) when calling in aggression. Pairs are identified by male's band code; MD/MI = male duration vs male interval; MD/FD = male duration vs female duration; FD/FI female duration vs female interval; MD/FI = male duration vs female interval; MI/FI = male interval vs female interval.

GRY	MD/MI	MD/FD	FD/FI	MD/FI	MI/FI	R sq.
LS	.112	.010	.300	.007	.415	17.2
GRY	.528	.015	.380	.015	.087	—
YRG	.119	.080	.021	.051	.364	13.2
YGG	.183	.115	.122	.259	.400	16.0

Predictor	Coef	STDEV	T-Ratio
Constant	0.0703	0.1185	0.59
MINTLS	0.4150	0.4535	1.93

S = 0.07704 R-Sq. = 17.2% R-Sq. (Adj) = 12.6%

Analysis of Variance

Source	DF	SS	MS
Regression	1	0.022201	0.022201
Error	18	0.106819	0.005934
Total	19	0.129020	

MALE INTERVALS

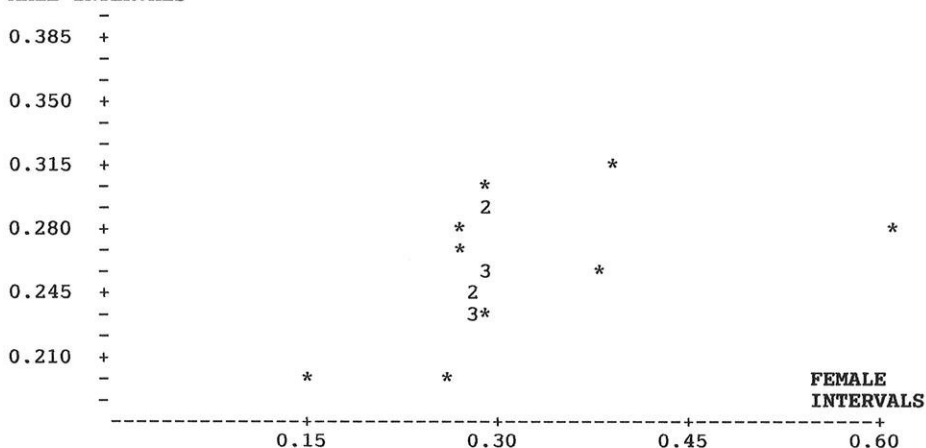


Figure 2. Plot of regression of male's "A" call interval on female's "E" call interval for aggressive duet calling. Numbers indicate multiple data points. The regression equation is FINTLS = 0.070 + 0.877 MINTLS

male and female call intervals, and males were shown to reduce their interval to match the female's interval, this logically supports the hypothesis that the female determines the overall rate of calling in duets.

It should be stated in addition that males also influence duetting behavior, either by initiating calling or reinitiating it if the female ceases to respond. Visually reviewing sonograms of an aggressive duet, Figs. 1,

the male's immediate return to solo call interval is obvious when the female fails to call. He may then either quit calling or retain this longer interval if "A" call use continues, or shift to "G" calls which I believe serves to reinitiate female calling.

Territorial call analysis indicated male's assumed a call interval intermediate between his rate calling alone and the female's rate for this display. Male's call duration was not significantly reduced when duetting in the territorial display. ANOVA of "A" vs "E" duration in duetting for each pair indicated a significant difference for YRG ($X = 0.15$, STD 0.010) and for his mate, BYR ($X = 0.10$, STD 0.006), 95% CI. $N = 39$, 1 DF, $F = 334.75$. Only one pair, GRY \times YBR, evidenced overlap in call duration parameters for this behavior.

I wish I could state trends evident in duetted "A" and "E" calls were uniform throughout the study animals. Yet one pair, YBR \times GRY, evidenced non-standard call relationships. Their data support the trend toward reduced "A" interval when duetting, his call interval was actually shorter than the female's. Male GRY also reduced call duration in aggressive and triumph duetting such that he and his mate both evidenced a mean duration of 0.134 sec. However, his "A" duration increased to nearly double that of the female when calling with her in territorial context, possibly as a function of increased aggressive motivation (Whitford 1987).

It is probably safe to state that males always reduced "A" call interval and usually duration during duetting in those three behaviors. Two

aspects of "A" and "E" call series remain to be discussed: 1) are they in truth duetted, not simply randomly overlapping series of calls, and 2) what form of duet is incorporated?

Antiphonal, or response duets, should evidence very low overlap of components (Farabaugh 1982). Sonograms of calls from four pairs were analyzed for overlapping calls in duetted aggressive, territorial and triumph series. For 215 "A" calls given by males in these displays, only 15 (7%) evidenced partial or complete overlap with "E" calls. Calls are given at roughly 0.30 sec intervals and are approximately 0.10 and 0.15 sec in duration for the female and male respectively and were considered to overlap if less than 0.02 sec existed between calls. Given these temporal relationships, I calculated call overlap probability to be 30–60%, based on whether duetted calls were begun simultaneously or sequentially. A Chi-square adjusted to percent basis indicated that no significant difference in overlap frequency existed among the four pairs, but that overlap vs non-overlap was significant (95% CI, 3 DF, $N = 430$, Chi-square 21.63). Maximum observed overlap among individual pairs was 7.6%, $N = 118$; the minimum 0%, $N = 58$ calls. Thus these calls definitely represent a well coordinated form of response-based antiphonal duetting.

Referring to bird song, Armstrong (1963: 180) defined three forms of antiphonal duetting: "1) the male's song calls forth the female's response ... 2) the birds sing in regular alternation; 3) the female adds her utterance so promptly that the

two sounds combine to sound like a single stereotyped song." The alternation of "A" and "E" calls observed in most duetting of Canada geese fits the first description. The male frequently initiates the series, then apparently awaits and responds to the female's calls. A second classification of duetting is applicable to parts of these call sequences; simultaneous (Farabaugh 1982) or unison (Armstrong 1963) duetting, exists when calls of the two participants regularly overlap or are superimposed during calling. This describes the call pattern evidenced whenever the male Canada goose shifts to the extended duration "G" or "L" calls. These calls are accompanied by the female's calls, still at her higher rate. Thus, she superimposes up to four "E" calls on a single "L" or "G" during triumph or aggressive calling. Unison duetting better describes the relationship of these calls. The proportion of "G" calls used in a call series by the male is believed to be related to the intensity of the encounter and the motivational state of the male when calling (Whitford 1987). Therefore, increased levels of threat or aggression can rapidly shift the duet form from antiphonal to unison calling.

CONCLUSIONS

Canada goose calls used in aggression, territory and triumph behaviors constitute true antiphonal, and at times unison, duets. The rate of calling closely matches the interval and duration pattern of the female calling alone, and differs significantly from that of the male calling alone in aggressive and triumph behaviors,

though not in territorial calling. Alteration of the males' call rate such that it does not differ significantly from the females implies that it is she who sets the rate and intensity of calling during duetted call series. Males alternate their calls with those of the female by apparently awaiting her response to his last call before he calls again. The strongest correlation between call components within a duet were found to be those between the interval of the females call and the interval of the males next responding call.

ACKNOWLEDGEMENTS

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The Winter Season: 1995–96

by *Kenneth I. Lange*

Okay, here's the deal. I promise to hold off on telling you about yet another winter, if you try to answer this question: how many species of birds have been added to Wisconsin's official list since the publication in 1991 of Sam Robbins' *Wisconsin Birdlife*. A remarkable total of 7, an average of more than one per year since Sam's landmark book came out (actually 9, if you follow the American Ornithologists Union, which in its 40th Supplement to the AOU Checklist splits Rufous-sided Towhee into Eastern Towhee and Spotted Towhee, and Northern Oriole into Baltimore Oriole and Bullock's Oriole). Here they are, in chronological order: California Gull (November–December 1991), Phainopepla (October–November 1993) Townsend's Warbler (December 1993), Brambling (January 1994), Swainson's Warbler (May 1976—a museum specimen; *Passenger Pigeon* 57:201–202, 1995), Scott's Oriole (November 1995–February 1996), and Glaucous-winged Gull (January 1996).

This was a remarkable winter for birds in Wisconsin. Not only did the

season produce 2 additions to the state's list (Glaucous-winged Gull and the oriole), but there was also a major influx of northern owls. The tally included an incredible 35 Great Gray Owls, 6 Boreal Owls, 3 Northern Hawk-Owls, and a relatively high number of Snowy Owls, an unprecedented strigiform galaxy. Also notable was the Common Redpoll, which invaded the state in high numbers.

But this was only part of the excitement. Master birder Daryl Tessen summarized the season this way: "Birding during January & February was spectacular—unbelievable . . . For example on Jan. 3 had Glaucous-winged Gull, Glaucous, Thayer's and Great Bl.-backed Gulls, Peregrine Falcon (harassing gulls & ducks at Port Washington), Short-eared Owls, Varied Thrush, Townsend's Solitaire, Hermit Thrush & Hoary Redpoll among others! The next day saw the Spotted Towhee at Shawano and 2 days later the Scott's Oriole at Adams etc. etc."

There were still other highlights (or is this an oxymoron?!): a flock of

77 Greater White-fronted Geese in Dane County; Wisconsin's first winter record of Ross' Goose; over 100,000 Canada Geese on the state winter waterfowl survey; 11 species of gulls in addition to the Glaucous-winged Gull, including the first winter records in at least 8 years of Laughing Gull, Little Gull, and Black-legged Kittiwake; a significant flight of Bohemian Waxwings into northern Wisconsin; and the state's second winter record of Clay-colored Sparrow.

Now, what about the weather? For one thing, the winter seemed interminable, in that it began in the first part of November and extended well into official Spring. It also was unusually cold, with much snow and a number of ice storms, but we might remember it best for extremes in temperature and precipitation. In short, it was a tough winter; I could describe it in more colorful terms, but you get the idea. It was also especially hard on birds; more on this later.

The period began with statewide snow cover but mild weather: for the first 4 days of December, Wisconsin experienced a warming spell after the snowstorm of November 27th. But then winter returned with cold weather, more snow, and, in southern Wisconsin, an ice storm on the 13th and 14th. Temperatures moderated and snow levels decreased by the end of the month, but one or more ice layers persisted well into 1996.

January began with bitter cold in the first week. Temperatures then moderated, with a brief thaw towards the end of the second week. On the 19th and 20th, Wisconsinites expe-

rienced a dramatic weather change: temperatures plummeted from above freezing to zero and below, with snow in the north and mainly rain and sleet in the south. The state then was blanketed with several snowfalls, including a blizzard. Bitter cold returned towards the end of the month and extended into February; during this interval, Madison had a record-tying 130 consecutive hours of subzero temperatures, and some northern areas (for example Oconto County with 137 consecutive hours of subzero temperatures) had even longer periods of extended subzero conditions. Temperatures then climbed above freezing for up to 5 days, reducing the snow cover; this was followed by seasonal temperatures and, in the third week of February, another thaw. The weekend of February 24th-25th was spring-like, and then it rained, sleeted, and snowed.

The period ended with another cold spell. It also ended with much snow still on the ground, for example up to 5 feet in Park Falls, Price County (Maybelle Hardy), and 6 inches or more, especially in wooded areas, in Oconto County (the Smiths). Apparently the El Nino that peaked in December 1994 and January 1995 (*Passenger Pigeon* 57:187, 1995) ended in the fall of 1995, resulting in a cold and snowy winter.

Winter, as poets have described it, is the "cruel" season, the "pitiless" season. This winter may have been especially so for birds, notably owls. A total of 56 dead Barred Owls was brought into Antigo, Langlade County (Marge Gibson), while 15-20 were reported from Spooner, Washburn County (Larry Gregg). Dead or

emaciated Great Gray Owls were reported from Polk, St. Croix, Manitowoc, and Milwaukee Counties (one from each county), and dead Boreal Owls (a total of 5) were reported from Burnett, Rusk, Eau Claire, and Ozaukee Counties. Still another species seemingly hit hard by the winter was the Pileated Woodpecker: a total of 6 dead Pileateds was reported for northwestern Wisconsin by Gregg. Also, the ice crusts and ice layers in the snow cover must have been unusually hard on such species as Ruffed Grouse. Finally, see the species accounts of Song Sparrow and Swamp Sparrow for further possible consequences of a severe winter.

Late fall migration was reported for Tundra Swan, Canada Goose, and Bald Eagle. Spring migration was reported for the following species: Pied-billed Grebe, Horned Grebe (?), Great Blue Heron (?), Greater White-fronted Goose, Snow Goose, Canada Goose, Green-winged Teal (?), American Black Duck, Mallard, Northern Pintail, Gadwall, American Wigeon, Canvasback, Redhead, Ring-necked Duck, Lesser Scaup, Common Goldeneye, Bufflehead, Hooded Merganser, Common Merganser, Turkey Vulture, Bald Eagle, Northern Harrier, Sharpshinned Hawk, Cooper's Hawk, Red-shouldered Hawk, American Kestrel, Killdeer (?), American Woodcock, Ring-billed Gull, Herring Gull, Northern Flicker (?), Horned Lark, Eastern Bluebird, American Robin, Fox Sparrow, Red-winged Blackbird, Rusty Blackbird (?), Common Grackle, and Brown-headed Cowbird. See the species accounts for details.

Philip Ashman, in Dane County,

noted an early waterfowl migration for Lower Mud Lake in McFarland: on February 19th there was open water and from 600–700 waterfowl, mostly Canada Goose and Common Goldeneye, and by February 25th the number of birds had approximately doubled and included 3 species of geese and 11 of ducks.

A total of 103 people contributed reports or photos covering 66 counties. All but 6 counties (Rusk, Lincoln, Florence and Marinette in northern Wisconsin, and Columbia and Racine in southern Wisconsin) were covered, the most complete coverage in the 16 years that your truly has been the Winter Editor; usually some 15 counties are not covered (the range has been from 11–19). The counties with the most coverage (at least 5 contributors) were Adams, Dane, Douglas, Manitowoc, Marquette, Milwaukee, Outagamie, Ozaukee, Portage, Shawano, Sheboygan, and Washington. A total of 21 counties was covered by only one report.

The following statewide species are not included in the species accounts: Ruffed Grouse, Great Horned Owl, Barred Owl, Downy Woodpecker, Hairy Woodpecker, Pileated Woodpecker, Blue Jay, American Crow, and Black-capped Chickadee.

These abbreviations are included with the species accounts: BOP—beginning of the period, EOP—end of period, TTP—thruout the period, CBC—Christmas Bird Count(s), and m. obs.—many observers.

REPORTS (1 DECEMBER 1995– 29 FEBRUARY 1996)

Pied-billed Grebe.—1–2 in Waupaca County, 17 December–22 February (Nuss-

baum). Migrants in Winnebago County, 23 February (I Tessen), and Manitowoc County, 25 February (2, Nussbaum).

Horned Grebe.—One in the Chippewa River in downtown Eau Claire, Eau Claire County, late February (Polk).

Double-crested Cormorant.—Thru January in Winnebago County (Tessen), and TTP in Brown County (Hansen).

American Bittern.—One in Antigo, Langlade County, apparently TTP (Gibson); first winter record since 6 February 1987.

Great Blue Heron.—One in Iowa County, 28 January (Thiessen), an overwintering bird or an early migrant in Dane County, 25 February (Ashman), and one (migrant?) in Kenosha County, 28 February (Hoffman).

Black-crowned Night Heron.—One in Ozaukee County thru 5 December (Uttech).

Tundra Swan.—A total of 36 in Bayfield/Ashland Counties, 1 December (Verch), also migrants (7–10) in Richland, Dane, and Walworth Counties, 1–8 December (m. obs.). Uttech noted 3 in Ozaukee County, 17 December.

Trumpeter Swan.—5+ collared birds TTP in Burnett County (Hoefler), Portage County, and (Ashman—documented) a collared and banded individual in Lake Monona by the Madison Gas and Electric outlet, Dane County, 7 January–12 February. Robbins noted this species in Dane County, 17 February.

Mute Swan.—After the CBC, noted in these counties: Douglas, Shawano (6 TTP), Brown, Door (8 on 17 February in shallow water near the shore of Bailey's Harbor, pulling up plants), Kewaunee, and Dane (m. obs.).

Greater White-fronted Goose.—Ashman saw a total of 77 on Lower Mud Lake in McFarland, Dane County, 25 February, apparently the largest spring flock of this species ever reported for Wisconsin.

Snow Goose.—TTP(?) in Winnebago County (m. obs.), 7 January in Ozaukee County (Domagalski; Wood), and migrants (total 20) on 25 February in Dane County (Ashman).

Ross' Goose.—Wisconsin's first winter record: one in the Wolf River in Winneconne, Winnebago County, 29 February (documented by Nussbaum).

Canada Goose.—Fall migration in Jefferson County, 15 December, 300+, and 6 January, 200+ (Hale). TTP in at least 22 counties, north to Douglas (maximum 6), Marathon, and Door Counties (m. obs.). Approximately 104,000 geese were counted in Wisconsin, 2–5 January, on the state winter waterfowl survey; peak areas were Green Lake, 15,000, and the Rock Prairie-Walworth County region, 31,000 (Wheeler). Spring migrants from 19–25 February in the southern third of Wisconsin, north to LaCrosse, Dane, Dodge, and Sheboygan Counties (m. obs.); the maximum count an estimated 8000 in Dodge County, 25 February (Diehl).

Wood Duck.—After the CBC, single birds in Portage, Waupaca, Winnebago, Manitowoc, and Dane Counties (m. obs.).

Green-winged Teal.—After the CBC, 1–3 birds in Waupaca, Kewaunee, Manitowoc, and Milwaukee Counties (m. obs.); birds in the Lake Michigan counties might have been early migrants.

American Black Duck.—Reported from 19 counties thruout the state (m. obs.), with a few migrants by 25 February in Dane County (Ashman).

Mallard.—Reported from 33 counties thruout the state; maximum counts were 450 in Portage County and 700 in Dane County (m. obs.).

Northern Pintail.—After the CBC, 1–3 birds in February in these counties: Winnebago, 23rd (Tessen), Milwaukee, 23rd (Diehl), and Kewaunee, 26th (Regan).

Northern Shoveler.—After the CBC, these records: Dane County, TTP, maximum 20, 7 February (Evanson), and Milwaukee County, 25 February (m. obs.).

Gadwall.—After the CBC, single birds in Crawford, Wood, and Winnebago Counties (m. obs.), also TTP in Dane County, with migrants by 25 February (Ashman).

American Wigeon.—TTP in Dane County, with migrants by 25 February (Ashman), TTP, 1–2, Ozaukee and Milwaukee Counties, and TTP(?) in Winnebago County (m. obs.).

Canvasback.—Migrants in Dane County, 25–26 February (Ashman; Robbins); also February birds in Milwaukee and Kewaunee Counties, and one in Ozaukee County, 26 January (m. obs.).

Redhead.—After the CBC, noted in Ozaukee and Milwaukee Counties (m. obs.). Migrants in Dane County, 25 February (Ashman).

Ring-necked Duck.—After the CBC, records for Portage, Winnebago, Dane, Ozaukee, and Milwaukee Counties, with migrants by 25 February in Dane and (?) Milwaukee Counties (m. obs.).

Greater Scaup.—TTP in Lake Michigan, from Kenosha County north to Door County (m. obs.).

Lesser Scaup.—TTP in these counties: Brown, Winnebago(?), Manitowoc, Ozaukee, and Milwaukee (m. obs.). Migrants by 25 February in Dane (Ashman) and Winnebago (Tessen) Counties.

King Eider.—One in Lake Michigan, Milwaukee Harbor, Pieces of Eight Restaurant, Milwaukee County, 23–25 February; documented by Idzikowski (who discovered it), Frank, Bontly, and Tessen.

Eider species.—One with Mallards and Canada Geese at the mouth of the Pike River on the Lake Michigan shoreline in Kenosha County, 29 January (Hoffman).

Harlequin Duck.—A female in Ozaukee County, 13 January (documented by Gustafson), also a female in Milwaukee County, 21–27 January (documented by Gustafson and by Frank).

Oldsquaw.—TTP in Lake Michigan, from Kenosha County north to Manitowoc County (m. obs.).

Surf Scoter.—In striking contrast to last winter, just one scoter record for the period: an individual of this species in Ozaukee County, 13 January (Gustafson).

Common Goldeneye.—TTP in these localities: Lake Michigan, from Kenosha County north to Oconto and Door Counties; Waupaca, Outagamie, and Winnebago Counties (maximum in Winnebago County, 280, 10 February, Ziebell); Marquette County; the Wisconsin River, from Sauk and Dane Counties to Marathon County; and Polk, Dunn, Chippewa, and Eau Claire Counties (m. obs.). Bacon reported a total of 14 in Iron County, 7 February. Migrants in Dane County by 19 February (Ashman).

Barrow's Goldeneye.—Like last winter, a male TTP at Virmond Park, Ozaukee County (documented, in chronological order, by Utech, Boldt, Domagalski, Tessen, and Frank), also a female on the WSO field trip, 6 January, Milwaukee County (documented by Schultz).

Bufflehead.—TTP in Lake Michigan, from Kenosha County north to Door County, TTP in Outagamie County and TTP(?) in Winnebago and Dane Counties (m. obs.). Migrants apparently by 19 February in Dane County (Ashman), and definitely on 29 February in Winnebago County (Tessen).

Hooded Merganser.—After the CBC, records for these counties: Burnett (2 January, 1, Hoefler), Brown, Ozaukee, Milwaukee, Dane, and Winnebago (m. obs.). Migration apparently by 19 February in Dane County (Ashman).

