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EDITORS

Bettie R. and Neil A. Harriman 5188 Bittersweet Lane Oshkosh, WI 54901 920. 233. 1973 bettie@new.rr.com harriman@uwosh.edu

BIRD REPORTS COORDINATOR

Randy Hoffman 305 Fifth Street Waunakee, WI 53597 608. 849. 4502 ecurlew@hotmail.com

ASSISTANT EDITOR (Art)

David Kuecherer 726 Harvard Drive Neenah, WI 54956 920. 725. 7915 dkuecherer@new.rr.com

FIELD NOTE COMPILER (Spring)

Karl H. David 6880 Beechnut Drive Racine, WI 53402 david@msoe.edu

FIELD NOTE COMPILER (Summer)

Randy Hoffman 305 Fifth Street Waunakee, WI 53597 608. 849. 4502 ecurlew@hotmail.com

FIELD NOTE COMPILER (Autumn)

Ted Gostomski 11860 Leonard School Road Cable, WI 54821 gostomski545@msn.com

FIELD NOTE COMPILER (Winter)

Kay L. Kavanagh 801 Lakview Drive Niagara, WI 54151 715. 589, 2299 The Passenger Pigeon (ISSN 0031-2703) is published quarterly (Spring, Summer, Fall, Winter) by The Wisconsin Society for Ornithology, 2022 Sherryl Lane, Waukesha, WI 53188. Periodicals Postage Paid at Hartland, WI and at additional mailing offices, including Lawrence, KS 66044. Subscription rates are \$25 domestic; \$30 foreign. Back issues may be obtained for \$8 each. "POSTMASTER: Send address changes to The Passenger Pigeon, Jesse Peterson, 810 Ganser Drive, Waunakee, WI 53597."

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Front Cover: Male Spruce Grouse in spring breeding display. Photograph by Karl Martin.

President's Statement

Spring Into Action

For many of us, the past several months have been very rough. I know my 401k retirement account is much smaller than it was just a few months ago. Jobs have been lost and homes are going into foreclosure. The reasons for this economic decline are many and there are many things that have to happen to correct the situation. But, as is generally the rule, the necessary resources will be brought to bear, the actions required will be taken, and, in time, our economy will recover.

There are many comparisons that can be made between our current economic situation and the situation many bird species are in. As we all know, there are a number of species of birds in decline or even threatened with extinction. Habitat loss, pollution, human structures, and pesticides are some of the major reasons that the collective bird 401k is falling in value. The impact is startling and is hitting close to home.

Likewise, there are many things that have to happen to correct the situation. Unfortunately, it is **not** the general rule when birds and nature are involved that all of the necessary resources will be brought to bear and all of the required actions taken. This is where we come in. Through actions we take as an organization and as individuals, we can positively impact the immediate and long-term well-being of birds.

As winter draws to a close, I encourage you to think about and commit to taking action on behalf of birds, that is, to make a deposit into the avian 401k. There are many activities you can participate in: work groups to help maintain or restore habitat; building and/or erecting nest boxes/structures; performing or assisting with bird-related field studies; purchasing federal Migratory Bird Hunting and Conservation Stamps (Duck Stamps); voicing your opinion on important bird-related issues to local, state, and/or federal government representatives; supporting conservation-minded organizations like WSO; and the list goes on and on.

It may only be February, but the days are getting longer, the temperatures are beginning to warm just a bit, and, after all, this is the Spring issue of our journal. So, it is time to think Spring . . . as in "spring into action" for the birds of Wisconsin. There is so much we can do!

President

Jene Lite



Northern Cardinal carving by Jack Bartholmai

From the Editors' Desk

Some Changes to Note

Once again, we are bidding goodbye to a seasonal field note compiler for this journal. Karl David's last Spring Season report is in this issue. Although Karl has not spent twenty plus years doing the spring season, he has done it well and with skill. Both these editors and our WSO members appreciate all the time and effort he put into providing excellent articles each spring season. Thank you Karl and enjoy your retirement from this task.