Common Merganser.—TTP in these localities: Lake Michigan, from Kenosha County north to Door County; Shawano, Waupaca, Outagamie, and Winnebago Counties (1000 in Winnebago County on 4 January, Tessen); and the Wisconsin River, from Sauk and Dane Counties to Marathon County (m. obs.). A total of 8 in Pierce County, 12–22 February. Migration in Dane County by 25 February (Ashman).

Red-breasted Merganser.—TTP in Lake Michigan, from Kenosha County north to Manitowoc County (m. obs.).

Ruddy Duck.—TTP in Ozaukee and Milwaukee Counties, and (?) Winnebago County (m. obs.).

Turkey Vulture.—25 February, 3 in Washington County (Tessen), and 27 February, 1 in Lafayette County (McDaniel).

Bald Eagle.—High numbers this winter, for example along the Wisconsin River in the Sauk City-Prairie du Sac area, Sauk and Dane Counties, 180 on the Sauk City CBC, 23 December. Warren in Eau Claire County noted 5 birds high overhead, flying south on 5 December. TTP in 20+ counties, including Douglas and Vilas Counties (m. obs.). Most birds departed southern Wisconsin by EOP.

Northern Harrier.—After the CBC, records for these counties: LaCrosse, 12 January (Dankert), Oconto, 14 January—EOP (Smiths), Sauk, 13 January (Thiessen), and Ozaukee, TTP (Uttech). Migrants (or probable migrants) from 14–24 February in Waushara, Winnebago, and Green Lake Counties (m. obs.).

Sharp-shinned Hawk.—After the CBC, reported from 17 counties, north to Dunn, Chippewa, Marathon, Shawano, and Door Counties (m. obs.).

Cooper's Hawk.—After the CBC, records for 21 counties, north to Polk, Dunn, Chippewa, Marathon, Oconto, and Brown Counties (m. obs.).

Northern Goshawk.—After the CBC, reported from these counties: Burnett, Langlade, Oconto, Door, Chippewa, Clark, Marathon, Ozaukee, and Milwaukee (m. obs.).

Red-shouldered Hawk.—Thiessen saw 2 in Iowa County, 1 January. Probable migrants in Waupaca County, 1 February (Tessen), and Dane County, 26 February (Ashman).

Red-tailed Hawk.—Northward to these counties, where TTP: Douglas, Chippewa,

Clark, Marathon, Oconto, and Door (m. obs.).

Rough-legged Hawk.—Carlsen in Pierce County noted "many" in January, none in February, and 2 in early March, and Tessen found high numbers in Portage, Waushara, Winnebago, and Calumet Counties, 14–20 February.

Golden Eagle.—Exclusive of the CBC, these records: Buffalo County, one on 13 January (Polk), Jackson County, 12 January (Dankert and Leshner), Monroe County, TTP (Kuecherer), Dodge County, 2 December (Robbins), and Grant County, 1 January, an adult male and an immature (Thiessen).

American Kestrel.—Northward and at least into February in the following counties: Clark, Marathon, and Brown (m. obs.). Migration by EOP, probably by 20 February, in scattered locations (m. obs.).

Merlin.—One in Pierce County, 24 January (Carlsen), and a female in the University of Wisconsin Arboretum, Madison, Dane County, 24 December–7 February (Ashman).

Peregrine Falcon.—Southeastern Wisconsin (Walworth, Milwaukee, and Ozaukee Counties) and Brown County (m. obs.).

Gyr Falcon.—A gray morph bird in Superior, Douglas County, 21 January (documented by O'Donnell, Michael, and Hankin).

Gray Partridge.—Tessen, in Outagamie County, found just 3–4 flocks totaling 25–30 birds, and remarked, "has become very uncommon." Also noted in Oconto, Door, Manitowoc, and Kenosha Counties (m. obs.).

Ring-necked Pheasant.—Northward to Burnett, Chippewa, Clark, Marathon, Oconto, and Door Counties (m. obs.).

Spruce Grouse.—One on the Clam Lake CBC, and single birds in Forest County on 8 February (M. Peterson) and 22 February (Tessen).

Greater Prairie-Chicken.—Marathon County (Belter), maximum 25, 20 February

(Tessen), and Portage County, 17, 16 February (Dankert and Leshner).

Sharp-tailed Grouse.—TTP in Burnett County (Hoeffler).

Wild Turkey.—Reported from 30 counties, north to Polk, Dunn, Chippewa, Marathon, Oconto, and Door Counties (m. obs.).

Northern Bobwhite.—After the CBC, records for Dunn and Eau Claire Counties, Richland County (where a covey visited a feeder regularly, with at least 14 EOP; Duerksen), and Kenosha County, 29 January (m. obs.).

American Coot.—TTP in Dane, Winnebago, Ozaukee, and Milwaukee Counties; maximum in Ozaukee County, 14, low numbers in Milwaukee County (m. obs.).

Sandhill Crane.—The crane on the Shiocton CBC, 21 December, was unable to fly and could not be rehabilitated; it died on 3 January (Fisher). Gjestson saw a group of 4 in an upland cornfield near Mazomanie, Dane County, 27 December.

Killdeer.—One (migrant?) on 25 February in Dodge County (Diehl).

Common Snipe.—13 January, 2 in Manitowoc County (Nussbaum).

American Woodcock.—The Smiths found an early migrant in Oconto County, 22 February.

Laughing Gull.—13 February, one in the Summerfest area, Milwaukee County (documented by J. Peterson), and 24–25 February, one in Kewaunee harbor, Kewaunee County (documented by Regan); first winter records since the winter of 1987–88.

Little Gull.—One in Kewaunee harbor, Kewaunee County, 2 December (documented by Regan); first winter record since the winter of 1987–88.

Bonaparte's Gull.—Regan in Kewaunee County reported 200+ on 2 December and last saw this species 5 December, while Uttech

in Ozaukee County noted it thru 8 December. Single birds in Milwaukee and Kenosha Counties during the CBC the latest records.

Ring-billed Gull.—TTP in Lake Michigan, north to Manitowoc County; 8 February–EOP in Brown County; TTP in Winnebago County, maximum 6 on 3 December; BOP in Washington County; and 5 February in Douglas County (m. obs.). Noted in Dane County thru 9 December, and (Ashman) again by 25 February.

Herring Gull.—TTP in Lake Michigan, north to Door County; thru 3 January in Ashland and Bayfield Counties; and thru 5 February in Douglas County, with 3000 there on 11 January (m. obs.). Noted in Dane County thru 9 December, and (Ashman) again by 25 February; thru late January in Winnebago County, and again from 10 February–EOP, with 30 on 25 February (Tessen; Ziebell); and thru late December in Outagamie County, and again from 7 February–EOP (Tessen).

Thayer's Gull.—Excluding the CBC, records for Milwaukee, Ozaukee, Sheboygan, Manitowoc, Winnebago, and Douglas Counties; generally 1–2 birds (m. obs.). Documented by Dankert, Frank, Gustafson, Tessen, and Uttech.

Iceland Gull.—Excluding the CBC, records for Ozaukee, Sheboygan, Manitowoc, Kewaunee, and Douglas Counties (m. obs.); maximum 3, Port Washington harbor, Ozaukee County, 11 January–22 February (Uttech). Documented by Dankert, Regan, Tessen, and Uttech.

Lesser Black-backed Gull.—Milwaukee County, one on 22 February (documented by Frank).

Glaucous-winged Gull.—This species, new to Wisconsin, was found in the Port Washington harbor, Ozaukee County, 1–4 January. It was documented by Uttech, who discovered it, also by Gustafson, Korducki, Boldt, Tessen, Schultz, and Frank; photos by Idzikowski were critical in determining that the bird was not a hybrid. This species was also reported and documented, but not accepted by the Records Committee, for Manitowoc and Douglas Counties.

Glaucous Gull.—Excluding the CBC, records for these counties: Douglas, thru 5 February, maximum 12; Brown, 16 February; Kewaunee, 3–5 regularly, 9+ on 18 February; Manitowoc, maximum 19, 13 January; Sheboygan, 13 January–24 February, maximum 2; Ozaukee, 15 December–26 February; and Milwaukee, 21 January–23 February, maximum 10, 21 January (m. obs.).

Great Black-backed Gull.—Excluding the CBC, records for these counties: Milwaukee, 21 January–25 February, maximum 2 (documented by Diehl, Frank, and Gustafson), Ozaukee (documented by Uttech), Sheboygan, 24 February (Tessen), Manitowoc, 31 December–12 January (M. Peterson; Sontag; Wood), and Kewaunee, 18 January, 5 adults and a first winter bird (Regan).

Black-legged Kittiwake.—Port Washington harbor, Ozaukee County, 13 December (documented by Uttech), and 6 January (documented by Schultz). First winter records since the winter of 1984–85.

Rock Dove.—Northward to the following counties, where TTP: Douglas, Bayfield, Ashland, Vilas, Oconto, and Door (m. obs.).

Mourning Dove.—Northward to the following counties, where TTP: Douglas, Vilas, Oconto, and Door (m. obs.).

Eastern Screech-Owl.—After the CBC, records for Clark, Shawano, Brown, Winnebago, Sheboygan, Ozaukee, Milwaukee, and Dane Counties (m. obs.).

Snowy Owl.—After the CBC, reported from 13 counties, south to Clark, Marathon, Dodge, and Kenosha Counties (m. obs.). At least 12 in Clark County, and at least 3 in Marathon County (Decker and Ken Luepke).

Northern Hawk Owl.—One in Price County, 24 December (documented by Bartelt), one in Douglas County, 13 January–EOP (documented by Gower), and one in Marquette County, 7 February–EOP (via Judi Nigbor, Conservation Warden for Marquette County; documented, in chronological order, by Christensen, Tessen, J. Peterson, Bontly, Strelka, Frank, Ashman, and Gustafson). First records since the winter of 1992–93.

Great Gray Owl.—Approximately 35 birds, a record number, in 14 counties, south to Pierce, Dunn, Eau Claire, Wood, Green lake, and Milwaukee Counties (m. obs.). Dead or emaciated birds reported from 4 counties (see the introductory comments of this seasonal summary). Documented by Boldt, Diehl, Frank, Gustafson, Hausman, M. Johnson, S. LaValley, Olson, Pritzl, Scheuneman, Schultz, Strelka, Tessen, and Vincent. First winter records since the winter of 1991–92.

Long-eared Owl.—6 January, one in Vernon Marsh, Waukesha County (Wood).

Short-eared Owl.—3 January, Milwaukee County (Domagalski; Tessen), and 6 January, Bong Recreation Area, Kenosha County (Wood).

Boreal Owl.—A total of 6, a record number, in 5 counties: 2 dead birds at bird feeders, 6 and 8 February, Burnett County (Hoefler), a dead bird in Rusk County (via Tessen), a dead bird, early February, Eau Claire County (via Tessen), a dead bird in Harrington Beach State Park, Ozaukee County (via Tessen), and one rehabilitated and released (had flown into a window on 5 January), Milwaukee County (Diehl). First winter records since the winter of 1988–89.

Northern Saw-whet Owl.—One in Milwaukee County, 23 December–9 February (Diehl).

Belted Kingfisher.—After the CBC, records for 11 counties (m. obs.): Dunn, Monroe (TTP), Richland, Langlade, Oconto, Manitowoc, Waupaca (TTP), Winnebago, Marquette, Dane, and Lafayette (TTP).

Red-headed Woodpecker.—After the CBC, records for Trempealeau, Richland, Dane, and Lafayette Counties (m. obs.).

Red-bellied Woodpecker.—Northward to Bayfield/Ashland Counties, 18 February, 1 (Verch), Langlade County, 17 December, Oconto County, and Door County (m. obs.).

Black-backed Woodpecker.—Forest County (m. obs.).

Northern Flicker.—After the CBC, records for 8 counties: Oconto, Outagamie, Waupaca, Waushara (TTP, maximum 5), Green Lake, Ozaukee, Dane, and (28 February, 1, migrant?) Washington (m. obs.).

Horned Lark.—TTP in several northern counties (e.g. Burnett, Polk, Clark), also Richland County. Migration most pronounced from 7–25 February, earlier (?) in the Lake Michigan counties (m. obs.).

Gray Jay.—Excluding the CBC, records from these counties: Iron, Vilas, Forest, Price, Oneida, and Langlade (m. obs.).

Common Raven.—Southernmost records: Monroe County, TTP; Adams County, 6 January; Waupaca County, 27 December; and Outagamie County, thru 22 February (m. obs.).

Boreal Chickadee.—Excluding the CBC, records for these counties: Oneida, Forest, Marathon (29 December, Ott), and Shawano (m. obs.).

Tufted Titmouse.—Excluding the CBC, records for these counties: Dunn, Chippewa, Eau Claire, Monroe, Vernon, Richland, Sauk, Dane, and Green (m. obs.).

Red-breasted Nuthatch.—TTP in much of the state, including far northern counties; generally high numbers (m. obs.).

White-breasted Nuthatch.—Northward to the following counties, where TTP: Douglas, Bayfield, Ashland, Iron, Vilas, Forest, Oconto, and Door (m. obs.).

Brown Creeper.—After the CBC, northern most reports for Washburn County, TTP, 1; Iron County, 6–15 January, 1 (Bacon); Vilas County, 20 January (Reardon); and Oconto County, 28 January, 1 (Smiths).

Carolina Wren.—One in Dane County, 5 January (Robbins).

Golden-crowned Kinglet.—After the CBC, reported from just 2 counties: LaCrosse, 12–15 January, 1 (Dankert, Leshner), and Win-

nebago, thru 19 February, maximum 2, 6 January (Ziebell).

Eastern Bluebird.—TTP in Milwaukee County, up to 6 (Bontly). February birds (13th in Brown County, Regan; 24th in Green Lake County, Gustafson; 24th in Lafayette County, McDaniel) must have included migrants.

Townsend's Solitaire.—One on the Milwaukee CBC in Mequon, Ozaukee County, 16 December; still there, 14 January (m. obs.). Documented by Frank, Strelka, and Bontly.

Hermit Thrush.—After the CBC, these records: University of Wisconsin Arboretum in Madison, Dane County, 14 January (Ashman), and Ozaukee County, 1 TTP at a feeder (m. obs.).

American Robin.—TTP in Bayfield, Ashland, Portage, Brown, and Dane Counties, with January records for Oconto, Winnebago, Ozaukee, and Iowa Counties (m. obs.). First migrants: 25–26 February in Walworth, Milwaukee, and Outagamie Counties (m. obs.). Diehl reported 20 in Dodge County, 25 February.

Varied Thrush.—One in Ozaukee County on a CBC and until EOP (m. obs.).

Brown Thrasher.—One TTP at a feeder in Appleton (Mielke), the only mimic thrush (Gray Catbird, Northern Mockingbird, Brown Thrasher) reported after the CBC.

Bohemian Waxwing.—Excluding the CBC, records for these counties: Bayfield and Ashland, Forest, Burnett, Polk, Taylor, Clark, Marathon, Shawano, and Door (m. obs.). Maximum numbers: 400+ in Shawano County, 30 December (M. Peterson), 200+ in Bayfield/Ashland Counties (where TTP), 27 February (Verch), and 70+ in Burnett County, 1 January (Hoefer).

Cedar Waxwing.—After the CBC, northernmost reports from Dunn, Chippewa, Marathon, and Outagamie Counties. Highest count: 70 in Ozaukee County, 3 January. Migrants in southern Wisconsin by end of January (m. obs.).

Northern Shrike.—After the CBC, reported from 33 counties scattered thruout the state (m. obs.).

European Starling.—Northward to these counties, where TTP: Douglas, Bayfield, Ashland, Oconto, and Door (m. obs.). Reardon noted this species in Vilas County on 9 February.

Yellow-rumped Warbler.—Exclusive of the CBC, just one record, a bird in Vernon County, 21 January (Dankert).

Northern Cardinal.—Northward to these counties, where TTP: Bayfield, Ashland, Price, Langlade, Oconto, and Door (m. obs.).

Eastern Towhee.—Exclusive of the CBC, these records: one at a feeder in Shawano County (M. Peterson), one in Marathon County, 12 December (Ott), and one in Dane County, 21 December (Robbins).

Spotted Towhee.—One TTP at a feeder in Shawano County (documented, in chronological order, by M. Peterson, Tessen, Korducki, Domagalski, Gustafson, and Boldt).

American Tree Sparrow.—Northward to these counties, where TTP: Polk, Barron, Chippewa, Langlade, Oconto, and Door (m. obs.).

Clay-colored Sparrow.—One at a feeder in Grafton, Ozaukee County 9–18 December (documented by Ficken, who discovered it, and Gustafson). Wisconsin's only other winter record was one at a feeder in Brown County, 23–27 December 1994 (*Passenger Pigeon* 57:196, 1995).

Fox Sparrow.—One at a feeder, TTP, Jefferson County (Hale), and a migrant in Dane County, 25 February (Ashman).

Song Sparrow.—TTP in Washington County, January records for Waukesha and Milwaukee Counties, and a February record (the 12th) for Kenosha County (all single birds; m. obs.). This species had overwintered at the west end of Lake Wingra, Dane County, every winter since the winter of 1988–89, but not this winter (Ashman).

Lincoln's Sparrow.—One at a feeder near Chilton, Calumet County, 12 November–15 January (Rudy, who discovered and documented it); Wisconsin's 10th winter record.

Swamp Sparrow.—This species had overwintered at the west end of Lake Wingra, Dane County, every winter since the winter of 1988–89, but not this winter (Ashman).

White-throated Sparrow.—TTP in these counties: Bayfield, one at a feeder (Verch), Outagamie, 6–9 birds (Tessen), Ozaukee, 1–4 (m. obs.), Milwaukee, 6–8 at a feeder (Diehl), Jefferson, 3–4 (Hale), and Dane, maximum 9, 22 January (Ashman). January records for these counties; LaCrosse (Dankert), Shawano (Nussbaum), Washington (Haseleu), and Sauk (Thiessen).

Harris' Sparrow.—An adult in Winnebago County, 8 January (Tessen), and one near Fremont, Waupaca County, 12–14 January (Nussbaum; M. Peterson).

Dark-eyed Junco.—Northward to Bayfield and Ashland Counties, thru 16 December; Langlade and Oconto Counties, TTP; and Door County, TTP (m. obs.).

Lapland Longspur.—After the CBC, noted in these counties: Dunn, Oconto, Waupaca, and Ozaukee (m. obs.). Still in Ozaukee County, EOP (Uttech). Maximum number in a flock—10 to 12.

Snow Bunting.—After the CBC, records for 18 counties, south to LaCrosse, Winnebago, and Ozaukee Counties. Large flocks (60+) in Ozaukee (500, 13 January, Tessen), Oconto, Waupaca, Marathon, and LaCrosse Counties (m. obs.).

Red-winged Blackbird.—Kenosha County, TTP(?), and Brown County, 28 January, 1 (Nussbaum). Migrants, 24–29 February, in Walworth (85), Milwaukee (approximately 100), Ozaukee (50), Washington (3), Fond du Lac (20), Dodge (150), and Dane (1) Counties (m. obs.).

Eastern Meadowlark.—Ozaukee County, 13 January, 2 (Gustafson).

Western Meadowlark.—Portage County, 10 January, 1 (Nussbaum).

Meadowlark species.—One in Ozaukee County, 7 January (Wood).

Rusty Blackbird.—Diehl found a total of 6 in Dodge County, 25 February (migrants?).

Common Grackle.—TTP in LaCrosse County, Brown County, and (?) Kenosha County (m. obs.). Migrant, 24–26 February, in Dane, Jefferson, Milwaukee, Washington, and Manitowoc Counties; from 1–3 birds in each county (m. obs.).

Brown-headed Cowbird.—TTP, 1–7, in LaCrosse, Monroe, and Oconto Counties, with a January record for Ozaukee County (m. obs.). Migrants, 25–26 February, in Washington (30), Outagamie (a female) and Fond du Lac (1) Counties (m. obs.).

Scott's Oriole.—A male at a feeder in a residential backyard (rural setting) on the edge of oak-pine woods in Adams County from November 1995–3 February 1996, when apparently it succumbed to the cold. This may have been a second year bird and not yet in full adult plumage: Harriman noted that the feathers from the nape to the rump area were black with pale edging, not solid black, and Gustafson observed that some light scaling was evident on the black portion of the upper back. Fed on oranges, finch seed, and suet, and bathed in a heated bath. Enjoyed by numerous birders, thanks to the hospitality of Ross and Angie Newberg, the property owners. Documented, in chronological order, by Robbins (who was informed of the bird by Ken Wood of the Madison Audubon Society), Gustafson, Korducki, Tessen, Domagalski, Harriman, Strelka, and Bontly. First Wisconsin record for this southwestern species.

Pine Grosbeak.—After the CBC, records for 18 counties, south to Chippewa, Clark, Juneau, Shawano, Oconto, and Door Counties (m. obs.). Mostly 6–24 in a flock; maximum 60, Shawano County (M. Peterson).

Purple Finch.—Scattered thruout the state, but generally scarce and in relatively low numbers; maximum 20–25 (m. obs.).

House Finch.—Northward to these counties; Douglas, BOP–February; Bayfield/Ashland, TTP; Marathon, TTP; and Oconto/Door, TTP (m. obs.).

Red Crossbill.—After the CBC, records for these counties: Clark, Douglas, Forest, Langlade, Menominee, Shawano, Portage, and Calumet; maximum 20–25 (m. obs.).

White-winged Crossbill.—After the CBC, records for these counties: Douglas, Iron, Oneida, Forest, Langlade, Oconto, Menominee, Shawano, Marathon, Portage, Calumet, and Door (m. obs.). Maximum usually 1–25; Berner in Portage County noted an increase in February, peaking on the 28th with a total of 80.