We are happy to report that long-time WSO member and Wisconsin resident Marilyn Bontly was agreed to be the next compiler of the spring season. Marilyn brings considerable knowledge of our Wisconsin birds to the task of writing the seasonal report; she's birded just about every corner of our state, reporting her uncommon finds to the Records Committee for many years. She also serves WSO on the Annual Convention Committee, birds Schultz Nature Center almost daily, and is an active member of the Riveredge Bird Club. We look forward to reading her spring season reports.

Another change you will find in this issue of *The Passenger Pigeon* is book reviews. Since co-editor, Neil Harriman, rather enjoys researching and writing book reviews, when these editors were asked in the fall of 2008 about doing some reviews, Neil took on the task. We make no promises about how often you will find book reviews included, but hope you find the ones we run useful to you.

And finally, you will find more color photographs in this issue than in previous issues. Yes, this does cost WSO more, but the readers have indicated to the editors that they really enjoy having color in the journal, so as long as we can afford it, we'll try to use more when we can. Any assistance with covering the cost would be appreciated. Thank you.

Bettie and Neil Harriman, Editors



Magnolia Warbler by Jack Bartholmai

Spruce Grouse Distribution and Habitat Relationships in Wisconsin

Mike Worland

Wildlife Research Technician
Wisconsin Department of Natural Resources
107 Sutliff Ave.
Rhinelander, Wisconsin 54501
715. 365. 8857
worlam@wisconsin.gov

Karl J. Martin

Chief, Wildlife and Forestry Research Section Wisconsin Department of Natural Resources 2801 Progress Rd. Madison, WI 53716 608. 224. 7138 Karl.Martin@Wisconsin.gov

Larry Gregg

829 Atwood Ave. Park Falls, Wisconsin 54552 715. 762. 3446 lnjgregg@pctcnet.net

ABSTRACT

Spruce Grouse are sparsely distributed across portions of northern Wisconsin and are generally found in pure coniferous forest. There is little information regarding the distribution, habitat use, and population status of Spruce Grouse in Wisconsin. Our goal was to develop general recommendations for the study, monitoring, and management of Spruce Grouse in Wisconsin. We used results from three ongoing

projects: 1) a database of Spruce Grouse observations in Wisconsin from 1980 to 2008; 2) breeding season surveys in the Chequamegon National Forest in 2006–2007; and 3) radio-telemetry data on nine individuals in the Chequamegon National Forest during May 2007–March 2008.

The database contained 312 records of 565 Spruce Grouse observations. Eighty-six percent of observations were in five counties: Sawyer, Oneida, Vilas, Ashland, and Forest. Spruce Grouse were observed at

12% (56/458) of the breeding season survey points. Radio telemetry resulted in 144 locations for 9 birds (6 male, 3 female). Seventy-nine percent of telemetry locations were < 25 m from the lowland-upland edge. Upland habitats—spruce-fir, jack pine, and red pine—were used by males during the breeding season and by hens and their broods in late summer and fall. The only lowland habitats used were black spruce and tamarack swamps. Three nests belonging to two hens were found in black spruce swamps. Results from the observation database, surveys, and telemetry demonstrate the importance of edges that include a mix of both upland and lowland coniferous forest in the landscape.

An increased monitoring effort in Wisconsin is needed because the current known distribution of this species is primarily limited to a few isolated pockets. The survey protocol and GIS habitat assessment we developed were effective for detecting this inconspicuous bird.

INTRODUCTION

Relatively few people have had the good fortune of observing a Spruce Grouse in Wisconsin. A Spruce Grouse observation in Wisconsin is highly prized among both avid birders and those with only a passing interest in birds. The Spruce Grouse's fame and mystique in Wisconsin is due not only to its mysterious nature and rarity, but also to its reputation as the "fool hen"—the moniker it has earned because of its approachability and apparent lack of fear of humans.