Common Redpoll and Hoary Redpoll.—A major invasion: records for 48 counties, south to Lafayette, Green, and Rock Counties, with flocks of 100 or more as far south as Monroe and Green Lake Counties (m. obs.). The Hoary Redpoll was reported in 6 counties (Oconto, Wood, Waupaca, Outagamie, Adams, Ozaukee); one was banded in Oconto County by the Smiths.

Pine Siskin.—Widespread (reported from 40 counties thruout the state after the CBC), and in relatively high numbers (m. obs.).

American Goldfinch.—Northward to these counties: Bayfield, Ashland, Iron, Vilas, Langlade, Oconto, and Door (m. obs.). Counts from these northern counties varied; the Smiths in Oconto County had up to 200 at their feeder, whereas in other counties, e.g. Vilas, the numbers were low.

Evening Grosbeak.—After the CBC, records for 16 counties, south to LaCrosse, Monroe, Lincoln, Waupaca, Oconto, and Door Counties (m. obs.). Maximum counts from 40–97 in 3 northern counties, otherwise just 1–13 (m. obs.).

House Sparrow.—Northward to these counties: Douglas, TTP (R. Johnson), Forest, 17 December (Reardon), Oconto, TTP (Smiths), and Door, TTP (Lukes).

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“By the Wayside”

Observations of special interest include albino giant Canada Goose, an urban nesting of Cooper's Hawk, mouse caching by Blue Jays, and two partial albino Black-capped Chickadees.

ALBINO GIANT CANADA GEESE (*Branta canadensis maxima*)

31 August 1994, Washington County—at 1440 hours while surveying neck-collared giant Canada geese in the Menomonie Falls area. I spotted twenty-eight giant Canada geese and six white geese feeding in oat stubble and newly seeded alfalfa about seventy-five yards from the highway (Hwy. Q, T9N, R19E, Sec. 31, Town of Germantown, two miles west of Menomonie Falls, Washington County). I at first suspected them to be farm geese as a farm yard was within five-hundred yards of the feeding geese. I set up my 15×-45× spotting scope and studied the geese for fifteen minutes. They were the same size as the rest of the large Canada geese. Closer examination showed the heads, bills, bodies, and necks to be of the same size as all the other Canada geese in the flock. They had no grinning patch typical of snow geese on their bills. Being all white, they showed no cheek-patch typical of Canada geese. After examining all six carefully, they all had pink feet, pink to pinkish tan bills, totally white plumage, and pink

to deep red eyes. After watching them feed for another ten minutes, I walked into the field to within approximately 40–50 yards at which point the total flock of 34 geese flew away together. The six white geese in the center of the flock remained together and I suspect they were a family group. Partial funding for the neck-collar observation studies was provided by the Federal Aid to Wildlife Restoration under Pittman-Robertson Wis. Proj. W-141-R William E. Wheeler, Wisconsin Department of Natural Resources, 1210 North Palmar Street, Horicon, WI 53032.—*William E. Wheeler, Southern Wildlife Research, Wisconsin DNR*

AN URBAN COOPER'S HAWK NESTING (*Accipiter cooperii*)

29 July 1996, Milwaukee County—At the end of July, during all hours of the day, emanating from a dimly lit 100-foot by 200-foot hickory, oak, and basswood plot, weird cries are constantly heard. The lot lies between a major artery and residential road. One seldom sees where the cries come from until going where a view of the nest of the hawks is in

view. That being the fourth branching strata of a 35-foot white pine. Then it is obvious that these sounds come from various high points in the climax woodland where young hawks are perched. Suddenly, when one of the adult birds comes, several young converge swiftly on it and follow until it appears the adult allows them a chance to feed. Even the deserted nest appears to be used as a feeding platform. At other times the exchange takes place at a perch two hundred feet away in the dimness of the wooded area. Looking back to early July, the nest tree was climbed by a researcher. The young were lowered in a sack for banding while the adults continually dive bombed the researcher. There were five young, all densely covered with a creamy down with protruding 1-1/2 inch primaries, secondaries, and tail feathers. Watchers were shown the difference between male and female young. The working equipment of the females' toes and talons were apparently twice the size of those of the immature males. The young were put back in the nest with the old birds to be caught and banded later on. All this action did not seem to frighten the parent birds away. Earlier in the year before the leaves were out (April) one of the Coopers was seen carrying sticks to a high crotch in an elm tree. Subsequently this site was abandoned and a nest built in the previously mentioned white pine, just twenty five feet to the rear of a residence, on the lot line. Even earlier in the year there had been frequent sightings of the hawks 200-feet west on the other side of the mentioned woodland where the fledged young were being fed. At that earlier

date, February, it appeared that the adults hunted a brush area and a brush pile adjoining the rear lot lines and when one entered or left the rear house door, disappeared into the wooded strip to the east. Then, it was not suspected that nesting would occur. Prey seen to be taken early were a House Sparrow and Mourning Dove. Later Robins were seen carried to nestlings. Another person saw a chipmunk taken and another claimed a gray squirrel was hit. The writer however, watched one of the hawks perched at the wood's fence line 10-foot high sunning and preening itself while two gray squirrels fearlessly ran right under it without disturbance. Of course it is possible that later when the growing young demand more food, this situation changed. It was noted that unlike previous years, no Robin or Common Grackle young were being fed or trained to feed on the writer's rear lawn under the hickory trees. Other small birds' awareness of the nesting seemed general and were careful of their exposure in this lawn area. At the time when the young hawks were fledged, the adults were seen to be hunting the subdivision areas both north and south of the wooded area on the open grassy lots, fearlessly in the open.—*John F. Schaeffer, Bill Holton, and Jill Holton, Greenfield, WI*

OBSERVATIONS OF MOUSE CACHING BY BLUE JAYS (*Cyanocitta cristata*)

Marquette County—On 26, 27, and 28 December 1996, at the bird feeder on my farm in Marquette County, Wisconsin I witnessed a se-

ries of cachings of mice by several members of a family group of Blue Jays (*Cyanocitta cristata*). I freely admit complicity through my disposal of a number of White-footed Mice (*Peromyscus leucopus*) that were killed with snap traps placed in the root cellar of the farm house when I arrived there for Christmas break. At first the complicity was unintentional, I merely employed my habitual laziness in disposing of the first mouse caught by throwing it out the back door into the fresh-fallen snow near my feeders and woodpile. I happened to notice its absence a short time later as I went for wood. Curious, I searched for tracks that would identify what had become of the mouse, suspecting feral cats from the barn as the most likely explanation. The ground bore no mammal tracks at all in the new snow, only bird prints of assorted sizes—none large enough for crows or hawks. So, I was left with the question, "What had taken the mouse?" I began to formulate a plan to find out.

The following morning I awoke to find three mice in my traps (and considerable evidence of others having feasted on my winter supply of squash and potatoes since the preceding day). I waited until 10:00 A.M. and placed the mice just beyond the bird feeders—a neat row of furry corpses at one foot intervals across the snow. I vowed I would keep watch to see what came and took them. After 30 minutes staring out the kitchen window, my attention lapsed briefly as I made another cup of coffee. At 10:37 one mouse was gone. I had missed its manner of departure. I nearly missed the next as well. At 10:58 I watched a Blue Jay

arrive and begin feeding on sunflower seed. I had dismissed it as a potential mouse thief and begun to turn to answer a question from my daughter when I noticed it hop towards the mice. In the next instant, it quickly jabbed the nearest mouse with its beak, rolled it over, and then grasped it about the middle of the body with its bill. A second later and it was airborne, headed southeast in labored flight, the fat, brown mouse very prominent in its beak as it flew. I was dumbfounded. I had expected the mice were being taken by a Northern Shrike, a Kestrel, maybe even a Cooper's hawk or American crow that picked them up on the wing—but not a Blue Jay. At 11:04 four Blue Jays arrived at the feeder. One approached the last mouse, poked at it and returned to the birdseed, then all scattered for reasons I could not discern. At 11:14 they returned. Again one poked at the mouse, moved away. A different Jay hopped over and struck several times with its beak at the mouse's head, and turned away. Then, it turned back and grasped the mouse as the earlier bird had and flew off on the same flight line.

The next day I had three more mice ready to repeat the experiment. I began at 9:00 A.M., mice in the same location as before. The first was taken by one of the family of four Blue Jays at 9:16, the second at 9:28 (by a single Jay) and the last at 9:43 by a member of the family of four once again. This yielded a mean duration of only 43.5 minutes/mouse before it was carried off, based on the six mice for which fairly precise times were noted. All were carried off in the same manner and identical

directions—I believe by at least two different birds but I could not be absolutely sure of differences in white markings on the wings. They appeared to be caching the mice in the snow on a southfacing slope of a small juniper covered hill roughly 150 meters from the feeder, though I failed to find any mice there when a cursory search was made. The Jays might also have simply stopped there to rest and gone on farther to cache the mice, but this was as far I could follow their flight from my window. Family obligations and a return to work required that I abandon further field efforts to research the Jay's behavior and necessitated that I resort to library review for further answers.

Library research indicated that

food caching behavior is certainly normal for Jays, though one tends to think of seeds rather than flesh. Seed caching behavior and recovery rates have been extensively studied in several related species of Jays: Clark's Nutcrackers (*Nucifraga columbiana*); Pinyon Jays (*Gymnorhinus cyanocephalus*); and Scrub Jays (*Aphelocoma coerulescens*) (Balda, R. P., and A. C. Kamil. 1989. A Comparative Study of Cache Recovery by Three Corvid Species. *Anim. Beh.* 38:486–495.) Yet, Blue Jays are corvids, and I have witnessed their distant cousins, American Crows (*Corvus brachyrhynchos*) caching literally hundreds of bite-sized scraps of meat from a freshly butchered deer carcass. They hid them in tufts of grass in a one-half acre snow-covered marsh



Partial albino Black-capped Chickadees. Photos by Carlton Mahn.

meadow, as I watched from cover 30 December, 1994.

As I was thinking about writing this article, I stumbled across a brief note about a related aspect of Jay's carnivorous behavior (Robert W. Nero. 1993. Scavenging Blue Jays. *Bird Watchers Digest* Vol 16:2:96-101). In that article Dr. Nero summarized reports from readers of observations of Blue Jays feeding upon—or dispatching and subsequently consuming, birds that were either stunned, killed or injured in window strikes and other accidents. That article, in turn, resulted from an earlier note Dr. Nero had published about Blue Jays dispatching and feeding on window strike passerines (Nero, R. W. 1991. Blue Jay Scavenging Window Kills. *Blue Jay* 49:2:98.) Given these re-

ports of unsavory Blue Jay behaviors, I will no longer be surprised to see my feeder Jays scavenging dead mice casually tossed out into the snow. However, I will continue to be amazed to see them carry mice away for caching. In all the articles I read about Jay behavior, I could find no reference to the Jays carrying off and caching their victims/scavenged finds. They ate them in situ, or near the point of discovery. So, it seems odd that the Jays I witnessed invariably carried the mice off to some other point for caching rather than consuming them where they were found. I would be delighted to know if others have witnessed this phenomenon before, and to gain more data on the rate of removal of mice from feeders by Blue Jays, if others



Partial albino Black-capped Chickadees. Photos by Carlton Mahn.

have information about it.—*Dr. Philip C. Whitford, Biology Department, Capital University, 2199 East Main St., Columbus, OH 43209*

BLACK-CAPPED CHICKADEE
(*Parus atricapillus*)

6 Feb. 96—Southeast Outagamie County—Of about 15 chickadees coming to my feeder, two had all white tails. One had a shorter than normal tail. The other had a normal length tail. But both had tails that

were damaged on the end. The white feathers seemed less durable than normal dark-colored feathers. This condition—(partial albinism) can be caused by damage to the bird, possibly having the tail pulled out. These birds were very noticeable with a pure white tail. I was only able to get pictures of one bird because the second never came back to the feeder after I got my camera out a few days after they were noticed.—*Carlton Mahn, 1140 Hillcrest Dr., Kaukauna, WI 54130*

“By the Wayside”

Rare species accounts include Trumpeter Swan, Ross' Goose, Barrow's Goldeneye, Gyrfalcon, Laughing Gull, Little Gull, Lesser Black-backed Gull, Glaucous-winged Gull, Black-legged Kittiwake, Northern Hawk-Owl, Great Gray Owl, Boreal Owl, Clay-colored Sparrow, Lincoln's Sparrow, and Scott's Oriole.

TRUMPETER SWAN (*Cygnus buccinator*)

7 January–12 February 1996, Dane County—A large white swan about twice the size of a nearby Canada Goose; with a black eye; all black bill; black legs; flattish head with a sloped forehead; while looking almost straight down on the bird (as you can do at the MG&E outlet) the black skin on the face formed a “V” on the forehead. This bird had a green neck collar with yellowish letters 97K and was banded on the left leg with a U.S. Fish & Wildlife Service silver band 27331. I had one good look at the bird standing on the ice. The bird mainly was seen milling about on the water with all the other waterfowl; once it was seen roosting on the ice. It was never seen in flight or heard calling.—*Philip Ashman, 615 E. Johnson, Madison, WI 53703.*

ROSS' GOOSE (*Chen rossii*)

29 February 1996, Winnebago County—The bird was all white with

black wing tips. The bill was short, smooth, and unmarked. It was orangish but lighter near the tip. No grin patch was visible. The neck was short, about the same length as a Mallard when swimming. The body was wider and sat higher in the water than a Mallard, but it was about the same length. The goose was swimming among Canada Geese, Mallards, and other ducks. It was much smaller than the Canada Geese.—*Don Nussbaum, 1544 Ames St., Neenah, WI 54956.*

BARROW'S GOLDENEYE (*Bucephala islandica*)

6 January 1996, Milwaukee County, Lake Michigan shore, near the former gun club—As we scoped through a large flock of diving ducks during our W.S.O. field trip, one particular female Goldeneye caught my eye. What grabbed my attention was the striking yellow-orange bill, which contrasted noticeably from the largely dark bills of the female Commons. I tried to call attention to this

bird from others on the field trip, but it was very challenging—due to the almost continuous diving that this bird was engaged in, amidst a milling flock of similar-appearing birds. Eventually Bettie Harriman and a few others managed to find it, but the continuous diving and shifting of the flock made it difficult to relocate and keep in a scope. (Besides the fact that people were also trying to get looks at a female Harlequin duck in the vicinity!)

Many of the female Common Goldeneyes also had orange on their bills, but it was confined to a small area around the tip. As far as I could tell, the entire bill of the Barrow's was orange. In addition, the bill of this bird was on the small side, appearing somewhat stubbier than those of the Commons. The head shape was not obviously different from the ♀ Commons, but the vigorous activity of this bird prevented lengthy studies of this character. No other plumage comparisons were made. In all obvious respects, this was a typical female goldeneye with a chocolate brown head, brownish back and grayish flanks.—*Thomas R. Schultz.*

GYRFALCON (*Falco rusticolus*)

21 January 1996, Douglas County—The bird was initially observed from a distance of about 75 feet chasing a flock of approximately 30 pigeons in the vicinity of the Peavy grainery building. The bird then alighted on the northeastern corner of the grainery where it watched the tight circling band of pigeons for approximately ten minutes. We observed the bird perched from about

250 feet through spotting scopes. The bird was as large as or larger than a red-tailed hawk also perched on the same grainery building about 100 feet to the south. Overall plumage was grayish with perhaps a tinge of brown. The tail was barred both above and below. The underside of the bird was distinctly streaked throughout including the underside of the wings. The mantle and upper wings were gray with some mottling. The bird was impressively and powerfully built, looked larger both in the air and when perched than a peregrine, lacked the characteristic helmet of a peregrine, and exhibited a tail which, when perched, looked to be longer than the wing tips. Wings were broad in width but falcon-like; wing-beats were rapid and shallow versus the characteristic wing-beats of a buteo. The head was lightly streaked with a gray stripe running below the eye behind the bill and down the bird's cheek. We observed the bird flying and making casual passes at the pigeon flock on three occasions for a total of about 1 1/2 minutes in addition to the 10 minute observation of the bird while it was perched. The bird was not vocal during this time. The bird was most likely the same gray morph female gyrfalcon that was caught and banded in Duluth four days earlier. The bird was characteristically falcon-like and was distinctly different from the red-tailed hawk perched on the same grainery 100 feet away. The bird appeared almost larger than the red-tail and also appeared larger than a peregrine. It lacked the dark "helmet" of the peregrine, the darker back, and white upper chest of a peregrine. Its behavior, physical

structure, and habitat (e.g., the grainery) clearly differentiated it from a goshawk.—*John O'Donnell, 3606 Candlewick Ct., Mequon, WI 53092; Larry Michael, 116 Nebraska St., Horicon, WI 53032; Irvin Hankin, E8643 Pine Valley Lane, Fremont, WI 54940*

LAUGHING GULL (*Larus atricilla*)

13 February 1996, Milwaukee County—The bird was standing on a ice flow along with a mixed flock of about 50 Ring-billed Gulls and 10 Herring Gulls. It was slightly shorter in length and appeared thinner than the Ring-billed Gulls. Its legs were black and appeared relatively long compared to overall length of the bird. The bill was black and had a downward curve at the end. The bill was proportionately longer compared the Ring-billed Gulls. A broken white eye ring was evident, with the two pieces almost converging at the back of the eye. The gray mantle was slightly darker than the Ring-billed Gulls. A faint gray wash extended up the nape onto the top of the head. This wash was very slightly darker on the side and top of the head just behind the eye. A gray wash on the sides extended from the neck to the tail. Remaining underparts were white. The primary wing tips were solid black. The black tail band at the end of the tail was rather wide, covering approximately one quarter to one third of the tail length. In flight, this bird acted similar to the Ring-billed and Herring Gulls. Wing beats were fairly steady and deep.—*Jesse Peterson, 1691 Hunters Glen Drive, Oshkosh, WI 54904*

24–25 February 1996, Kewaunee County—The gull was slightly smaller than nearby Ring-billed Gulls. The most striking feature was the large black bill, which seemed rather long with a slight droop at the tip. The forehead, chin and throat were white (which probably helps make the black bill stand out—similar to a first-winter Great Black-backed Gull). There were thin white crescents above and below the dark eye. A dusky patch at the ear-coverts, this duskiness extending up, as a thin line, to the back of the crown-grayish. The nape was medium gray which extended down into the mantle (giving no impression of a partial hood). The mantle and scapulars were dark gray (much darker than adult Ring-billed Gulls) with a few small brown patches in the coverts. The primaries were dark brown/black with no white visible. The breast and flanks were light grayish-brown. The legs were black and seemed long in proportion to the small body. On occasion the gulls would fly up, giving me a chance to briefly see the Laughing Gull in flight. The upper wings appeared dark overall, with blackish primaries, a dark brown inner wing with a prominent black secondary bar. A white rump and a fairly broad, dark tail band (forgot to check if it extended to outer feathers). The Laughing Gull may have arrived with Ring-billed Gulls which had suddenly started to appear the day before and were quite numerous on 2/24. The gull was still present the next morning, but I couldn't find it thereafter.—*John Regan, 1425 Western Ave. #23, Green Bay, WI 54303*

LITTLE GULL (*Larus minutus*)

2 December 1995, Kewaunee County—

The gull was slightly smaller than the Bonys. The striking black underwings were clearly evident, allowing me to pick up the gull quickly as the flock took off (the gulls spent most of the time on the water but occasionally took flight as the large waves rolled in). The Little Gulls upperwing was an even light gray, where the Bonys (mostly adults) had the white wedge at the primaries. I returned later that day with a spotting scope and was able to get a better look at the gull. The head was white with a dark spot behind the eye, gray cap, black bill. Also present that day were 2 Great Black-backed and 3 Glaucous Gulls.—*John Regan, 1425 Western Ave. #23, Green Bay, WI 54303*

LESSER BLACK-BACKED GULL (*Larus fuscus*)

2 January 1996, Ozaukee County—

There was a large flock of gulls sitting on floating chunks of ice which had drifted into the inner harbor, just outside of the area where boats are launched. I was looking for, and found, the Glaucous-winged Gull which I had discovered the previous day. There was also one dark mantled gull in the flock. I could see three things instantly that were important, or unusual. First, the mantle was dark grey, but lighter than the black primaries. Second, the bird was a little smaller than the nearby Herring Gulls. Third, the bird had the brightest orange spot at the gonys that I had ever seen on a gull. It positively glowed like a light on a Christ-

mas tree, or like a blaze orange hunting jacket. This whole ice pack was drifting to the south and into the sun. I could always re-locate this gull by looking for this orange spot, even when it was sitting with the sun behind it. The whole flock flew and circled and I could not find it during this time. When they landed I found it again, this time on the north end of the ice flow. In this light, which was no longer backlit, I could see all its features clearly.—*Tom Uttech, 4305 Hwy. O, Saukville, WI 53080*

22 February 1996, Milwaukee County—

In scanning the breakwater from the east end of Juneau Park landfill I noted hundreds of Herring Gulls, occasional ring-bills and a 2nd year Glaucous Gull. As I continued on a black mantled bird caught my eye. The black contrasted sharply with Herring Gulls adjacent to it, but the mantle was not quite as dark as the primaries on the bird. The other noteworthy point was its size. A bit smaller than the Herring Gulls. It otherwise exhibited the white head, breast and tail of an adult bird. Standing and preening, it had obvious yellow legs rather than the pinkish legs of the adjacent Herring Gulls. Though the bill was yellow, no other markings were evident at this distance.—*James C. Frank, 4339 W. Laverna Ave., Mequon, WI 53092*

GLAUCOUS-WINGED GULL (*Larus glaucescens*)

1 January 1996, Ozaukee County—

Late in the morning I drove into the harbor area to see what was in. there were a lot of gulls around and most were concentrated near the harbor

mouth. I stopped my van next to the boat launch area and began scoping the gulls sitting along the north breakwater. Within 2 or 3 minutes I saw a large gull that looked like a Herring Gull, but it had very pale primaries which were the same tone as the mantle. The gull was standing on the floating pancake ice and harassing 2 or 3 1st year Herring Gulls, from whom it pirated a rather large fish, ate it and then again flew out to the Harbour, the last time I saw it it was over the north end of the Harbour. It was a large stocky gull with a "normal" grey mantle and identical primaries which had white crescent dots on them. The legs were pink, the eyes dark, the bill was yellowish with an unusual mark at the gonys. The bill was larger than a Herring Gulls and had a more bulbous distal end, formed by a hook at the gonys. The neck and head were greyish brown.—*Tom Uttech, 4305 Hwy. O, Saukville, WI 53080*

1 and 2 January 1996, Ozaukee County—The mantle and wings of the gull were lighter gray than a Herring Gull but darker than a Glaucous Gull. This gray extended all the way into the outer primaries and became slightly darker near the tips. A few faint white spots were noted in the outer primaries. The trailing edge of the wing was white. On the under-surface of the wing, the trailing edge had a narrow band of sooty gray running along its length. This ventral side was dingy white. The breast, belly and tail were clean white. This gull was hooded with dirty brown feathering. This hood appeared to consist of smudges not streaks. The eye was dark, a trait observed in good

light at close range. Legs were bright pink. The size was nearly identical to Herring Gull but this gull was noticeably huskier. The dull yellow bill had a slightly enlarged tip but was not noticeably heavy. However, it was definitely larger than a Thayer's Gull. Gradually sloping forehead and flat headed appearance.—*Mark Kordecki, 168 B. N. 67th Street, Milwaukee, WI 53213*

1 January 1996, Ozaukee County—After observing hundreds of gulls, including several Glaucous Gulls, I was finally rewarded with a short view of the reported Glaucous-winged Gull. The gull was flying east, along the inlet towards the harbor, where it landed on the water behind the breakwater out of view. The bird was an adult with white undersides, tail, and head (although the head and neck were finely streaked, making the bird look hooded). The upper wings and back were gray, with the back being most pale, and the gray darker as it approached the primary wing tips. The bill was pale (too far to see any red spot, but black would have shown up if there had been any) and appeared heavier than the bill of Herring Gulls nearby. The underwings were not seen well, but the views I did have showed a fairly uniform pale underwing. I was to be able to detect any white apical spots on the upper wing primaries, but I don't think I could have made them out at the distance I was watching. The eye appeared dark, but again I couldn't be sure at that distance. What was most striking to me was the proportions of this gull. It did not seem much larger than the nearby Herring Gulls, but it seemed far heavier



Glaucous-winged Gull photo by John Idzikowski

or "chunky" in comparison. This impression was reinforced by its flight which had rather slow powerful wingbeats, yet it covered ground quickly.—*Dennis Gustafson, 15440 Linfield Lane, New Berlin, WI 53151*

2 January 1996, Ozaukee County— This bird was first seen in flight. The fact that the wingtips were a gray similar to the mantle color, as opposed to black or white, was very evident. The white internal markings in the wingtip appeared to be more extensive than in Herring, though the similarity in color made the precise pattern difficult to see. While in flight, the other characteristics I tried to measure where overall size and mantle color. Size was on average larger than, but within the range of Herring. Mantle color was similarly lighter than average, but within

the range of Herring. At rest, the following were also noted; eye appeared dark throughout the observation, though often this can be difficult to gauge with gulls. The bill was yellow with a red gonydeal spot. The bill did not appear significantly heavier or thicker than Herring. The position of the eye did seem unusual, being higher up on the head than Herring, similar to the difference in eye position between Snow Goose and Ross's Goose. There was also a "crease" in the feathers behind the eye, similar to what I subsequently noted in photos of Glaucous-winged Gull, giving the bird a somewhat Puffin-like expression. Overall the expression was less menacing than Herring Gull. The bird had a well defined hood, though I wouldn't say there was prominent streaking on the head; the effect was

the result of a more suffused darkness.—*Brian Boldt*

3 January 1996, Ozaukee County—It was a large gull, obviously larger than adjacent Herring Gulls. The head and neck were mottled, the bill large and yellow. The back and wings were a soft gray with the remainder of the body white, legs pink. In flight the white outer “spots” to the primaries could be seen on the upper as well as lower wing. The underwing was gray in contrast to the Glaucous Gull whitish underwing.—*Daryl D. Tessen, 3118 N. Oneida, Appleton, WI 54911*

3 January 1996, Port Washington Harbor, Ozaukee County—I observed this bird for much of this 45 minute period, but also spent some time scanning through a flock of gulls on the north breakwater. For most of the time this gull was swimming along the steel seawall along the south side of the harbor, adjacent to the coal piles. Initially it was within about 150 meters, but it gradually worked its way east along the seawall until about 250–300 meters away. When I first observed it, the bird was trying to swallow a fish that was too large for its throat. At times it would flap its wings while on the water, or fly for brief periods, but always remained in the same general area. At times it was in close proximity to a few Herring Gulls, and it appeared to have some dominance over them. The gull was in adult winter plumage, with the mantle being a uniform, medium gray—appearing very slightly darker than the gray of the Herring Gulls. The folded primaries were a uniform gray, fairly similar to

the mantle color, but slightly darker. The white tips of the primaries showed as a series of crescent-shaped spots along the folded wingtip. In flight, the upper wings were a uniform medium gray, appearing about the same shade from the base almost to the tips, with only the very tips of the outer primaries being white. From below, the wingtips looked very pale gray, with no dark markings present. Again, the tips and the trailing edge were white. There were none of the dusky subterminal markings that are present in adult Thayer's Gulls. The outermost primary appeared to have a subterminal white spot or “mirror.” The head shape was rather unique among the gulls present. The bird had a very flat forehead/crown, with relatively little space from the eye to the top of the head. The eyes were dark in color, apparently dark brown, although the exact color could not be determined. The head, neck, and upper breast (down to at least the water line) were mottled with a fairly uniform pale grayish brown, forming something of a bib against the white breast and flanks. The remainder of the underparts were also pure white. The bill was yellow, with red on the gonys, and a dusky subterminal spot above it on the upper mandible. The bill was rather long and somewhat heavy in structure, although not as heavy as in some Glaucous-wings I have seen. The gonydeal angle was not particularly pronounced, but seemed somewhat more prominent than on the Herring Gulls nearby. The legs and feet were pink. In overall size and shape, this bird seemed rather bulky, and as large or larger than any of the Herring Gulls present

nearby.—*Thomas R. Schultz, N6104 Honeysuckle Lane, Green Lake, WI 54941*

4 January 1996, Ozaukee County—

The bird seemed larger than a Herring Gull, with a slightly darker gray mantle, though the shadows initially left me uncertain of this. Though something about the bird appeared glaucous-like the head and neck were heavily to moderately streaked brown—lighter on the ventral neck (a similar hooding effect seen in winter Thayer's Gull). Since the eye also seemed dark, I did do a double take looking at the Thayer's Gull swimming 20 yds closer to prove to myself that though the mantle and hood suggested a Thayer's, this bird was indeed very large, with a comparable heavy bill, and angular head compared to the Thayer's. Though the bill was as heavy as a Glaucous Gull's, it also was different in color. The tip was yellow, in the proximal 2/3 it was gray-yellow. A red-tinged spot was seen at the gonys with a dark gray line overcasting it and extending up across the adjacent upper mandible. The gray mantle extended across the primaries on the dark wing surface—not turning white as a glaucous or black as a herring—just again an odd wing tip to wing tip gray. Below the primaries were also a light gray contrasting with the white secondaries and underwing coverts. It exhibited the bulky, short-winged ("relatively" shortwinged) of a glaucous gull in flight. Pink legs were noted as it stood on the breakwater, 40 minutes later, after observing an adult glaucous gull, I was able to find the glaucous-winged gull again on the breakwater by noting its large size,

and obviously gray primaries, slightly darker gray mantle; heavier brown hood relative to the Herring Gulls.—*James C. Frank, 4339 W. Laverna Ave., Mequon, WI 53092*

BLACK-LEGGED KITTIWAKE
(*Rissa tridactyla*)

13 December 1995, Ozaukee County—

I had just put the scope down after looking for Thayer's Gulls in a large flock of Herring Gulls when I saw a very unusual gull which had a very unusual wing pattern. I saw a gull which was larger than a Bonapartes Gull and which flew with a wing beat similar to a Ring-Billed and not at all as buoyant as a Bonaparte's Gull. The bird was white all over except for the large dark "M" pattern across the wings, a black "ring" at the nape, black eyes, a black bill which was dagger shaped and a black band on the tip of the tail.—*Tom Uttech, 4305 Hwy. 0, Saukville, WI 53080*

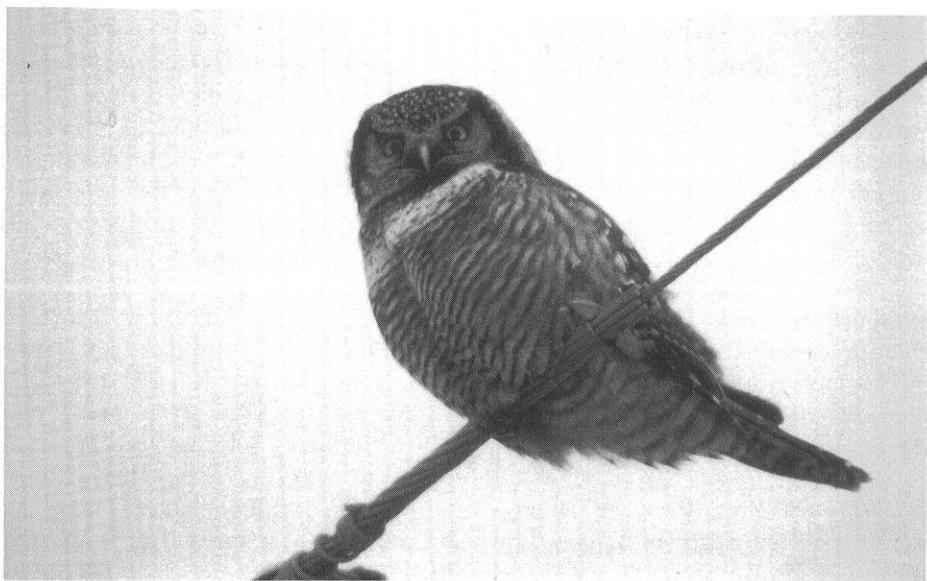
6 January 1996, Ozaukee County—I was looking through a flock of Herring and Ring-billed Gulls standing on some ice in front of the south breakwater when I suddenly saw a first-winter Black-legged Kittiwake fly in and land on the water near the other birds. We were able to see the very distinctive field marks of this plumage: the prominent black bar across the hindneck, the black bill, the pale gray mantle, the carpal bar across each upperwing, the black triangle on the outer primaries, and the solid black terminal band on the white tail. The head and underparts were white. Less prominent but also visible was the black spot on the hindcheek.—*Thomas R. Schultz*

NORTHERN HAWK-OWL
(*Surnia ulula*)

24 December 1995, Price County—I spotted a medium-sized bird perched on the very top of a spruce tree, 30 feet off the highway to the east. I figured it was “just another crow,” but as I came up along side of it, I saw it was more gray, overall, than black, and it appeared to have a relatively large, rounded head. I pulled over and looked at it with my binoculars. I noted a long tail, round head and a beautiful light and dark vertical pattern on the back of its head. After a quick u-turn, I pulled up next to the tree—30 feet from it. We spent 5 minutes gazing on an owl with yellow eyes, long tail, a bit smaller than a crow. It had a shrike-like posture and a dark outline around its face. It also had fine barring on its underside. Another quick u-turn to the

other side of the road (taking turns getting “good looks” from our tiny Honda). Watched it another 5 minutes, until it spotted something (it was constantly looking about) on the road ahead of us. It took off in a flash, flying low and fast along the highway and cut across the road, inches in front of a truck and briefly landed on the shoulder, 50 yards ahead of us. It then flew into the adjacent wooded area and disappeared. Its flight reminded me of a Merlin's. Rapid wing beats, straight and full of intent.—*Betsy Bartelt, P.O. Box 1244, Bayfield, WI 54814*

13 January 1996, Douglas County—Saw bird flying as we drove past slowly, flying very similar to a falcon but was larger, hovering while about to land on top of a spruce. While flying saw a band of white on top of wing feathers on upper arm, joining



Northern Hawk-Owl photo by Jack Bartholmai

to shoulders. While perched we studied the bird from a distance of approximately 300 yards. Stocky bird, very large square head, long hawk like tail feathers. Perched upright looking towards us, sitting low on a branch. Breast feathers were white/pale gray. From the distance we could see white markings across both eyes. Drove vehicle closer to trap and band the bird. We sat about 35 yds from the bird for about 5 minutes before putting trap down. Bruce Bacon, Wisconsin bird bander and wildlife manager for the DNR set a trap onto the sow with a mouse. Owl came down from the tree almost vertically then very low across onto the trap. Bird was banded, weighed, wing and tail length recorded and studied before being released. While in the hand it was noted how short the birds legs were.—*Claire Gower, 82 Grange Road, Chessington, Surrey, KT9 1EY, England.*

25 February 1996, Douglas County—

This was a sunny, bright day, so this bird appeared more brown, than grey. The sun was shining in its yellow eyes as it looked at me. I stopped the car next to bird. Noted the fine barring over its underside, long tail, rounded head, dark markings of facial disk, and pattern on light and dark on the back of its head. After 10 minutes it flew fifty feet behind the car to another road-side tree.—*Betsy Bartelt, P.O. Box 1244, Bayfield, WI 54814*

7 February 1996, Marquette County—

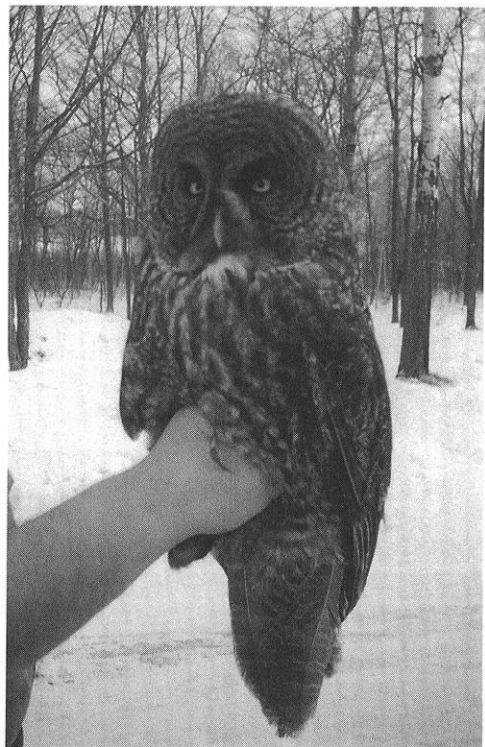
Driving down County Highway F about a half mile south of Glen Oak in Marquette County, I observed a strange-looking owl perched on a

utility pole overlooking a thawing field. The owl was quite tame and easily approached, displaying a long tail and heavily barred brown underparts. Its facial disks were highly accented with black borders, identifying the bird as a Northern Hawk-Owl. I returned the following day with Bill Brooks and we took several photos of the bird. In early morning, the bird is roosting in a nearby spruce (and possibly during the evening). During the day, however, it flies from pole to pole within a half-mile stretch of road. It was observed hovering over a melted grassy area between snowbanks and seen feeding on a small mammal atop one of the utility poles. It also seemed interested in a local birdfeeder, but the feeder's owner reported he had not seen it taking any birds.—*Daryl Christensen, N6053 Hwy. Y, Montello, WI 53949*

GREAT GRAY OWL (*Strix nebulosa*)

15 February 1996, Douglas County—

When I first saw the bird fly I noted the fine pattern gray back. Laura and I then observed the owl by flashlight at about 45 feet. The eye color could not be seen only the red glow from the reflecting flashlight. White below the bill and above the eyes (eye brows) could be seen. The owl was large, lacked ear tufts and was gray color (no tans). Large spots or streaks ran from the white below the bill to its belly. Judging its size compared to the snow shoes the owl was about 2 ft. tall. The owl appeared to be attracted to the window by pet birds. Observing this owl by flashlight up in the maple tree, it was not easily identifiable as a great gray. All



Great Gray Owl photo by Ira Follen

12 February 1996, Pierce County— After hearing crows mobbing something at the far edge of a woodlot, I slowly approached and soon spotted a very large owl sitting on a branch, trying to ignore the crows. Not only was the owl large, but it seemed to have a fairly long tail (for an owl). Its overall color was a brownish gray. Its large head lacked ear tufts. Most notable were its small looking yellow eyes surrounded by very large gray facial disks, strongly lined with concentric rings (like Barred Owl, only larger). Around the bill was a pale gray "x" shaped area, bordered below by distinct white mustache marks. From the throat down, the undersides were irregularly striped vertically. After a few pictures were taken, the owl left its perch and flew further into the woods, where it again perched within view. Its wings were very large and its flight slow and seemingly "labored." It appeared "tame" in allowing me to approach fairly close, before finally taking flight.—*Dennis Gustafson, 15440 Linfield Lane, New Berlin, WI 53151*

that I was sure of was that it had no ear tufts. So I spoke out loud these field marks to look up when I went inside: white "eyebrows" above the eyes and at the throat, and vertical barring from the throat down the breast, becoming more horizontal on either side.—*Steve LaValley, P.O. Box 324, Poplar, WI 54864*

25 February 1996, Green Lake County— The owl was at first sitting in a low branch of an oak tree on the north side of the road. It flew to a 3–4 ft. high metal fence post right out in the open and sat there for approximately 20 min. The fence post was quite close to the side of the road and the owl seemed unfazed as cars and trucks whizzed by at 60 MPH. When seen from the back the owl was an overall pattern of black, brown and white streaks. The feathers on the back of the head were quite long, and each time a car went by the feathers would lift in the wind

12 February 1996, Burnett County— Driving on Hwy 77 East from Minn. 48 we crossed the state line and 100 yards into WI the bird was perched upon a utility pole. Brownish-gray with large facial disk covering whole front of head. Yellow eyes, white mustache.—*Elaine Vincent, 4815 N. Lynndale Dr., Appleton, WI 54915*

revealing the solid gray, downy bases of the contour feathers. The wing tips framing the tail were noticeably darker than the tail. The tail had a very ragged looking edge at the tip. When the owl turned its head to look in our direction the first thing I noticed were the concentric circles of brown and white feathers that made up the facial disk. The eyes were yellow, as was the beak. White eyebrow's extended up from the beak and a white mustache framed the beak. There was a dark spot directly under the beak. When the owl finally flew it swooped low over the road, crossed the road and landed about half way up in a short spruce tree several hundred feet from the road. We watched it for a while longer but it remained in the tree.—*Jean M. Strelka, 19315 Killarney Way, Brookfield, WI 53045*

23 January 1996, Manitowoc County—On the morning of 23 January 1996 I received several calls regarding a large, injured owl along side State Highway 42 just 2 miles southwest of Manitowoc, WI. The first few calls referred to the bird as a Great Horned Owl and I contacted Donna Harms of Wildlife of Wisconsin-Manitowoc Area Wildlife Rehabilitators to recover the bird. I then received a call from C. R. Krieger who was confident the bird was a Great Gray Owl. I again contacted Donna Harms and arranged to meet her where the bird was located. As I approached the bird from the north I could easily see it sitting along a steep embankment of the road from greater than 1/4 mile away. I stopped my vehicle at the side of the road approximately 12 meters from the owl. The bird was perched on a

white cedar sapling which was barely sticking above the snow. Although I had never seen a living specimen of this owl before, identification was unmistakable. Recorded field marks of the bird included; its great size and general gray coloration, large "earless" head with large facial disks surrounding yellow eyes, a yellow beak, white crescents below each facial disk, and a proportionately long tail. The breast and belly was streaked longitudinally with dark gray feathers. These field marks were later observed with the bird in hand which easily distinguished it from other species. The owl was perched upright when I arrived, but soon collapsed on its perch and was lying on its face in the snow when Donna reached the scene. I approached the bird to capture it, but as I bent down to touch it, the owl recovered and flew with slow, labored wingbeats to a fencepost about 15 meters away. I photographed the bird from that distance without a zoom lens. I then approached the bird again and it allowed me to walk up to it and place a fish landing net over it. I removed the bird from the net with very little struggle. It did not appear to have been hit by a car, but rather just very emaciated. Donna photographed the bird at close range while I held it. It was then transported to veterinarian Joe Sutton in Manitowoc for treatment and then to Pineview Rehabilitation Center in Freedomia, WI. The bird died on 26 January. The specimen will be added to the avian collection at the Richter Museum on the UW-Green Bay campus.—*Jeff Pritzl, Manitowoc Field Station, Wildlife Management, 1314 Hwy 310, Manitowoc, WI 54220*

BOREAL OWL (*Aegolius funereus*)**5 January 1996, Milwaukee County—**

This was a small owl, quite similar to Saw-whet Owl. Chocolate-brown back, upper sides of wings, crown, nape, upperside of tail. Large white spots on back and wings; large white "eyespot" on back of head, white spotting on crown and on dark edging around facial disk. Irises—yellow. Bill—pale greenish-yellow, lighter on dorsal ridge and tip. Whitish undersides with warm brown blotchy streaking. Whitish facial disk edged with blackish-brown (except between eyes); between eyes was same brown as crown, with small, clean white fine spotting. No ear tufts. Weight was 133.5 grams; wing chord = 164 mm. Tail length = 94 mm. The owl was rehabilitated and released.—*Scott Diehl, S.68 W.12977, Camilia Dr., Muskego, WI 53150*

CLAY-COLORED SPARROW**(*Spizella pallida*)****December 1995, Ozaukee County—**

A small sparrow, overall body shape and size similar to Chipping Sparrow. Both mandibles pinkish, upper slightly more dusky. Legs pinkish. General impression is of the buffy coloration. Wing coverts not pronounced, about same as body color. Underparts unstriped, slightly buffish wash especially in mid abdomen. Crown has quite well defined median stripe that is paler (tan) than the more lateral stripes that are brown. Crown stripes are not at all rusty. Dark line post-ocular, tan cheek with whitish-gray area under cheek. Lores appear same color as cheek patch, i.e., no contrast with it and not dark

like post-ocular stripe. Only other possible species would be Chipping Sparrow. Unfortunately unable to see rump color because of the way the bird held its wings. However, I believe that it is probably a Clay-colored Sparrow because: 1) Chipping Sparrows are also not found in Wisconsin in winter and should have molted into basic plumage by this time of year (according to Kaufman at least by late Oct.), 2) No black line in lores, and 3) median crown stripe present.—*Millicent S. Ficken, 1623 16th Ave., Grafton, WI 53024*

16 December 1995, Ozaukee County—

A small sparrow (smaller than White-throated Sparrows also in yard) was seen coming to feed on seed on the ground below feeders. The sparrow was unstreaked below with a buffy breast and undersides. The head had a brown crown with a distinct pale medial stripe. A buffy supercilium was bordered below by a darker eyestripe which extended from behind the eye to the distinct gray nape (wider posteriorly). The lores were hard to see, but did not appear dark like the eye stripe, which was only behind the eye. The ear coverts were brown with a much darker front border (moustachial strips), contrasting with a whitish submoustachial stripe. I wasn't looking for a malar stripe below the white (and my pictures don't help with this either), but the throat was not quite as white as the moustachial stripe and seemed separate, so the malar stripe may have been present, but not noted as such. All these facial colors contrasted strongly with the distinct gray nape, which also contrasted strongly with the brown crown, back, and wings.