The secretive Spruce Grouse is closely associated with coniferous forests and feeds primarily on the needles of short-needle conifers. It is found throughout the forested re-

gions of Canada and Alaska and along the northern edge of the continental U.S. in the Northeast, Northwest, and States. Though plentiful throughout most of its range, the Spruce Grouse is relatively rare in Wisconsin where it is at the extreme southern edge of its range and listed as a state threatened species. In addition, increasing temperatures associated with climate change have been projected to significantly reduce the distribution of several key coniferous tree species in Wisconsin that provide habitat for Spruce Grouse (Sheller and Mladenoff 2005).

There is little information available on Spruce Grouse population status, distribution, habitat requirements, life history, and response to habitat management in Wisconsin. We are aware of only three sources that provide limited empirical information for Spruce Grouse in Wisconsin: 1) the Wisconsin Breeding Birds Atlas project (Gregg 2006); 2) a survey of parts of the Chequamegon and Nicolet National Forests in 1992–1993 (Gregg unpublished); and 3) an overview of the status of their population in Wisconsin (Scott 1943).

Our goal was to develop general recommendations for the study, monitoring, and management of Spruce Grouse in Wisconsin. We first delineated the area of the state that was occupied by Spruce Grouse and was most likely to support suitable habitat. We then developed a protocol to delineate potential Spruce Grouse habitat across landscapes using Geographical Information Systems (GIS) and landcover datasets. Results from this were used to select study sites near Clam Lake [Ashland County], Wisconsin that were most likely to

contain Spruce Grouse. We also developed a survey protocol for detecting Spruce Grouse during the breeding season. To assess Spruce Grouse distribution, habitat relationships, and population status we used data from three ongoing projects: 1) a database of Wisconsin Spruce Grouse observations from 1980 to 2008; 2) breeding season surveys in the Chequamegon National Forest in 2006 and 2007; and 3) radiotelemetry observations on nine individuals in the Chequamegon National Forest during May 2007–March 2008.

METHODS

Wisconsin Spruce Grouse Observation Database—

To broaden our understanding of the distribution of Spruce Grouse we solicited information from natural resource professionals throughout northern Wisconsin on all Spruce Grouse observations that they had recorded between 1980 and 2008. For each observation we entered details such as date, habitat, number of males versus females, and location into a GIS database. We overlayed this data on a Wisconsin map to develop a coarse map of Spruce Grouse distribution.

Chequamegon Habitat Assessment and Breeding Season Surveys—

We surveyed two adjacent project areas (Fig. 1) in the Chequamegon National Forest in 2006 and 2007. We selected survey sites in areas with previous Spruce Grouse observations or in areas dominated by large stands of potentially suitable habitat. To locate sites with no previous observations but

that contained potentially suitable habitat, we conducted a GIS habitat assessment in the project area. We identified landscapes containing multiple large, adjacent stands of conifer forest. We ranked landscapes according to two criteria: 1) total area of potentially suitable habitat (forest types containing black spruce, tamarack, white spruce, jack pine, red pine, and white pine), and 2) length of edge between upland and lowland conifer per unit area. We selected the top landscapes and delineated survey blocks as areas of mostly contiguous habitat that could be surveyed by one or two observers in one morning. We ground-truthed survey blocks to determine if stands were conifer-dominated before surveys were conducted.

Surveys were conducted from 19 April-17 May in 2006 and from 2 April-1 May in 2007. We began at sunrise or soon thereafter and ended approximately four hours after sunrise. Survey points were placed along edges between upland and lowland coniferous stands and in the interiors of conifer swamps. Each point was surveyed for five minutes. A taped recording of the female's call, the cantus, was played for 30 seconds at the beginning of the survey and again at two and one-half minutes. Males were detected when they responded to the cantus recording with the flutter-flight display and females when they responded with their cantus. We separated survey points by 100 m, which allowed for complete coverage of the area between points, since flutterflights were audible from 50-100 m. Forest types were recorded at each survey point—one type when the point was in the interior of a stand and two types when the point was on

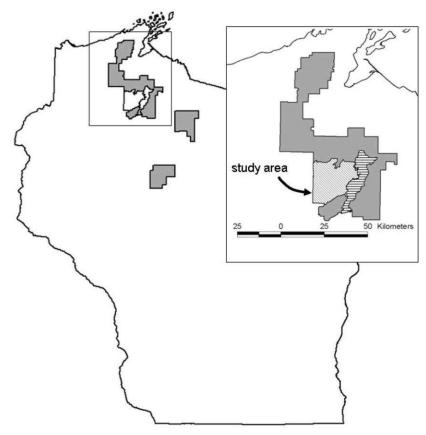


Figure 1. Spruce Grouse study area for spring surveys and radio telemetry in the Chequamegon National Forest, Wisconsin. The western portion was surveyed in 2006 and the eastern portion in 2007.

the upland-lowland edge. Spruce Grouse were confirmed visually after they were heard and their locations were recorded using a Global Positioning System (GPS). We measured the distance between the Spruce Grouse location and the nearest upland-lowland edge.

Radio telemetry—

Telemetry efforts were focused on three areas that were within 16 km of Clam Lake, Wisconsin and that contained relatively high densities of both males and females during spring surveys. A 15 ft. telescoping fiberglass pole with a noose of 150 lb.-test fishing-line taped to the end was used to capture birds (Zwickel and Bendell 1967, Schroeder 1986). Advanced Telemetry Systems (ATS A390) transmitters were attached to the birds using a necklace attachment that resulted in the transmitter resting just below the bird's crop with the antenna bent on a slight angle so it ran along the back of the bird. Transmitters were attached to eight Spruce

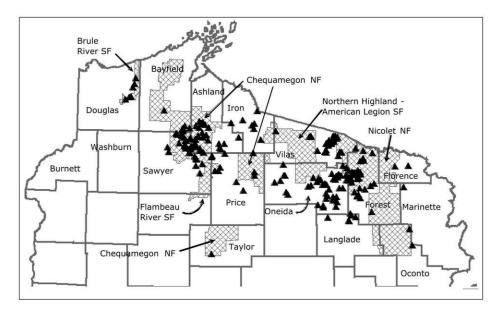


Figure 2. Reported Spruce Grouse (565 observations among 312 separate sightings) in Wisconsin, 1980–2008. Cross hatched areas are Federal and State forests.

Grouse (five males and three females) in May 2007, plus one immature male in September 2007.

Radio-tagged birds were located approximately once every one to two weeks by following their radio-signal using telemetry receivers until we observed the bird. At each observation we recorded the location with a GPS unit, habitat type (two types if found near the upland-lowland edge), and distance to the upland-lowland edge.

RESULTS

Distribution—

The Wisconsin Spruce Grouse observation database contained 565 observations among 312 separate reported sightings between 1 January 1980 and 4 January 2008. A map of these sightings (Fig. 2) showed that

Spruce Grouse were almost entirely limited to the northernmost two tiers of counties. Eighty-six percent of the records occurred in two main clusters overlapping five counties—a western cluster overlapping Sawyer and Ashland counties, and an eastern cluster overlapping Oneida, Vilas, and Forest counties. When this map was compared to the upland-lowland conifer map of northern Wisconsin (Fig. 3), we found that the two clusters overlapped two areas in the state with particularly high concentrations of both upland and lowland coniferous forest. Other areas of the state, particularly western Vilas, Douglas, and Burnett Counties, have high concentrations of upland conifer forest and limited lowland conifer forest, and show few Spruce Grouse observations.

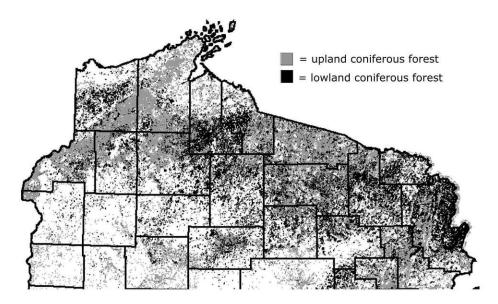


Figure 3. Coniferous forest in northern Wisconsin. Derived from WISCLAND (The Wisconsin Initiative for Statewide Cooperation on Landscape Analysis and Data) land cover data. Generalized to show areas dominated by coniferous forest; some smaller inclusions of nonconiferous forest are not visible.