The tail also was brown. The wings had two buffy wing bars. The legs and bill were pinkish. It would have been helpful to see the rump color, but this was not clearly seen, even by Dr. Ficken with scores of observations. When flushed, however, no contrast was seen between the back, rump, and tail. If the rump had been gray, it would be expected to notice some contrast, even in the brief moments of taking flight.—*Dennis Gustafson, 15440 Linfield Lane, New Berlin, WI 53151*

LINCOLN'S SPARROW
(*Melospiza lincolni*)

12 November 1995 to 15 January 1996, Calumet County—I first noticed the bird while I was raking leaves in the yard. It was eating at feeder about 20 feet away. Assuming it was a Song Sparrow, I paid little attention. Several days later while raking leaves again I noticed it did not fly like a Song Sparrow, but had a shorter tail and either ran very fast or flew low into bottom of a bush. Since it looked like a Lincoln's Sparrow to me, I got my binoculars and looked from inside the house. It always fed in exactly the same spot in a large wooden lean-to shelter we have for ground-feeding types. It was only about 8 ft away from the window, at the closest distance my binoculars will focus; so I saw every detail. Its face was gray with brown markings, a thin brown eye stripe narrow whitish eyering, and a russet crown stripe with a gray median crown stripe. The cheek was grayish brown, the lores buff (a yellow ochre shade). There was no large malar

patch as in Song Sparrow. All the dorsal parts were neutral brown with fine dark stripes on the back. The throat was white with fine dark spots or stripelets. The breast was buff with fine black stripes. The sides pale brown with fine black stripes. Under tail coverts were buff and the belly white and unmarked. There was a small central breast spot of grey, but not as large and bold as a Song Sparrow's. The wings and tail were brown with no conspicuous markings—each feather dark in the center with warm brown edges. The bill was neutral dark and the legs reddish brown. It scratched with both feet at the same time. The all over appearance was of an elegant, refined Song Sparrow with a more delicate appearance and a little bit smaller. Its flight pattern was direct and fast, low into the nearest bush to hide. Or it would run very fast—a veritable streak. Other behavior was not the familiar Lincoln pattern however. It showed little fear as I worked in the yard and chased Juncos or Tree Sparrows who got within a foot of its feeding place. It attacked a Red-backed Vole within two feet. This un-Lincoln-like behavior is consistent with descriptions in literature of their behavior on their wintering grounds in Mexico and Guatemala (*A.C. Bent's Life Histories*). The bird was silent at all times when I saw it outside. The bird's tail was at first 1/3 inch shorter on the left half. Apparently half of it had been pulled out by a predator and was nearly regrown. I hypothesize that the damaged tail may have interrupted its normal fall migration, forcing it to winter in Wisconsin. The bird vanished on January 15th during 2 days of continuous freezing

rain. It had spent 2 1/2 months here in Calumet County during one of our coldest winters. It disappeared not during one of the severe cold spells, during which it did not appear any more uncomfortable than the Tree Sparrows, but during the thaw period.—*Carroll Rudy, W3866 Highway H, Chilton, WI 53014*

SCOTT'S ORIOLE (*Icterus parisorum*)

5 January 1996, Adams County—The head was solid black. The upper back was also black, but with tiny flecks of white from feather edges. The lower back and base of the tail were prominently yellow—not orange-yellow or greenish-yellow, but lemon-yellow. The bill was fairly long, sturdy, black. The eye was black. I could not gauge size accurately from this position, but it was definitely smaller than a nearby mourning dove and much larger than nearby chickadees. The bird maintained this position, moving only slightly, for 20 minutes. I could see that the black was not confined to the back and head; it also included throat and upper breast, ending abruptly—junco style—on the breast. The lower breast and belly were bright lemon-yellow. The yellow extended partially onto the tail (medium length, largely black), but my view did not reveal the tail pattern with precision. Overall size and shape was similar to that of a Northern Oriole.—*Sam Robbins, 14 S. Roby Road, Madison, WI 53705*

6 January 1996, Adams County—About 20 minutes after parking my car in the driveway, overlooking the backyard, an oriole landed on a feeder and, after a brief visit, flew

closer to us, onto a woodpile, where oranges had been set out. The bird was approximately the size of a cardinal (no side by side comparison possible) with a typical black, pointed bill; a black head and hood, black upper back, black wings and most of tail. Instead of the familiar orange, yellow was present on the undersides, lower back, and rump, extending partially out on the sides of the tail. The wing also had a small yellow patch at the shoulder and a lower white wing bar. The yellow was somewhat on the light side (lemon? yellow). This bird may not have been in complete adult male plumage because some light scaling was seen on the black portion of the upper back.—*Dennis Gustafson, 15440 Linfield Lane, New Berlin, WI 53151*

6 January 1996, Adams County—This black and yellow oriole was roughly the size of a Northern Oriole. The head was black and this color continued to the breast and the middle of the back, forming a hood. The hood was dark black but on the black white crescents gave a scaly pattern suggesting a juvenile male. The underparts and rump were a brilliant yellow. The outer rectrices were yellow about 1/4 of the way down the tail. Tail and wings were black. Lesser wing coverts were also bright yellow and the wing bars were white. Legs and the long pointed bill were dull black. No vocalizations were heard. This bird seemed wary of people if they attempted to leave their vehicle. No evidence of feather wear that would be consistent with a captive bird.—*Mark Korducki, 168 B. N. 67th Street, Milwaukee, WI 53213*



Dark-eyed Junco *by Robert A. Kleppin*

WSO Records Committee Report—Winter 1995–1996

Seventy-three documentations of rare birds were reviewed by the WSO Records Committee for the Winter 1995–96 season. The sixty-seven accepted reports constitutes an acceptance rate of 92%. 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. Included in these reports are first Wisconsin records for Scott's Oriole and Glaucous-winged Gull. Also affecting the Wisconsin State List are recent splits by the A.O.U. of the Northern Oriole into Baltimore Oriole (renaming a species on the state list) and Bullock's Oriole (new to state list), Rufous-sided Towhee into Eastern Towhee (a renaming of a species on the state list) and Spotted Towhee (new to state list), and splitting of Sharp-tailed Sparrow into Saltmarsh Sharp-tailed Sparrow and Nelson's Sharp-tailed Sparrow (a renaming of the species on the state list). The Wisconsin State List thus stands at 403 species with the 2 new additions and two recent splits.

by Jim Frank

ACCEPTED

Ross' Goose—

#96–001 Winnebago Co., 29 February 1996, Nussbaum.

A small white goose with black wing tips was noted. It was much smaller than the adjacent Canada Geese and much shorter-necked, more Mallard-

necked than goose-necked. The bill was short, orange, and lacked the "grin patch" of the Snow Goose.

Barrow's Goldeneye—

#95–031 Ozaukee Co., 1 December 1996, Uttech; 7 December 1995, Domagalski; 7 January 1996, Boldt; 13 January

1996, Tessen; 13 January
1996, Frank.

This drake goldeneye had a shorter, dark bill and more abruptly rising forehead than the adjacent Common Goldeneyes. The white facial patch was crescent-shaped as opposed to round. The black back had white spots through the scapulars instead of black streaks through otherwise white scapulars, making the Barrow's stand out in the flock of Commons on the basis of significantly greater black on the back. This black of the back extended part way down toward the water in the area between the upper breast and flank. This is the second consecutive winter a Barrow's Goldeneye has wintered off Virmond Park in Ozaukee County. #96-002 *Milwaukee Co.*, 6 January 1996, Schultz.

This female was basically colored like the adjacent female Common Goldeneyes in that the head was dark brown, the back brownish, and the flanks grayish. The distinction between this bird and the Commons involved the entirely yellow bill. This was in contrast to the dark bill with yellow confined to the tip on the Commons. In rare cases Common Goldeneyes have been reported to have extensively yellow bills, but the additional notation of bill shape was made in this case to further support the identification. The bill of the Barrow's was noticeably shorter than those of the adjacent Common Goldeneyes. An additional characteristic difference, the more abruptly rising forehead was not discernible in this sighting.

King Eider—

#96-004 *Milwaukee Co.*, 23 February
1996, Boldt; 25 February
1996, Frank; 25 February

1996, Bontly; 25 February
1996, Tessen.

This dark or "rich" brown duck was slightly larger than adjacent scaup ducks. The most obvious distinction was the shape of the head and bill. The bill sloped in a straight line up to the forehead, very much like a canvasback. It was however, not nearly as long as a canvasback's bill. More importantly, the shape of the beak/face interface was markedly different than other ducks. The beak commissure extended back into the facial feathers as did a portion of the bill up toward the eyes. It might also be described as the cheek feathering protruding forward into the beak outline quite extensively. Given the significant racial variability of Common Eiders, the only consistent characteristics to separate King Eiders from Common Eiders center around the shape of this cheek feathering extension and the beak commissure line. This bird was noted to have a forward extension of the feathering stopping well short of the caudal end of the nostril instead of reaching the nostril as in Common Eiders. In addition, the beak commissure curled upward as it extended into the cheek instead of being straight as in Common Eiders. A lighter brown color was also noted in the forward cheek feathering and the chin.

The use of head shape alone or barring on the flanks to distinguish the eider species is not reliable. Western races of Common Eiders lose much of the "ski-nosed" appearance of the eastern races. Flank barring also is highly variable depending on age and racial variation.

This is the second consecutive "early spring" report of a King Eider on the Lake Michigan shoreline in Wisconsin.

Gyr Falcon—

#96-005 *Douglas Co.*, 21 January 1996, O'Donnell, Michael, and Hankin.

This hawk was as large or a little larger than the Red-tailed Hawk present in the area. It was gray overall, though the back was mottled and the breast streaked. The wings were broad, but flapped in a rapid, shallow, falcon-like fashion. The barred tail was relatively long when perched. A gray malar stripe was also apparent. Observation distance was 25-75 yards at various times.

This was the *only* documentation received on this individual, apparently present for much of the winter at Superior.

Laughing Gull—

#96-018 *Milwaukee Co.*, 13 February 1996, J. Peterson.

#96-017 *Kewaunee Co.*, 24, 25 February 1996, Regan.

Birds in first winter plumage were noted as thinner, with longer, dark legs than adjacent and slightly larger Ring-billed Gulls. The dark bill was also longer than that of Ringbills, with an additional notation of a drooped tip. A gray wash on the nape of the neck and back of the head, extended down into the mantle. The gray of the mantle was slightly darker than that of the Ringbills. The primary tips were black and unmarked. A black band was also apparent on the distal third of the tail. Lastly, white crescents were reported above and below the dark eye.

Lesser Black-backed Gull—

#96-020 *Milwaukee Co.*, 22 February 1996, Frank.

An adult bird was noted to be slightly smaller than adjacent Herring Gulls,

with a strikingly darker gray-black mantle. The primaries were still darker than the mantle. The bill and legs were yellow.

Glaucous-winged Gull—

#96-022 *Ozaukee Co.*, 1 January 1996, Uttech; 1 January 1996, Gustafson; 1, 2 January 1996, Korducki; 2 January 1996, Boldt; 3 January 1996, Tessen; 3 January 1996, Schultz; 4 January 1996, Frank; 3 January 1996, Idzikowski (photo).

This gull was described as larger than adjacent Herring Gulls, more in bulk than in length, but slightly smaller than a Glaucous Gull (also present). The mantle was generally perceived as slightly darker gray than the adjacent Herring Gulls. The flattened, white head was heavily streaked with brown creating a hooding effect somewhat like that of a winter Thayer's Gull. Most strikingly; however, was the color of the primary wing tips. They were *gray*, similar, or slightly darker than that of the mantle with white crescents created by the tip of each folded primary. *No black* coloration was detected by any observer or photograph. Photographs capturing the primaries extended and separated in flight revealed white mirrors in the 1st, 3rd, 4th, and 5th primaries. The eye was dark in color, the legs pink. The yellow bill was heavier than the Herring Gulls' bills, but not as blob-shaped at the tip as some field guides suggest. The lower bill had a red gonydeal spot and three observers independently noted a blackish "zigzag" line extending across both the upper and lower beak at the site of the red gonydeal spot.

All characteristics of this bird fit classically with an adult basic plumage

Glaucous-winged Gull, except perhaps the bill size. Most observers and the photographs don't suggest the blob-shaped tip field guides do. Interestingly, photographs in Grant's *Gulls—A Guide to Identification* don't show this characteristic either.

Another possibility raised by observers familiar with the species on the West Coast is of hybridization. Glaucous-winged Gulls reportedly will commonly hybridize with Glaucous, Herring, and Western Gulls in certain areas. Photographs and drawings of the resultant patterns do not fit this bird. These hybrids in general show intermediate colors and patterns. This bird has a darker gray mantle than a Herring Gull and gray primary tips. A Glaucous hybridization should have significantly lightened these characteristics. This bird had no black noted in the primary wing tips. Western and Herring hybridization should have added at least some black (based on studies published of birds in hybrid colonies). In addition, the mantle color should have been darkened by Western hybridization. The white mirrors in primaries 1, 3, 4, 5 should have been altered by hybridization as well.

Though this species is generally considered not to wander from the West Coast, casting doubt on the origin and identification of this bird, an article by Binsford and Johnson in *Western Birds* 25(4), 1995, documents the increasing inland reports of Glaucous-winged Gulls through 1993. (Alberta 14 records, Saskatchewan 1 record, Manitoba 1 specimen, Montana 4 records, Colorado 5 records, Oklahoma 1 specimen and Illinois 1 record. North Dakota reportedly had 2 records under review at the time of this article.) Also of extreme interest in Minnesota's first

state record of a Glaucous-winged Gull reported in *The Loon*, Spring 1996. This bird was present in the Twin Cities area from October 19 to December 24, 1995, moulting gradually during this time into what was felt to be 4th winter plumage. One week after disappearance as water froze up, Wisconsin's first accepted record appeared in Port Washington. Published Minnesota photos were from earlier in the fall, before completing its moult, so it is difficult to directly compare the two birds. The plumages were apparently very similar, and the coincidence of the timing of their departure and our sighting are intriguing.

(Also of note to interested observers, are two additional reports of Glaucous-winged Gulls summarized later in this article in the Not Accepted section).

Black-legged Kittiwake—

#95-048 *Ozaukee Co.*, 13 December 1995, Uttech.

First winter birds were observed to be slightly larger than a Bonaparte's Gull, with a light gray mantle on an otherwise white bird. The striking black markings on the outer primaries, the carpal bar, the nape of the neck, the cheek, the tip of the tail, the bill and feet were all evident. Specific mention was made of the lack of black along the trailing edge of the wing.

Great Gray Owl—

#95-046 *Sawyer Co.*, ? December 1995, Olson.

#96-006 *Douglas Co.*, 5 January 1996, LaValley.

#96-007 *Manitowoc Co.*, 23 January 1996, Pritzl, (captured, died in rehab).

#96-008 *Burnett Co.*, 12 February 1996, Vincent.

#96-009 *Pierce Co.*, 12 February 1996, Gustafson.

#96-010 *Douglas Co.*, 14 February 1996, LaValley.

#96-011 *Milwaukee Co.*, 17 February 1996, Diehl, (captured, died in rehab), (photo).

#96-012 *Wood Co.*, 16 February 1996, Boldt.

#96-012 *Wood Co.*, 20 February 1996, Tessen.

#96-013 *Green Lake Co.*, 21, 25 February 1996, Schultz.

#96-013 *Green Lake Co.*, 24 February 1996, Frank.

#96-013 *Green Lake Co.*, 25 February 1996, Strelka.

Identification was based on observing a large gray owl, with no ear tufts, yellow eyes, large facial disks with concentric rings, and a white moustache and eyebrows.

These 12 documentations of 9 individuals represent the documented evidence received out of a probable 31 individuals reported during the winter period in Wisconsin.

Northern Hawk-Owl—

#95-047 *Price Co.*, 24 December 1995, Bartelt.

#96-014 *Douglas Co.*, 13 January 1996, Gower.

#96-015 *Marquette Co.*, 7 February 1996, Christensen; 8 February 1996, Brooks; 10 February 1996, Tessen; 11 February 1996, Strelka; 11 February 1996, Bontly; 11 February 1996, J. Peterson; 18 February 1996, Frank; 20 February 1996, Ashman; 24 February 1996, Gustafson.

These owls were identified by the approximate crow-size, yellow eyes, lack of ear tufts, dark brown borders to the

gray facial disks, horizontal barring on the breast, the relatively long tail, the white spotting on an otherwise brown head, and the horizontal posture when perched.

Boreal Owl—

#95-038 *Sheboygan Co.*, 21, 24 November 1995, Green (photo).

#96-016 *Milwaukee Co.*, 5 January 1996, Diehl (photo).

These saw-whet-sized owls had whitish as opposed to brownish facial disks, with dark brown borders to these disks. They had yellow eyes, no ear tufts, and a yellow (not black) bill. Though much is made of the white spots on the brown forehead (instead of white streaks), the previously mentioned field marks are definitive and more easily observed.

Spotted Towhee—

#96-027 *Shawano Co.*, 1 January 1996, M. Peterson; 4 January 1996, Tessen; 5 January 1996, Korducki; 6 January 1996, Domagalski; 15 January 1996, Gustafson; ??date, Boldt.

Observed at a feeder, surprisingly enough with an Eastern Towhee for easy reference!, it was similar to the Eastern except for the presence of two white wingbars and white spotting on the scapulars. Also noted by some observers was a different call note, described as more of a nasal "wheee".

Though reported in several previous years (and photographed in some cases) prior to this sighting, this report coincides with the recent splitting of the Rufous-sided Towhee into the "common to Wisconsin" Eastern Towhee and the western Spotted Towhee. All of these reports result in the addition of a new species to the state list.

Clay-colored Sparrow—

#95-049 *Ozaukee Co.*, 9 December 1996, Ficken; 16 December 1996, Gustafson.

This very small sparrow, smaller than a white-throated in direct comparison, had an unstreaked, buffy breast and undersides. The brownish crown had a central pale stripe. Also reported was a buffy supercilium and a dark eye stripe, behind the eye only. The ear coverts were brownish, the upper border of this ear covert patch was the dark eyeline. The nape was gray, the bill flesh-colored with a darker tip. All of the above field marks are characteristic of both immature Chipping and Clay-colored Sparrows. To distinguish a Clay-colored from a Chipping Sparrow, observers noted a pale lores (not a black extension of the eyeline) and a dark malar stripe below the ear coverts (not a diffuse pale brow edge).

Lincoln's Sparrow—

#95-050 *Calumet Co.*, 12 November 1995, Rudy.

Though at initial look it was assumed to be a Song Sparrow, it was described as being smaller and shorter-tailed than expected. It also exhibited a buffy wash to the breast with fine streaking. It lacked the malar stripe and central breast spot of the Song Sparrow. The lores were buff. Importantly, the whitish throat was finely streaked, unlike the unstreaked throat of Song and Swamp Sparrows.

Scott's Oriole—

#96-028 *Adams Co.*, 5 January 1996, Robbins; 6 January 1996, Domagalski; 6 January 1996, Gustafson; 6 January 1996, Korducki; 6 January 1996, Tessen (photo); 7 January

1996, Boldt; 20 January 1996, Bontly; 20 January 1996, Strelka.

Though present at a feeder from November of 1995, positive identification was not made until January 1996. This oriole had a black head, upper back, upper breast, wings, and tail. This contrasted sharply with the bright yellow breast, lower back, shoulder and upper outer tail feathers. A wide white wingbar was also evident. The beak was black, sharp-tipped, and as long as the head. Whitish scaling was noted on the edge of the black upper back feathers suggesting a 2nd year male.