Efficacy of survey protocol and habitat assessment—

Between 2006 and 2007 we observed 56 Spruce Grouse (28 males and 28 females) among 452 survey points, resulting in a 12% detection rate among survey points. We spent a total of 108 hours surveying (including walking between points, but excluding driving time, habitat reconnaissance, and walking into stands), resulting in an average of 1.9 survey hours/observation.

We identified 21 survey blocks and found at least one Spruce Grouse in 67% (14) of the blocks. Ten of these blocks had historic observations and eleven were identified using the GIS habitat assessment. The rate of Spruce Grouse presence among survey blocks was similar between these two types

(67% vs. 73%). Moreover, time efficiency was equal between the two (1.9 hours/observation). There was a difference in the detection rate among survey points, however; 9% for blocks identified in the assessment versus 15% for blocks with historic observations.

Breeding season habitat type relationships—

All 56 observations were within or adjacent to swamps dominated by black spruce (*Picea mariana*) or tamarack (*Larix laricina*), with evidence of a preference for black spruce (Fig. 4). There were no observations of Spruce Grouse at the 23 survey points that were located in white cedar (*Thuja occidentalis*) swamps.

Forty-two of the 56 observations

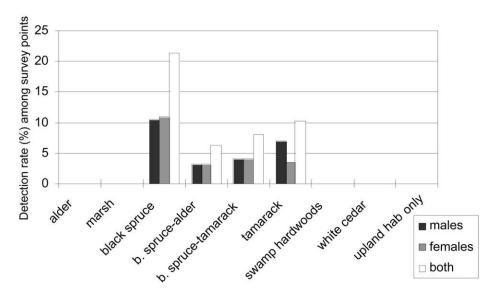


Figure 4. Detection rate of Spruce Grouse among lowland forest types in Chequamegon National Forest, Wisconsin, April–May, 2006 and 2007.

(75%) were associated with upland coniferous forest in addition to lowland coniferous forest. These observations were within or adjacent to stands of upland spruce (both black and white spruce (Picea glauca)), jack pine (Pinus banksiana), or red pine (Pinus resinosa) (Fig. 5). White pine (Pinus strobus), in which we surveyed 15 points, was not used by Spruce Grouse. Jack pine was used at the highest rate, with a 50% detection rate among survey points, but this was among only 16 points in a single stand that was surveyed both years. Forest types dominated by upland spruce had higher detection rates than forest types dominated by red pine (Fig. 5).

Despite the high detection rate in upland spruce-dominated stands, Spruce Grouse were nearly absent whenever upland spruce was combined with a deciduous component, particularly white birch (*Betula pa-*

pyrifera) or aspen (*Populus* spp.); there was only one observation among 107 survey points in these mixed stands (Fig. 5).

We observed evidence of habitat use variation between sexes during the breeding season. Of the 14 observations that were found within coniferous swamps with no nearby upland habitat, 12 were female; overall 43% of the female observations were not associated with upland habitat (Fig. 5). Alternatively, 26 of 28 males (93%) were associated with upland habitat. Nearly all of these males were found along the upland side of the lowland-upland habitat edge where their display grounds were located.

Radio telemetry—

Between May 2007 and March 2008 we acquired 144 telemetry locations on nine birds (three females and six males, including a first-year male).

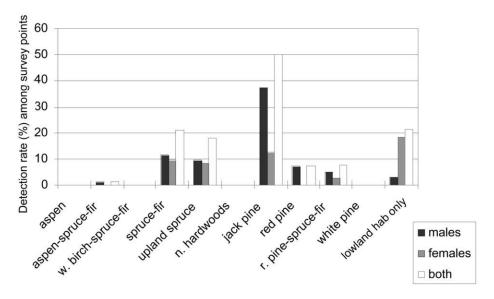


Figure 5. Detection rate of Spruce Grouse among upland forest types in Chequamegon National Forest, Wisconsin, April–May, 2006 and 2007.