This is yet another new addition to the Wisconsin list.

NOT ACCEPTED*Common Eider—*

#96-003 *Kenosha Co.*, 29 January 1996.

A large, uniformly tan-brown duck was noted to be larger than a Canvasback or Shoveler. A wedge-shaped head with a gray bill sloping up almost to the eye was also reported. No further description of the bill shape, beak commissure line, or nostril position was provided. This would most likely be a female Eider (species?).

Lesser Black-backed Gull—

#96-019 *Ozaukee Co.*, 4 December 1995, 2 January 1996.

The first report was of a bird seen at some distance, but noted to have a dark gray back while being smaller than a Herring Gull. The bill was considered average in size. Due to the distance and overcast conditions, bill and leg color were not clearly seen. The legs seemed the same grayness as the Ring-billed legs, different than the Herring legs though. Chances are this

was a Lesser Black-backed Gull, but since the view wasn't the best it can't be certain. Also note the following sighting at the same harbor.

In January, a dark-backed gull was seen at approximately 50 yards. Though it appeared slightly smaller than the adjacent Herring Gulls, the primary wing tip black was darker than the dark gray mantle, and the bill was yellow with a bright orange spot, all suggesting a Lesser Black-backed; the leg color was noted to be pink. Several other observers present at the time apparently varied in their descriptions of the legs from pink to yellowish. Though less than 3% of the Lesser Black-backs are reported to have pink legs, the identification of this individual might be best left as a probable Lesser Black-backed Gull. Given the possibility of hybridization, even more confusion enters the discussion.

Western Gull—

#96-021 *Ozaukee Co.*, 22 February 1996.

This gull was in direct comparison to Herring, Ring-billed, and Glaucous Gulls. It was smaller than the Glaucous, but larger than the Herrings, with a dark gray mantle contrasting with black primary wing tips. The white crescents in the wing tips were thought to be too large for a Western Gull by the observer. The bill was yellow with a red spot, heavy and expanding at the gonys. The angular head and bill shape reminded the observer of a Great Black-backed. The head, tail, and body were unmarked and white. The legs were "clearly pink". In flight, the white that separates the mantle from the black wing tip in Slaty-backed Gulls was not noted, nor were the two white mirrors of a Great Black-backed. No white could be detected in the wing

tips, except the white leading and trailing edges of the wings. The underwing pattern was not noted.

Several possible identifications may be reasonable on this (and similar previously reported birds). In the 1960s and early 1970s, reports and specimens of gulls fitting this description were being received from the eastern Great Lakes. The 6 earliest specimens were all females, and all intermediate between Herring and Great Black-backed Gulls in measurements of mantle color, body size, and wing, bill, and tarsus lengths. At that time, the possibility of hybridization was raised. Are we seeing a similar event as Great Black-backs push in to the western Great Lakes? Also of note is that in spite of the stark black mantle suggested in most field guides, Great Black-backs can have a dark gray mantle. Their eye color is quite variable from dark to light even at close distance. Finally, they aren't all blatantly bigger than Herring Gulls. Male birds can be significantly larger than females in large gull species. Was it coincidence that those 6 specimens of presumed hybrid Great Black backs were all females? or were they small female Great Black-backs?

Observers should continue to watch for these birds and make as complete a report as they can. They may not be "accepted" as positively identified birds, but these reports and hopefully photographs may help shed light on a confusing, but fascinating situation.

Glaucous-winged Gull—

#96-023 *Douglas Co.*, 22 January 1996.

This winter adult bird was seen in comparison to hundreds of Herring Gulls and 12 Glaucous Gulls. The bird's size was not precisely described—appearing the "same size as the Her-

ring and Glaucous Gulls.” In contrast to the moderate to heavy brown streaking on the head and neck expected in a winter Glaucous-winged, this bird was lightly streaked on the neck only. The bill was described as large and yellow with a red gonydeal spot, but not really compared/contrasted to either the Herring or Glaucous bills. In addition, the “zigzag” spot often seen on Glaucous-winged bills in winter was not evident. The eye was dark, in contrast to the light eyes of the Glaucous Gulls, and the legs were pink. Also of confusion, was the gray of the mantle being lighter than that of the Herrings, but darker gray than that of the Glaucous. Classically, the mantle gray should be slightly darker than the Herring Gull’s. The characteristic leading to the identification as a Glaucous-winged was the *gray* primary wing tips. No black could be seen.

There is enough to agree this could have been a Glaucous-winged Gull, but there was no emphasis on the size or bulk of the bird or its bill. The mantle gray described is too light. An Iceland Gull could be the size of small Herring Gulls, but Kumliens’ race would probably have darker wing tip color than described in this bird. A Glaucous/Glaucous-winged hybrid might account for the lighter mantle color and lighter brown head streaking.

Given the inconsistencies in the plumage of this bird, this should be left as a possible Glaucous-winged Gull. It raises interesting possibilities though and will add one more species of gull to the list that Wisconsin birders will need to familiarize themselves with.

#96-024 *Manitowoc Co.*, 25 February 1996.

This very detailed description by an experienced observer is of a probable

second winter Glaucous-winged Gull. This bird was the size of the larger Herring Gulls, but bulkier. Overall, the plumage was light tan, but extensively mottled with gray-brown on the head and body. The mantle was a similar gray to that of the Herring Gulls. The primaries and coverts were uniform light tan, the secondaries and coverts were light gray-brown. No pattern or flecking could be discerned in the flight feathers. The rump and upper tail were whitish (more of an oncoming third summer characteristic), with a gray subterminal band. The bill was as long as a Herring Gull’s, dark brown-black in color but fading to a lighter brown proximally. The eye was dark, the legs gray-pink.

Though Thayer’s Gulls might have a similar plumage, they might be expected to show a more extensive and darker tail subterminal band, though this can vary. By the size description, it would probably be a bit large for a Thayer’s. Hybridization between a Glaucous and Herring Gull might also fit this description of many characteristics intermediate to the two species. Given the limited information on the possible outcomes of this hybridization, it is hard to conclusively discuss the points. The only trait falling slightly out of line from expected is the gray mantle color being similar to the Herring Gull. Most descriptions characterize it as a slightly darker gray in Glaucous-winged, though the shade determination could be influenced by adjacent gray-brown shades on the bird. The bill was not as large as generally is described for Glaucous-winged Gulls, but there seems to be inconsistency in the literature regarding the size range for this species.

The variability of immature plum-

ages, the difficulty ruling out hybridization of a species known to hybridize, the lack of photographic assistance, and rarity of the species in the Midwest would dictate a conservative approach to this excellently written report—leaving it as “very highly probable” that this too was a Glaucous-winged Gull. Perhaps treating it as “hypothetical” would be consistent with other uncorroborated first of a species reports, even though a first accepted report was to occur 6 weeks before this sighting.

Ivory Gull—

#96-025 *Ozaukee Co.*, 8 February 1996.

A seemingly all white gull was seen approaching the harbor. No direct size comparison could be made of the bird, but the bouyant flight of the bird didn't fit other gulls in the observers experience. Other than white wing tips, little else was clearly determined about the gull, including bill and leg color. The glare of the sun precluded much of a look as the bird's flight continued south. Though Ivory Gull is a possibility, albinistic Ring-billed, Iceland, etc. are not ruled out by the limited view of this bird.

Jim Frank

WSO Records Committee, Chair



Field Sparrow *by Robert A. Kleppin*

C.E. Nelson



C. E. Nelson Jr. (better known as Charlie) was born 1904 and died 1993 in Waukesha, Wis. Both Charlie and Mary were great outdoors people dedicated to preservation of our natural resources. Their last years together were spent south of Dousman, Wis. where they were able to enjoy the flowers, birds, and wildlife.

They had a small pond formed by a dam of the Bark River that flowed through their property. Spring, summer and fall this area was alive with birds. Bird houses erected on his property produced many Bluebirds, Tree Swallows and ground-nesting birds.

Charlie was a member of many ornithological and conservation organizations including W.S.O., International Crane Foundation, East African Wildlife Society, The Nature Conservancy, and Benjamin Goss Bird Club. Part of his land that bordered on the Bark River was donated to the Nature Conservancy.

Charlie and Mary traveled around the world pursuing their love for the wildlife around the world in Africa, Ecuador, Australia, New Zealand, and India. Each winter Mary and Charlie would spend the winters in Arizona enjoying the warm climate and the birds of the Southwest.

The Benjamin Goss Bird Club was started in Waukesha in 1932 by S.P. Jones a former member of W.S.O. Charlie was one of the early members, and continued to be active and helped in the building of the status of the club until his death. Held all of the offices of the club and participated in the clubs field trips, campouts, May & Christmas counts, the I.C.F. big day count.

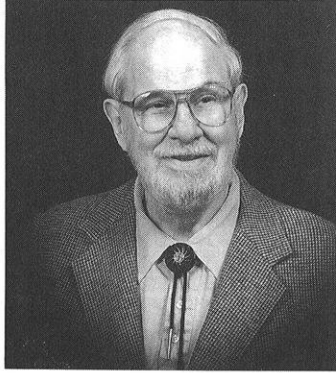
Charlie was president of W.S.O. in 1950 and became a life member in 1963.

He was a friend and birder. I will always be grateful for his support of the wildlife and youth of our country.—Bob Adams



Mute Swan by *Robert A. Kleppin*

Howard Young
14 April 1996



Howard Young died Sunday, April 14, 1996 in Franciscan Skemp Medical Center in La Crosse. Howie, as he was known to friends and colleagues, was born Nov. 13, 1918 in Fond du Lac, Wisconsin. He served for more than five years in World War II, was among the first troops to enter Berlin, and was discharged as a captain in the medical department.

He completed his Ph.D. at the University of Wisconsin-Madison in 1950, and was a student of Aldo Leopold in Wildlife Management from 1946 to 1948. He studied zoology under John Emlen. Howie was known for his wide interests, his ironic humor, and his crafts. He studied freehand drawing at U.W.-Madison, as well as prose fiction and 19th and 20th century drama. Also while at Madison he was for a time on the U.W. boxing team.

Howard was a biology professor at U.W.-La Crosse for 29 years, from 1955 until he retired in May, 1984. During his career he published more than 40 articles in scientific journals such as *The Auk*, *The Wilson Bulletin*, *Bird Banding*, and *The Passenger Pigeon*. Articles in *The Passenger Pigeon* included studies of the Tufted Titmouse, White and Red-breasted Nuthatches, and Downy and Hairy Woodpeckers. He published a monograph, "The Spring and Summer Birds of the Pigeon Lake Region" through the Wisconsin Academy of Arts and Letters. The Academy also published his monograph on the Avifauna of the Pine and Popple River watershed in northeastern Wisconsin. His monograph, "The Territorial Behavior of the Eastern Robin," appeared in the *Proceedings of the Linnean Society of New York* in 1951.

Howard was vice-president of The Wisconsin Society for Ornithology in 1962 and 1963, and president in 1964. He was on the WSO board for two long tenures,

1957–1965, and 1979–1989, when he was chairperson of the awards committee. He himself received The Passenger Pigeon Award in 1967, and a Certificate of Appreciation in 1992.

He was also a member of the La Crosse Audubon Society, served as chairperson of two WSO conventions held in La Crosse, and helped organize the tri-state convention in La Crosse in 1990.

He was preceded in death by his wife, Jeanne, and is survived by two daughters, Sharon Donovan of Redwood City, California, and Patricia Bantle of Durand, Wisconsin, a son John of La Crosse, two grandchildren, a brother, and a sister.

Memorial services for Howie were at 2:30 p.m. Thursday, April 18, 1996 in First Congregational Church, La Crosse. At the conclusion of the service a tremendous bolt of lightning and thunder accompanied the words of committal. Following the service, his family greeted guests at an informal reception, and many of his crafts were distributed as gifts.—Fred Leshner, 509 Winona St., La Crosse, WI 54603

1996 Bronze Passenger Pigeon Citation

John L. (Jack) Kaspar has found many ways to express his interest in, knowledge of, and concern for birds during his lifetime. From endless hours in the field as a youth learning to identify them to mastering the Ph.D. course in Zoology at the University of Wisconsin-Madison, Jack built his extensive understanding of birds.

He conveyed this knowledge to countless students at UW-Oshkosh through 31 years of Ornithology classes. His infectious enthusiasm converted many of his students to life-long bird-watchers, and inspired several to become professional ornithologists.

From 1954 to 1961, and again from 1978 to the present, Jack helped each fall trapping and banding hawks at the Cedar Grove Ornithological Station. He has been a member of their board of directors since 1980, contributing many hours of scanning the skies, securing House Sparrows and Starlings for bait birds, supplying food for both birds and people, and putting the banding data on computer files.

In 1970, Jack was one of the founding members of the Oshkosh Bird Club, and has served the club as Program Vice President and President. Each year he eagerly participates in the Christmas Bird Count and the May Count conducted by the club.

Sam Robbins attests that Jack has "a long distinguished record" with the Breeding Bird Surveys. Although Jack lives in Oshkosh, he conducts two routes about as far away as he can get in northwestern Wisconsin: The Grandview route from the mid-seventies to the present, and the Bayfield route since 1967. From 1971–80 he added the Clintonville count in Waupaca County. In addition to running these BBS routes, he is currently surveying in Winnebago County for the Wisconsin Breeding Bird Atlas project.

Whether in the field or the classroom, Jack's delight in birds was ever apparent. He always had time to cheerfully answer endless questions from students, friends, and the public about birds. His most lasting contribution to ornithology undoubtedly will be instilling the love of birds in the minds and hearts of so many individuals over the years.

June 1996

1996 Bronze Passenger Pigeon Citation

Charles R. Sindelar, during his early impressionable University of Wisconsin-Stevens Point student years, was a frequent visitor to Fran & Frederick

Hamerstrom's Plainfield home. He subsequently developed his interest in raptors while serving as one of the "Hamerstrom gaboon's".

In 1964 he, along with Daniel D. Berger, conducted the three month Eastern Survey of Peregrines, repeating the survey that had been performed by Joseph J. Hickey in 1939-40. The 1964 survey brought to the attention of the ornithological community the fact that Peregrines had disappeared as breeding birds in the Eastern United States.

His most noteworthy contribution to ornithology in Wisconsin began in 1965 when he embarked on what turned out to be a long term project that consisted of locating Bald Eagle nests in northern Wisconsin and banding the young. While many others assisted Chuck in this endeavor, he remained the driving force. In the early years he funded the work almost entirely alone, but over the years he gradually received more and more financial assistance from individuals as well as government agencies. By the time he retired from the project twenty-five years later, he had banded on the order of 3000 eagles, by which time the birds had made a dramatic recovery from the population crash that had occurred in the 1950's and 60's.

Wisconsin can be proud of having spawned such a dedicated and energetic field ornithologist.

June 1996

1996 Silver Passenger Pigeon Citation

This year's recipients of the Society's Silver Passenger Pigeon Award, even with a short board tenure, have made a significant impact on the Society. After returning to Wisconsin and joining the Society in 1990, they followed up on a background of volunteer activism by joining the WSO Board just two years later.

Assuming one of the most demanding of the WSO volunteer positions, the Society Bookstore, the recipients used a team approach in developing many inventive publicity and educational approaches to emphasize service to members and nonmembers alike. Instituting autographed copies of Society member publications, offering special publications keyed to Society sponsored field trips and events and publicizing monthly specials in the Society newsletter is just a few of their innovations.

With a strong background and interest in birds and the supporting environmental issues they came well equipped to contribute to the Society in many diverse ways. A particular interest in strengthening the Society's youth education involvement was instrumental in establishing the new Youth Education Board position. Those who have attended the past several conventions may have participated in the spirited competition generated by a bird song contests also developed by the recipients.

The Wisconsin Society for Ornithology, Inc. gratefully recognizes their significant service to the Society and is pleased to present its highest service award, the Silver Passenger Pigeon, to Mark and Margie Amato.

June 1996

1996 Bronze Passenger Pigeon Citation

Don Kopff from Beaver Dam has undoubtedly coordinated the building of the most birdhouses in the history of Wisconsin.

A successful colony of Purple Martins at his home on Beaver Dam Lake stimulated his interest in cavity nesters. After attending a Bluebird Restoration Association of Wisconsin (BRAW) meeting in the mid-1980's and volunteering to serve as BRAW's Dodge County coordinator, Don started the nest box building project at the Beaver Dam Senior Citizen Center.

Using mostly scrap and donated lumber and other materials, the Center's mass production of bluebird houses coincided with a resurgence of interest in the Eastern Bluebird and a bluebird population recovery in the state. Of course, the price for the houses also has helped their popularity. For years, houses sold for \$2.10 with proceeds going for Center needs and the future improvement of the Center. Working mostly from late fall through early spring, Don and his crew builds, stores, and readies for sale between 1,000–2,000 houses each year.

While focusing on bluebird boxes, houses for Tree Swallows, Wood Ducks, Purple Martins, American Kestrels, House Wrens, Screech Owls, and bats and butterflies also are constructed. Feeders and traps for House Sparrows also have been built and sold. Always interested in trying new house designs, Don has actively pursued plastic "jugs", PVC, slot opening, and tree-branch designs.

No project is too big for Don to tackle. An order was filled for 1,015 bluebird houses from the Ozaukee County Land Conservation District in 1990. After a story on their work on Madison TV, 992 houses were delivered. Recently, the group received permission from the Department of Transportation to place 500–600 boxes atop fence posts along Hwy 151 between Beaver Dam and Sun Prairie. The number of houses produced each year is limited only by the supply of wood and the number of volunteers, and Don's crew still has time for some pool shooting and card playing at the Center. In 1994, the Center started a mail-order business, with birdhouses being sent to 28 states.

Don continues to serve BRAW as a county coordinator and to present slide programs in Dodge County to help educate area residents about bluebirds and other cavity nesters. At BRAW annual meetings, Don and his wife Marge always can be seen unloading and carrying boxes that the Center donates as door prizes.

The birdhouse building project has received considerable recognition and

publicity, which in turn promotes the project, the Senior Center, and the entire Beaver Dam community. The success of this program is attributed directly to the leadership of Don Kopff.

June 1996

1996 Certificate of Appreciation

Whereas Daryl D. Tessen has continued to serve the Wisconsin Society for Ornithology, Inc. with enthusiasm, diligence, and patience since receiving the Silver Passenger Pigeon in 1980; and

Whereas he serves as the Associate Editor of the *Passenger Pigeon*, receiving the numerous records from members for the Seasonal Reports, Christmas Bird Counts, Big Day Counts, and May Counts, processing these records, and distributing them in a timely fashion to the appropriate individuals for inclusion in the *Passenger Pigeon*; and

Whereas he shares this information about bird records by serving as the Western Great Lakes Region compiler for the summer and fall seasons of the *National Audubon Society's Field Notes*; and

Whereas he compiled and edited the third edition of *Wisconsin's Favorite Bird Haunts*, published in 1989; and

Whereas he serves on the Steering Committee of the Wisconsin Breeding Bird Atlas, being particularly helpful in obtaining the coordinators for the 27 regions; and

Whereas he undertook the role of Wisconsin coordinator for the U. S. Fish and Wildlife Service Breeding Bird Survey in 1995; and

Whereas he continues to provide historical perspective, thoughtful insight, and delightful humor as a member of the WSO Board of Directors;

Now, therefore, be it resolved that the Wisconsin Society for Ornithology, Inc. expresses its grateful appreciation to **Daryl D. Tessen** in recognition of his exceptional continuing service to the Society.

June 1996

1996 Certificate of Appreciation

Whereas Alex F. Kailing has continued to serve the Wisconsin Society for Ornithology with fervent dedication since receiving the Society's Silver Passenger Pigeon in 1985; and

Whereas he continues to serve as the Chair of the Membership Committee, the single most time-consuming tasking within the Society; and

Whereas he has served as Treasurer since 1990; and

Whereas he has modernized the Society's financial records through computerization, with the result that his thorough and detailed Membership and Treasurer's reports are a joy to review at Board meetings; and

Whereas he is Treasurer for the Wisconsin Breeding Bird Atlas, serving as a valued member of the Atlas Steering Committee since its inception; and

Whereas he is responsible for mailing annually more than 20,000 "Pigeons," "Birders," annual meeting brochures, dues notices, and other Society materials; and

Whereas he maintains a keen interest in environmental education and exhorts the Society to do more in the educational arena; and

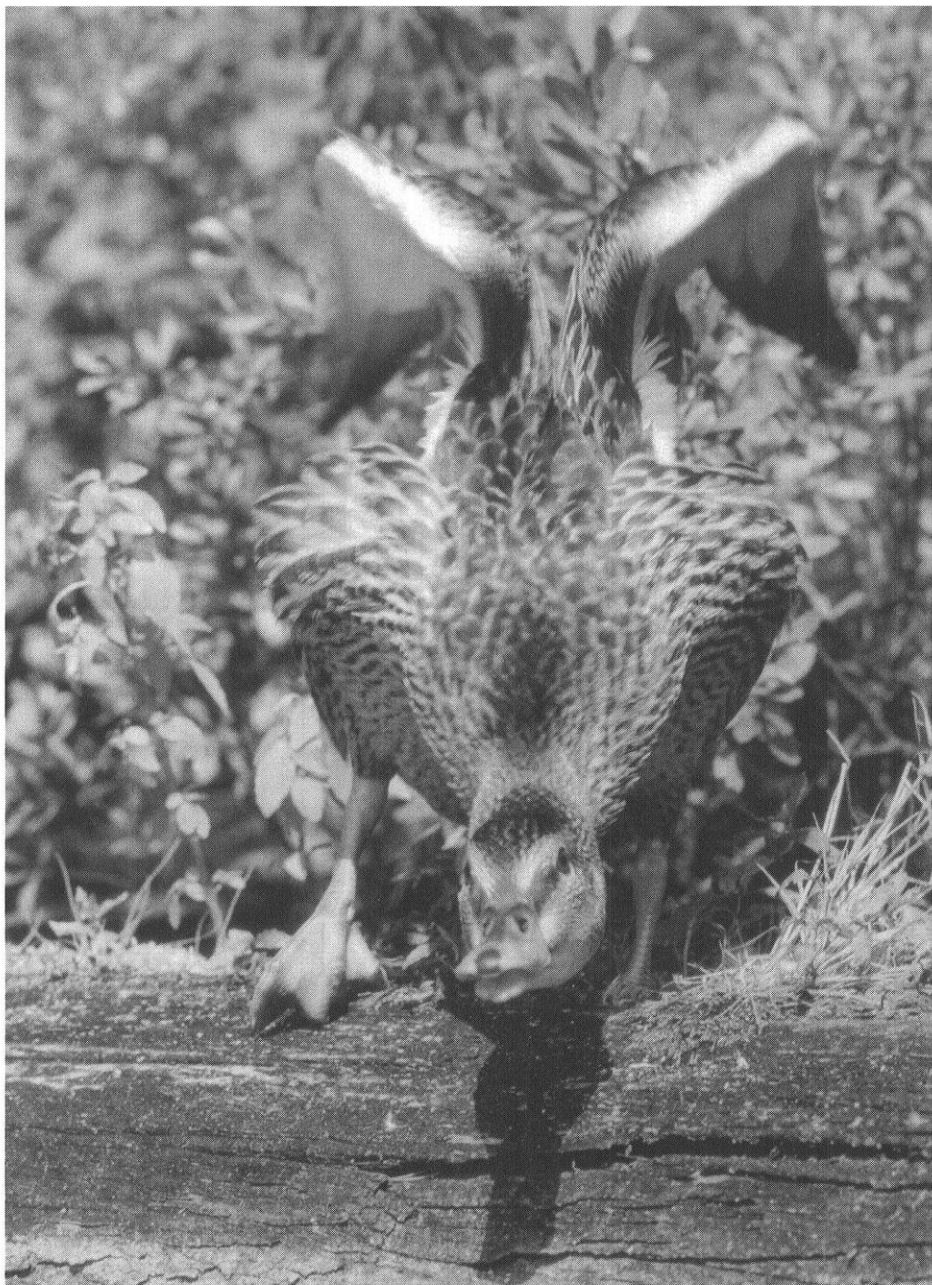
Whereas he faces almost daily the often thankless tasks of dealing with the IRS, property taxes, liability insurance, budgets, and the U. S. Postal Service, nonetheless handling these duties professionally and with an honest and open viewpoint; and

Whereas he prepared a Directory of Wisconsin's Nature and Environmental Education Organizations, and has demonstrated a real concern for the management of the Society's Honey Creek property; and

Whereas he continues to provide a wondrous historical perspective while at the same time supporting and urging the Society to embark upon new paths and undertake new initiatives, thus being a valued member of the WSO Board of Directors;

Now, therefore, be it resolved that the Wisconsin Society for Ornithology takes extreme pleasure in presenting this Certificate of Appreciation to **Alex F. Kailing**, in recognition of his exceptional continuing leadership of and service to the Society.

Given into his hands this eighth day of June 1996, and of the Society its 57th year.



Mallard by *Gerald H. Emmerich, Jr.*

ABOUT THE AUTHORS AND ARTISTS

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.

David Flaspohler is a PhD candidate in the Dept. of Wildlife Ecology at the University of Wisconsin-Madison. He is studying the nesting ecology of northern forest songbirds.

Jennifer L. Graetz is a Consulting Ecologist at Prairie Nursery in Westfield, Wisconsin.

David Grosshuesch received a BS in Wildlife Management and Biology from the University of Wisconsin-Stevens Point. He is currently studying the nesting biology of songbirds on St. Nicolas Island, California.

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

Charles Kemper is a long-time member and former officer of WSO. He is a past editor of *The Passenger Pigeon*. His research on bird mortality at a transmission tower is the longest study of its kind.

Robert A. Kleppin is a long-time resident of Menomonee Falls. His backyard is a tamarack swamp, the headwaters of the Illinois Fox River and Bob’s photography workshop. His interest in his natural “backyard” has given him the perfect opportunity to show his skills as a nature photographer. As a 20-year member of the Image Makers, Bob has taught his specialty to many new club members.

Kenneth I. Lange is the retired Naturalist of 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.

Sumner W. Matteson is an avian ecologist working in the non-game program of the Bureau of Endangered Resources of the Wisconsin Department of Natural Resources. He is a regular contributor to *The Passenger Pigeon*.

Philip C. Whitford is a frequent contributor of articles concerning bird behavior. He has BS and MS degrees in Wildlife from UW-Stevens Point, and a PhD in Biology from UW-Milwaukee. He currently teaches Animal Behavior and other Biology courses at Capital University, Columbus, Ohio. His present research emphasis is "goose pornography" deciphering the pre and postcopulatory intersexual communication behavior of Canada geese.

NOTICES AND ADVERTISEMENTS

MINUTES OF THE ANNUAL BUSINESS MEETING

(JUNE 8, 1996 UNIVERSITY OF
WISCONSIN-SUPERIOR)

KATHRYN OLHMAN THEATER

President Bettie Harriman opened the 57th Annual Business Meeting of the Wisconsin Society for Ornithology at 1:33 p.m. by welcoming everyone. She informed all those present that a handout packet which includes a copy of the day's agenda, last year's annual meeting minutes, and a copy of the annual reports could be found at the back of the auditorium.

The year's convention was a joint meeting of the WSO and the MOU (Minnesota Ornithological Union). It was held on the campus of UW-Superior in Superior, Wisconsin. Approximately 83 people were present for the business meeting.

First order of business, was for President Harriman to appoint a reading committee that would take up the responsibility of reading and approving these minutes. This will allow for these minutes to be printed and made available to everyone who attends next year's business meeting. The members of this committee are Jim Otto, Jim and Doris Gorton, and Daryl Tessen.

Minutes for the May 20th 1995 business meeting, held at UW-Marinette, were printed in the Fall issue of the *Passenger Pigeon* and a copy was handed out at the entrance to this meeting. On a motion from Alex Kailing (second, Jim Anderson) those minutes were approved.

ANNUAL REPORTS

(A copy of each annual report was included in the handout packet.)

OFFICERS

President—Harriman covered some of the highlights for the WSO in the last year in her annual report. Bettie pointed out one of the most pleasant actions taken by the board over the last year was giving money to Andy Kimball. Andy is a ten year old birder who was trying to raise money for a trip he and his dad were planning on taking to the ABA (American Birding Association) convention in Utah. Andy gave a presentation at the April board meeting asking for the board's help. The board's action resulted in a \$250 donation to Andy. Bettie emphasized how happy and proud the board was in taking this action on Andy's behalf.

Vice-president—Jim Anderson informed the membership of the two proposals that he has brought before the board. The first was the location of the 1998 annual convention site, which is tentatively scheduled for Eau Claire County. The second proposal was the location of the 1999 annual convention in Fond du Lac County. At this time Vice-president Anderson brought a motion before the meeting that the 1997 annual convention be held at the Fox Hills Resort in the Manitowoc area. This convention will be hosted by the Woodland Dunes Nature Center

and the Aegolius Bird Club. The dates are May 16–18. The motion was seconded by Daryl Tessen, and the motion passed unanimously.

Treasurer—Alex Kailing had nothing to add to his report. Furthermore, there were no questions asked concerning his annual report.

Passenger Pigeon Editor—Becky Isenring could not attend the convention but her written report is found in the handout packet. She did have an update to her report that she gave Bettie. Volume 58 of the *Passenger Pigeon* is at the printer this week and should be mailed by the end of June '96. Issue 2 of that volume has been typeset and is ready to be proofread.

COMMITTEE CHAIRS

Associate Editor—Daryl Tessen reports that Wisconsin has had an outstanding year as far as rare bird reports. Daryl urged all to send in documentation reports and seasonal reports on their findings so we can get a better idea of just how amazing this year has been. Daryl reports that the totals for Great Gray Owl is near 50 and between 25 and 30 for Boreal Owl. Daryl pointed out that the deadline for the spring reports has been changed to June 15th. There will be some small changes in the forms for next year. These changes will include the Oriole split, the renaming of the Sharp-tailed Sparrow race found in Wisconsin (Nelson's), and the renaming of the Rufous-sided Towhee to Eastern Towhee. Daryl is attempting a state big year, and asked the membership to please notify him of any rare bird sightings as soon as possible.

Badger Birder Editor—Jennifer Nieland had nothing to add to her written report. Please send anything unusual or interesting concerning birds and birding to Jennifer, she would enjoy hearing from you.

Bookstore Managers—Mark and Margie Amato report that they have had a change of plans about their move to New Mexico. They are still turning over the bookstore activities to the Reels, but will be around Wisconsin a little longer than they had planned. Margie informed the membership that Chuck Gilmore is now in a nursing home in Randolph and they have the address if anyone wishes to contact him.

Margie reported that the bookstore has had a great year in sales. The WSO published a new catalog this year with more selections. She reports that there were \$3755 worth of WSO publications sold this year. The checklist price went up to \$.15 to cover printing costs. There are two special funds right now, the Atlas Fund for the T-shirt and the patch (all proceeds go to the Atlas). The other fund was a special donation from the sale of the Loon note cards created by Woody Hagge. Proceeds for these sales go to the scholarship funds.

Margie took time to introduce the new bookstore managers Don and Christine Reel. Margie thanked the WSO for their help in making the Amatos' tenure as managers a success.

Conservation Chair—Noel Cutright reported that the Honey Creek Birdathon/Bandathon had 87 species. Noel stated that both Ed and JJ Peartree were extremely happy with the outcome of the weekend. A total of 46 birds were banded which was a new

record. Noel also put in a plug for Teaming With Wildlife. He reminded everyone to visit the display located next to the convention registration desk. Noel also pointed out that immediately following this meeting a presentation on the Teaming With Wildlife project will be held. Noel was asked about the Mute Swan control problem in Wisconsin. He reports that the WDNR wants to initiate a control program for Mute Swans. The WSO has prepared a position paper on where we stand, Noel will provide a copy of that paper to whoever wants one.

Education Chair—Bill Volkert could not attend the convention, and submitted no annual report.

Field Trip Chairs—Jeff Baughman and Tom Schultz reminded everyone to check the hotline for field trip cancellations due to inclement weather. It is very difficult to cancel a field trip at the last minute, but Jeff and Tom do try to keep track of the weather. One of them does try to make it to the field trip site despite the cancellation in case some hearty souls do make it.

Legal Counsel—Carlo Balistrieri could not attend the convention.

Membership Chair—Alex Kailing pointed out the downtrend in membership, he had no explanation for the trend. Alex has updated the list of Environmental Organizations, which is available at the WSO exhibit and just outside the bookstore. Alex also is putting together a listing of places to stay in Wisconsin while you are birding. Alex was trying to solicit help from the membership on information about any places they had stayed throughout the

state. The listing would then be used as a handout to people wanting to know more about birding in Wisconsin.

Publicity Chair—Bettie Harriman brought along a couple of the membership displays that could be put up in places where people go who are interested in birding. If anyone knew of a place, they were encouraged to take one of the displays. Bettie also pointed out that the WSO's large exhibit display was located behind the registration desk. This display was recently redone by Judith Huf, a graphic artist who moved to Wisconsin from New York recently. Bettie also asked the membership to send her any newspaper articles about any of the field trips, birding events, etc. that may have appeared in their newspapers.

There was a short discussion about how quickly birds are put on the hotline. Any questions or suggestions should be directed to Mark Korducki, who is the voice of the hotline. Green Bay and Racine now have rare bird hotlines, but phone numbers were not available.

Records Chair—Jim Frank had nothing to add to his written report.

Research Chair—Bob Howe could not attend the convention. Bettie did report that much of Bob's time has been spent working on the Atlas project. However, next weekend is the Nicolet Bird Survey, which Bob is very active in setting up. If anyone has any questions they can direct them to Bettie or one of the other past participants after this meeting.

Scholarships and Grants Chair—Janine Polk could not attend the conven-

tion. Bettie reported that the WSO gave out five scholarships and grants this year, they are listed on page 10 of the handout.

Youth Education Coordinator—Steve Kupcho could not attend the convention, but his written report is found in the handout.

NEW BUSINESS

It was reported in the Birder a couple of issue ago that the WSO board was proposing a dues increase, which would take affect in January 1997. At this time Alex Kailing moved that the WSO change its membership dues structure affective January 1, 1997 to reflect the following increases: Senior \$5 to \$8, Single \$15 to \$20, Family \$20 to \$25, Sustaining \$35 to \$50, Library unchanged (Pigeon subscription only), Life (single) \$300 to \$400, and Life (couple) \$400 to \$500. The motion was seconded by Jerry Smith. Bettie asked the membership for discussion. She once again pointed out that the increase was needed to cover the rising cost of paper, printing, and postage. A vote was taken and the motion was passed unanimously. Starting January 1, 1997 the increases voted upon will take affect.

The Nominating Committee, chaired by Tom Schultz includes Bob Tribensee and Karen Etter Hale. The committee made the following recommendations as the slate of officers for the upcoming year: President Bettie Harriman, Vice-president Jim Anderson, Secretary Jane Dennis, Treasurer Alex Kailing, and Passenger Pigeon Editor Becky Isenring. Carl Hayssen moved that the ballot be closed, sec-

onded by Alex Kailing, the motion carried.

ANNOUNCEMENTS

Bettie did have two announcements. First of all there is a survey located on the table at the back of the room that the CD-ROM Committee of the Atlas would like everyone to fill out and send back to them. And finally, next year is the 50th anniversary of the dedication of the Passenger Pigeon monument. Plans are being made to have a presentation at the monument site in Wyalusing State Park. Fred Leshner, chair of the anniversary committee, has informed Bettie that the date of the celebration will be the first weekend in June. The official ceremony will be on Sunday, June 1, 1997 at the monument site. Speakers are yet to be determined.

A motion was made by Alex Kailing to adjourn this 57th annual meeting of the Wisconsin Society for Ornithology, motion passed at 2:24 P.M.

Respectfully submitted,

Scott J. Baughman, WSO Secretary
Annual Reports from officers and committee chairs follow.

ANNUAL REPORTS JUNE 1995–MAY 1996

President—Bettie Harriman—The months since the 1995 annual meeting in Marinette have been busy and exciting for the Wisconsin Society for Ornithology. You will find most of the details of Society activities in the enclosed reports of the various officers and committee chairmen, but there are a few accomplishments that I would like to mention.

Certainly the most time-consuming and expensive activity this past year has

been the Wisconsin Breeding Bird Atlas project. The work for the first field season was quite successful. Approximately 800 individuals volunteered to do field work, and many others contributed financially. There were 425 Blocks that received Field Card coverage, including 277 Priority Blocks. There were 218 species reported and 191 species confirmed as breeding in the state. This is a very good beginning to the Atlas, and to all of you who helped in any way, the Atlas Steering committee extends a grateful "thank you."

The WSO has continued with all its usual activities as work on the Atlas was carried out. The many field trips went on as usual (sometimes in terrible weather), and a few new trips were even added. The *Badger Birder* seems to get larger with each issue, and the *Passenger Pigeon* is almost back on schedule. The Bookstore sold bird books and related items to interested birders in record numbers this past year. The Honey Creek Committee is meeting regularly and managing the property well for the Society. Some much needed maintenance was done on the property this past summer. WSO contributed information on numerous conservation issues from crow hunting to "Teaming with Wildlife."

In response to a growing concern about the future of birds and birding, the Board created the new position of Youth Education coordinator to undertake the task of providing ornithological information to middle school age students in our state. The Society is delighted to welcome Steve Kupcho as the initial chairman of this committee. Also in keeping with this new initiative, the WSO is helping to sponsor Andy Kimball, our most active 12 year

old member, to attend the 1996 American Birding Association Convention in Utah.

One sad event is occurring with the leaving of Mark and Margie Amato as the Bookstore managers. They have done an excellent job of running our Bookstore and were a helpful addition to the board of directors. We bid them a loving farewell and wish them all the best in New Mexico. As is typical of the Amatos they made sure their work was covered before they left by finding their successors. The Society is happy to welcome Don and Christine Reel as the new Bookstore managers.

Vice President—Jim Anderson—Locations for both the 1998 and 1999 WSO annual meetings have been determined.

Beaver Creek Reserve in Eau Claire County will be the host organization for our 1998 gathering to be held 22–24 May 1998. Rick Koziel, director of the reserve, will draw upon the services of the Chippewa Wildlife Society and the University of Wisconsin-Eau Claire to provide birding expertise and experiences for our WSO members. The pre-convention trip includes birding the Wisconsin and Minnesota banks of the Mississippi River.

Fond du Lac is sure to be a popular location to convene the 1999 convention. Weekend activities will be planned by members of the Fond du Lac Audubon Society and the Owen Gromme Bird Club. The dates are to be determined.

The birding possibilities provided by these two areas of our state are endless and I'm sure both will provide many birding memories for those in attendance.

In July of 1995, I was asked to participate on an ad hoc Youth and Edu-

cation Committee along with some other WSO board members. Much discussion centered on getting today's youth interested in birds and WSO. The result of our efforts was the board position of Youth Education Coordinator being established. I am pleased that WSO takes a strong stand on youth education.

After one year of serving on the WSO Board of Directors, I have made one important observation. The board is comprised of dedicated people who, individually and collectively, work unselfishly to maintain and improve our organization. I look forward to working with these and other board members over the next three years.

Treasurer—1996 Convention Report—Alex Kailing

STATEMENT OF REVENUES AND EXPENSES

	1994 TOTAL	1995 TOTAL	1995 BUDGET
REVENUE			
BOOKSTORE	5,476.25	3,755.06	4,000.00
SLIDES			
DIVIDENDS			
INTEREST	1,991.24	1,814.69	1,800.00
INVESTMENTS		476.19	
CONVENTION	2,421.84	2,625.09	500.00
PIGEON			
ADVERTISING			
BACK COPIES	5.00	30.00	
SUBSCRIP.	538.00	835.00	800.00
MEMBERSHIP			
DUES	22,132.03	20,770.50	21,000.00
LIFE	1,050.00	1,850.00	1,250.00
MBR LIST	13.00	15.00	
CONTRIBUTIONS			
ENDOWMENT	932.00	359.50	800.00
SCHOLARSHIP	3,304.35	639.00	1,500.00
HONEY CREEK	2,024.00	2,045.45	1,500.00
BIRDATHON	2,618.03	2,094.31	2,000.00
MEMORIALS	100.00		
BEQUESTS	100.00		
SPECIAL PROJECTS			
ANIV. PRINT	60.00		
TOURS	200.00	25.00	200.00
WEEB GRANT	20,000.00		
BIRDERS DIGEST	122.91	64.86	
SEMINAR	190.00	2,726.00	
ATLAS	6,807.58	26,272.91	25,000.00
TOTAL REVENUE	\$70,086.23	\$68,558.56	\$60,350.00
	1994 TOTAL	1995 TOTAL	1995 BUDGET
EXPENSES			
ADMINISTRATION	30.00	261.91	100.00
ASSOC. EDITOR	462.75	343.36	550.00
AWARDS	327.32		200.00
BADGER BIRDER			
PRINTING	4,232.59	5,322.00	4,800.00

MAILING	1,708.11	1,870.91	1,200.00
MISC		34.67	
CONVENTION			
1994	3,034.88	1,085.59	
1995		724.96	700.00
BOOKSTORE			
INSURANCE	2,325.20	266.00	200.00
MISC	292.00	300.00	
SLIDES			
EDUCATION	597.74		1,000.00
FIELD TRIPS	502.69	459.30	400.00
HONEY CREEK			
TAXES	3,226.42	3,500.00	
	3,403.98		
INSURANCE	1,072.00	1,050.00	1,000.00
UPKEEP	228.15	1,341.82	300.00
HOT LINE	120.23		
MEMBERSHIP			
MISC	1,891.72	2,435.77	2,000.00
PIGEON			
PRINTING	12,647.07	14,755.48	21,000.00
MAILING	1,268.14	1,771.36	2,250.00
MISC.	349.48	797.24	750.00
PRESIDENT		65.03	50.00
V PRESIDENT		36.37	
PUBLICITY	737.61	168.61	1,000.00
BIRDATHON	116.79	178.28	100.00
RECORDS	115.51	74.56	100.00
GRANTS	1,650.00	2,550.00	2,100.00
SPECIAL PROJ.	285.00		1,500.00
SEMINARS		2,619.27	
SECRETARY	50.00	20.40	50.00
PRINTING	893.45	135.63	1,500.00
TREASURER	73.26	232.80	75.00
CLUB LIST		145.68	
HABITAT	20,014.16		
HABITAT-NFWF	-	1,615.00	
ATLAS	4,388.92	29,152.06	
TOTAL	\$62,764.89	\$73,218.04	\$46,525.00

BALANCE SHEET—AS OF 12/31

	1994	1995
LIQUID ASSETS		
CASH	3,460.01	1,760.33
SAVINGS ACCOUNTS		
GENERAL SAVINGS	38,794.76	21,877.35
ENDOWMENT	15,140.27	7,897.71
ATLAS	6,807.58	9,650.05
INVESTMENTS		
ENDOWMENT	25,002.25	25,002.25
SAVINGS	6,000.00	6,000.00
GRANTS		15,300.00
INVENTORIES		
BOOKSTORE		
CASH	3,134.56	2,576.78
INVENTORY	31,124.11	29,418.07

SLIDES		
CASH	3,895.13	4,264.22
INVENTORY	3,017.80	2,445.42
MEMBERSHIP		
CASH		
INVENTORY		
FIXED ASSETS		
EQUIPMENT	379.98	4,544.97
LAND & BUILDING		
PRAIRIE CHICKEN	1,491.39	1,491.39
HONEY CREEK		
LAND	21,475.86	21,475.86
BUILDINGS	8,927.88	8,927.88
TOTAL ASSETS	\$166,253.52	\$167,680.33

HISTORIC ASSET GROWTH

1993	\$164,632	1986	\$107,333
1992	159,690	1985	100,838
1991	151,170	1984	98,773
1990	142,721	1983	103,132
1989	128,226	1982	95,806
1988	125,697	1981	82,176
1987	121,107		

SPECIAL FUND TOTALS (AS OF 12/31)

	1994	1995
ENDOWMENT	40,642.52	42,918.77
GRANT	36,168.80	36,201.08
HONEY CREEK	1,051.24	- [491.59]
BARABOO HILLS	129.40	276.60
ATLAS	9,918.66	9,650.05
HABITAT-NFWF		545.00

ADDITIONAL COMMENTS:

- **ATLAS:** Since its start in late 1994, Atlas expenditures have totaled \$33,540.98. Outside revenue received has totaled \$33,080.49 plus the WSO contribution of \$10,500 [\$3000 of this was for the construction of the UW-Green Bay WSO permanent Records storage area]. We have qualified for the full

\$25,000 [2:1] NFWF matching grant although only \$2,500 is reflected in the received revenue figure. [In 1996 up to May 1st a additional \$36,100 has been contributed.] Due to its magnitude the Atlas project is maintained as a separate profit/loss center and a separate monthly financial report is prepared. Contact the treasurer if additional Atlas financial information is desired.

- The Society received a \$2,000 NFWF [National Fish & Wildlife Foundation] grant to conduct out of state teacher training of the "One Bird/Two Habitats" secondary education course developed by Susan Gilchrist of the DNR & being implemented by Daryl Covell of the UW-Extension. The funds were utilized to pay for expenses of presentations given in Illinois & Minnesota.
- Honey Creek Fund income comes from the annual Birdathon/Bandathon, member contributions and memorials, and is used to offset the cost of maintaining the facility. Although 1995 income totaled \$4,140, expenses were \$5,796 leaving a year end negative balance of

\$492 [We had started 1995 with a \$1,165 positive carryover]. The long overdue trail maintenance expenses were the major reason. The reduced 1996 tax expenditures due to the property tax exemptions now in effect except for the Nature Center should help maintain the fund liquidity in 1996.

- **Membership service expenses**, which include the direct membership benefits [Passenger Pigeon & Badger Birder], plus costs to solicit & maintain our membership have been impacted significantly by sizeable postage and printing increases. Postal increases in 1st, 3rd [Badger Birder] and non profit library rates have been particularly significant. Paper increases were particularly severe on the Badger Birder as the number of pages has been increasing.

Passenger Pigeon Editor—Becky Isenring—Volume 57 of The Passenger Pigeon published 332 pages (compared to 336 pages in Volume 56). There were 13 research articles contributed. Regularly featured articles such as Christmas Count reports, Big Day Count results, and seasonal field notes, etc., represented 37% of the pages published.

The editorial staff remained the same as last year. Typesetting and printing continued under the same arrangement. There were a few problems with the printer this year including the Fall issue being printed on the wrong color cover but I have decided not to make a change at this time.

One issue of Volume 57 was devoted to papers presented at the February Symposium. The supply of pa-

pers submitted for publication was better than the year before. My thanks to all that sent them.

Volume 58 is off to a rocky start after the courier damaged the package containing the ready-to-print issue and lost all the art, halftones, and figures. The needed reconstruction set the production back a week.

The second issue of Volume 58 will feature the summary of the first 25 years of the Breeding Bird Survey by Sam Robbins, Mike Mossman, David Sample and Paul Rasmussen. This issue is in production and should arrive on schedule.

When I took the job as editor, I made a 5 year commitment. I am already half way through my fourth year. Therefore, the board and membership should begin to think about my replacement. If someone from the grater Madison area is available, I would be willing to work with them on Volume 59 if they chose to stay with the same typesetter and printer. I would be happy to speak with anyone about the work and time involved.

As always, I welcome feedback on the Pigeon. I also urge members to submit work to be published, especially papers presented at the convention and results of studies funded by WSO scholarships.

Associate Editor—Daryl Tessen—The traditional November mailing of 1996 seasonal, Big Day, and May Day count forms and the 1995 Christmas count form was made. This totaled about 145. All seasonal and count sightings that were received were analyzed. The acceptable observations were sent to either the seasonal or count editors, while the rare/un-

usual and record date sightings were forwarded to the Records Committee for their analysis. Significant observations were prepared for inclusion in the *Audubon Field Notes*.

The number of seasonal reports returned this past year has been highly variable. Both spring and summer were unusually low, with the latter being a record. Compounding the problem was over 50% of the reports arrived late. After an article addressing these concerns appeared in the *Badger Birder* the number and promptness of reports improved. About 75 fall reports were sent in with only a few being tardy, while for winter a record 85+ were received.

A quick reminder that if you enjoy reading the seasonal "Field Notes" and "By the Wayside" in the *Passenger Pigeon* then be certain to send in your sightings and experiences. Remember it is your contributions that form these articles. And again promptness is appreciated to meet the *Pigeon* and *Field Notes* deadlines. (Seasonal and count reports are due 10 DAYS AFTER THE CONCLUSION OF THE PERIOD).

A monthly summation of interesting observations has been prepared with Mark Korducki (Hot Line) for the *Badger Birder*. Other articles also have been written for the newsletter.

Last, a thank you to the seasonal and count editors for another year of fine work!!

Badger Birder Editor—Jennifer Neiland—The March 1995 issue of the *Badger Birder* marked my first year as editor. As I look over the issues of the past year, there have been the obvious visual changes in format, but there also have been gradual

changes in the content. When I accepted the position as editor, I knew it was a great responsibility to provide the membership with a monthly newsletter relating to current birding opportunities. What I didn't expect is how enjoyable and educational an experience it has become.

The content of the birder has grown dramatically in the last year, and it is exciting to have so much to communicate to the membership. I am now receiving notes and articles on a regular basis. Thanks to Daryl Tessen and Mark Korducki, we are getting summaries of birding highlights from the past month and Bettie Harriman is keeping us updated on the progress of the Wisconsin Breeding Bird Atlas. Mark and Margie Amato, the book store managers, have helped us find that special book to identify our birds or plan our trips, give as a gift or increase our knowledge. Our new Youth Education Coordinator, Steve Kupcho, will be contributing regularly with articles for the "Budding Birder," geared to foster interest and education in birding for the younger generation. There are so many other contributors who have given us opportunities to participate in research, education, recreation and travel, and also have shared their personal birding experiences with us. I hope the membership has been able to take advantage of all the wonderful activities and experiences to enjoy our birds and environment.

With the May 1996 issue, we will also have an additional format as the *Badger Birder* makes its way onto the World Wide Web. This is being maintained by WSO member Steve Konings on a web page for Wisconsin

birding. The address is: <http://kreeft.intmed.mcw.edu/wiaves/webpage.html>. This will be a way for birders worldwide to learn about Wisconsin birding opportunities and the WSO.

The *Badger Birder* is your newsletter, so please consider contributing in any way possible. There is a variety of content from articles, short notes, field trips, and observations to photos, puzzles, and art work. We are especially encouraging youth to send in contributions for the "Budding Birder" and other issues as well. As always, I will continue to look to the membership for their comments on the *Badger Birder*, its content and format, and any improvements you can recommend. Thank you all for contributing.

Bookstore—Mark and Marge Amato—The WSO Bookstore took in \$14,580.51 in total receipts for calendar year 1995. Of that amount \$3,755.06 was from WSO publications. The WSO publications sold include:

Bird Haunts
Baraboo Hills
Apostle Islands
Ducks at a Distance
WI Birds, Checklist with graphs
Checklists, Single Day
Checklists, Multi Day
WSO Anniversary Prints
Watachable Wildlife

The WI Bird Checklists did have a price increase to 15¢ each or 12¢ each in quantities of 25 or more due to the increase in printing costs. A new catalog was printed in October 1995. The WSO bookstore has two special funds besides the normal operations of the bookstore. The

WSO Atlas T-shirts and patches can be purchased through the bookstore. There is no discount given for these items, as all proceeds go to the Atlas project. The other special fund is due to the donation of loon notecards and postcards by Woody Hagge, a WSO member. All proceeds from these cards go toward the scholarship fund so there is no discount for these purchases.

The Amatos have resigned from the WSO bookstore manager position as they are leaving for New Mexico later this year. They have managed the Bookstore through 4 conventions. The new managers are Christine and Donald Reel. We feel confident they will continue to do a great job in providing the membership with this valuable service.

Send orders for the bookstore to WSO Bookstore, c/o Christine and Donald Reel, 2022 Sherryl Lane, Waukesha, WI 53188-3142 or phone 414-547-6128.

Conservation—Noel Cutright—As Conservation Chair I have:

- Attended all Board meetings;
- Prepared for distribution to the members the "Dear Rare Bird Host" letter;
- Coordinated the Honey Creek Birdathon/Bandathon—12th annual;
- Continued to chair the Education Committee of the Wisconsin Working Group, Partners in Flight initiative;
- Coordinated adoption of WSO's Code of Ethics;
- Provided testimony opposing a Wisconsin Crow hunting season;
- Continued to serve as WSO liaison with the Bluebird Restoration Association of Wisconsin;

- Followed Endangered Species Act reauthorization debate, and wrote letters and made contacts in support of the Act's strengths to protect our nation's natural heritage;
- Followed potential future conservation issues such as gypsy moth spraying, Mourning Dove hunting season, attitudes towards predators;
- Became active with "Teaming With Wildlife" initiative;
- Continued to comment on DNR's master planning/land use classification rules;
- Represented WSO on wind siting guideline—bird interaction committee;
- Represented WSO on DNR's advisory committee on bird depredation/fish hatchery issue;
- Prepared WSO position paper on Mute Swan control program;
- Made several presentations on bird topics to groups in southeastern Wisconsin;
- Followed Northern Goshawk listing controversy;
- Submitted comments to U.S. Fish

and Wildlife Service on Peregrine Falcon delisting proposal; and,

- Continue to serve on the WBBA Steering Committee.

Field Trips—Tom Schultz and Jeff Baughman—Our WSO field trips have continued to be popular and well attended. The October hawk-watch at Harrington Beach was truly exceptional, with perfect migration weather and hundreds of hawks seen. The February Eagle Trip was also noteworthy for the -30° F temperature! Nine hardy (crazy?) souls attended, and were treated to a special slide show by the Ferry Bluff Eagle Council. Then, under generally warmer conditions, a small (8) but enthusiastic group toured Costa Rica in March, and found 411 bird species in 10 days of birding.

We continue to extend the invitation for local bird clubs to host field trips for WSO. This year, the Wausau Bird Club again led a tour of Mead Wildlife Area, and the Fox Valley Bird Club hosted two trips to Shiocton. Other offers, and/or suggestions, are always welcome.

Membership—Alex Kailing

MEMBERSHIP STATUS: [AS OF MAY 1ST]

CATEGORY	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996
SENIOR	93	94	74	62	61	63	50	48	49	46	48
REGULAR	543	502	507	598	601	598	616	610	672	679	663
FAMILY	243	260	303	318	349	376	346	321	349	358	336
SUSTAIN	38	45	74	73	105	112	91	88	84	86	84
1/4 LIFE	2	0	5	10	14	5	6	10	7	9	3
LIFE	61	68	68	69	71	82	86	87	93	98	105
PATRON	8	7	7	6	6	6	6	6	6	6	6
HONORARY	8	7	7	7	8	8	7	7	7	6	6
BOARD	4	4	4	5	5	4	2	2	4	3	5
LIBRARY	58	58	55	48	45	48	46	40	44	47	44
EXCHANGE	47	46	42	43	44	43	36	40	41	43	44
TOTAL	1105	1091	1145	1239	1309	1346	1292	1259	1356	1381	1344

DECEASED	2	3	5	4	2	4	5	6	9	5	3
NON RENEW	166	141	110	99	119	130	189	237	172	177	191
LIBRARY DROP	3	3	2	7	5	2	2	3	1	0	4

NEW MEMBERS: [New members for the calendar year]

1990	1991	1992	1993	1994	1995
140	171	176	180	163	134

It appears that the overall membership reduction is influenced largely by the decline in new members in 1995.

Publicity—Bettie Harriman—Press releases about the Steenbock and WSO Scholarship winners were sent to several newspapers in the state, and an article about the winners and their work was published in the *Badger Birder*.

Several WSO membership brochure displays were created and most have been placed in new bird stores around the state. Three displays are available for placement. Please contact me at 5188 Bittersweet Lane, Oshkosh, WI 54901, or phone 414-233-1973, if you would like to put one up and keep it in brochures. Membership brochures were distributed as requested to members and made available at numerous events concerning birds and nature.

Notices of the WSO field trips continue to be sent to area newspapers. If any members see these notices, I would appreciate a copy for the Publicity files. Several papers have carried some excellent pictures or stories about the field trips.

A new WSO Display was created in August by Judith Huf. Judith, al-

though a new member to WSO, did an excellent job of presenting WSO information on the display. This six panel display is available to be used at any event where you believe WSO should be represented. Please contact me at the above address if you would like to use the display.

WSO was a vendor at the 4th Midwest Birding Symposium in September at St. Joseph/Benton Harbor, MI. The WSO Display, as well as an Atlas display were used, and a few WSO publications were available for purchase. About 700 individuals attended the meeting, and viewed the WSO display.

The 1995 "Birds in Art" event which WSO co-sponsored was a presentation by Laura Erickson on 24 September. Laura was well received by an enthusiastic audience. The Leigh Yawkey Woodson Museum is quite pleased with the addition of WSO as a sponsoring agency.

The WSO and/or Atlas Displays were present at the annual meeting of The Nature Conservancy, a "One Bird/Two Habitats" Workshop, the Wisconsin Working Group Neotropical Migrants Meeting, the Stewardship Meeting of The Nature Conservancy, and at the capitol in Madison for International Migratory Bird Day on 11 May.

WSO continues to receive recognition as the initiating organization through the publicity about the Wisconsin Breeding Bird Atlas (WBBA) project.

I have given several talks to bird

clubs or about the Atlas this year, and always include information about WSO. I continue to serve on the WSO Board, attending all meetings, and to serve as the Director of the WBBA.

Records—Jim Frank—The WSO Records Committee for 1995 consisted of Mark Peterson, Jim Frank,

Robbye Johnson, Randy Hoffman, and Jeff Baughman. They reviewed 74 records of 31 species, 59 records were accepted for an acceptance rate of 80%. One new species was added to the state list, a Harris Hawk. Complete information on the committee's decisions appeared in the *Pasenger Pigeon* Vol. 57, Nos. 3 & 4, and Vol. 58, Nos. 1 & 2.

Season	Records Examined	Accepted	Not Accepted
(Fall 1994 deferred)	(1)	(1)	
Winter 1995	13	12	1
Spring 1995	25	21	4
Summer 1995	10	7	3
Fall 1995	26	19	6
			(+ 1 deferred)
TOTAL 1995	74	59	14

Research—Robert Howe—Activities during 1995–96 were mainly associated with the Wisconsin Breeding Bird Atlas (WBBA). A data management center for processing Atlas records was established adjacent to the Richter Natural History Museum at the University of Wisconsin-Green Bay. This facility also will be used to store archival records from WSO. Planning during the year has led to commitment for long term storage of WSO research records at UWGB, including those from the Atlas.

As of 15 May 1996, nearly all of the 1995 records from the WBBA have been computerized. Editing of the records will begin in June. A system for managing the data is in place, and meetings with WDNR staff and the WBBA Steering Committee have led to a policy for data use. A site on the World Wide Web has been established for the Atlas, and further development of this will occur during summer 1996.

This has been a very busy and rather difficult year for me. I have not been able to do justice even to the Atlas in terms of answering correspondence and keeping up with my responsibilities as a Regional Coordinator. I apologize to those whose unanswered letters still lie on my desk. They haven't gone away, nor has my commitment to play a significant role in furthering the mission of our organization.

Scholarship and Grants—Janine Polk—The WSO awarded five Scholarships and Grants for 1996.

A Steenbock Award was given to William E. Stout for "Population Surveys on Hawks and Owls in the Metropolitan Milwaukee Area." Mr. Stout is a high school biology teacher. He will be conducting visits to hawk and owl nests in a five-county area around Milwaukee in order to determine reproductive suc-

cess. His data will be contributed to the Wisconsin Breeding Bird Atlas.

A joint Steenbock/Nelson Award was given to Dr. Philip C. Whitford for a project to determine the relationship between "Canada Geese Use of Small Urban Park Ponds and Human Use of the Areas." Dr. Whitford, Professor of Biology at Capitol University in Ohio, is attempting to determine if Canada Geese avoid areas for nesting and resting around urban park ponds where human-use paths are constructed.

A Nelson Award was given to Don and Julie Waldrop of a study of "Colonial Versus Isolated Wood Duck Nesting." The Waldrops will be placing, maintaining, and observing 18 Wood Duck boxes along the Yahara River south of Stoughton, 9 isolated boxes, and 9 in groups of threes, to determine if the duck produce more successfully in groups or alone. A Nelson Award was given to Liying Su, Research Associate for the International Crane Foundation, for a proposal on "Habitat Use and Crop Depredation by Sandhill Cranes at Biggsville, Wisconsin." The goal of this work is to solve crop depredation by Sandhill Cranes by developing and implementing solutions while the damages are relatively small and localized. This is the second year that WSO has supported this work.

A WSO Scholarship was given to John P. Jacobs and Eugene A. Jacobs to continue their work on the "Wisconsin Red-shouldered Hawk Nesting Study." This study will check 120 Red-shouldered Hawk nest sites in northeastern and central Wisconsin, monitor active nests, band young, determine rates of reproductive suc-

cesses, analyze possible reasons for success or failure, and make management recommendations. This study of a threatened species in Wisconsin received funding from WSO in 1995.

Youth Education Coordinator—Stephen Kupcho—I took on the position of Youth Education Coordinator (YEC) for WSO in November 1995. The position description was diffuse—my initial task was to find a focal point on which to center my efforts.

I received correspondence from four persons in the state offering their assistance with the new position: Darrel Covell, UW-Madison; Jane Raymond-Wood, Wausau Bird Club; Mary Dykstra, Wisconsin Center for Academically Talented Youth; and Jackie Sharfenberg, Havenwoods State Forest. In phone conversations with these four in February we discussed the YEC position as they saw it benefiting youngsters. Through the insights of these people, I've narrowed the focus of the position. A policy will be formulated incorporating short- and long-range objectives for the Youth Education Coordinator based on these discussions. I know of three WSO members, Dennis Gustafson, Anne Graham, and Barbara Duerfsen, who have educational backgrounds and knowledge of classroom bird projects. Bill Volkert, WDNR at Horicon Marsh, will also be used in policy formulation.

My initial report to the WSO board was given at the February board meeting by Noel Cutright, as I was attending to classroom duties. The two key points of that report addressed the need for a compilation

of ornithology programs throughout the state and the screening of curricular materials for classroom teachers. The dissemination of this material is still under consideration, but will probably be handled through the state Environmental Education Network and its liaison people in schools and nature centers.

At the April board meeting, I gave a brief report of the communication aspects of WSO, notifying teachers about what's happening with birding activities in the curriculum through environmental studies. I touched on International Migratory Bird Day and the One Bird-Two Habitats curriculum. WSO slides (educational packet) and the new WSO video dealing with state birds are other ways to get bird information into the classroom.

The *Badger Birder* of March and May had articles in the "Budding Birder" sections dealing with the incorporation of activities for teachers into their classroom curricula. This bimonthly format will continue to report on other classroom happenings

from teachers around the state related to birding teaching strategies, field trips, and classroom material selection.

My final contribution for this year came at the Wisconsin Environmental Education Spring Workshop at the Wausau School Forest on 11 May 1996. I had the privilege of offering a three-hour introductory birding session to sixteen elementary and secondary school teachers from around the state. I incorporated the WSO slides, One Bird-Two Habitats overview, and the Wisconsin Breeding Bird Atlas project into the early morning class. Each participant received a three-ring folder with birding activities that should be used in the classroom. In addition, the packet included our WSO brochure, two WSO checklists, and a WSO Bookstore catalog. Some of the teachers expressed an interest in buying/renting the WSO slides.

This first half-year has gone well. It is a challenging position and one in which I will be needing and seeking much outside assistance.


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50 Years Ago in *The Passenger Pigeon*

For many years, people have opened their homes so others could view bird rarities at their feeding stations. The 14-day visit of a male Varied Thrush at a Janesville feeder in February is described in this issue. The bird kept company with Blue Jays, Tufted Titmice, Northern Cardinals, and Evening Grosbeaks and 16mm color movies of the bird were taken. This bird constituted the second record for the state, the first being a bird at a Madison bird bath for a couple of hours in October 1944. Schorger also noted that there is an indefinite record from Sauk County.

The author of the note, Harry G. Anderson from Madison, concludes, "With an ever-increasing number of people becoming interested in 'birding' and setting out feeding stations, new and interesting bird observations will be forthcoming. Only by letting these records become widely known through the means of the press can they be of any value to other ornithologists." (Excerpts from Volume 8, 1946)

THE WISCONSIN SOCIETY FOR ORNITHOLOGY

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