Figure 6. The first Spruce Grouse nest reported in Wisconsin. Found in the Chequamegon National Forest, May 2007.

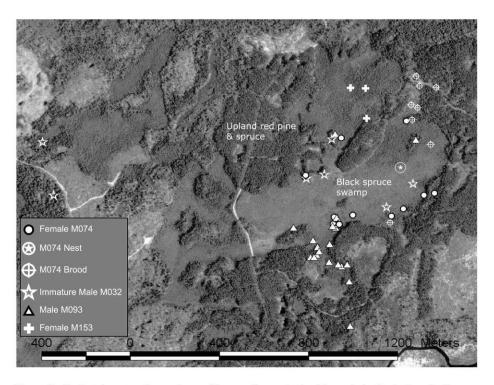


Figure 7. Radio telemetry observations of Spruce Grouse in the Moose Lake Study Area in the Chequamegon National Forest, Wisconsin, May 2007–February 2008.

During this span there were four mortalities due to predation.

We tracked two of the females to nests-to our knowledge the first Spruce Grouse nests reported in Wisconsin. One nest contained five eggs and one contained seven (Fig. 6). The seven-egg nest was abandoned and the female renested 70 m away with five eggs. Nests of both females fledged successfully. All nests were in a black spruce swamp adjacent to upland spruce and red pine. Each nest was well concealed at the base of a black spruce tree on top of a sphagnum moss hummock. The local habitat for each nest was relatively sparse 2-6 in. diameter black spruce, with a thick ground layer of labrador tea (Rhododendron groenlandicum), cotton grass (*Eriophorum* sp.), leatherleaf (*Chamaedaphne calyculata*), and sedges.

We attempted to track broods after fledging, but did not acquire good telemetry locations for one of the broods. We believe the brood moved to upland coniferous forest based on one telemetry location for the hen, but the chicks were never seen—presumably they were killed by predators. However, the other brood used upland conifer habitat for approximately one month after fledging. This was the only time we found Spruce Grouse consistently using upland conifer relatively far from the lowland edge over a succession of weeks (Fig. 7).

Telemetry locations revealed the use of upland versus lowland conifer

was similar: 36% were within lowland and 49% within upland. But there was a clear association with the upland-lowland edge: 15% of locations were directly on the upland-lowland edge and 79% of locations were <25 m from the upland-lowland edge (Fig. 7).

DISCUSSION

Habitat relationships—

From the telemetry data it appears that both upland and lowland coniferous forest have roles in the life history of Spruce Grouse in the Chequamegon National Forest near Clam Lake, Wisconsin. Our observations indicate that lowland forest was used for nesting and to satisfy food and cover needs, while upland forest was used by males to display during the spring breeding season and also by hens and their broods. This differs from other accounts of Spruce Grouse habitat use in Wisconsin's neighboring states. In Minnesota, Haas (1974) and Anderson (1973) both indicated the use of only black spruce swamps, with no mention of uplands or edge (upland conifer may have been scarce in their study area). In another Minnesota study, Pietz and Tester (1982) found forest type associations similar to what we found. But they stressed a strong seasonal pattern where upland jack pine was used almost exclusively from October through April, while lowland black spruce was the primary habitat from May through September. We found no strong seasonal variation in the use of upland versus lowland, aside from the aforementioned associations for displaying males, nesting, and brood rearing. Pietz and Tester (1982) found Spruce Grouse along

the upland-lowland edge, but unlike our results, they found no positive association.

The association between Spruce Grouse and jack pine found by Pietz and Tester (1982) was also found by William Robinson (1980) in his work in the Yellow Dog Plains of the U.P. of Michigan. But a close look at Robinson's data emphasizes the importance of spruce in addition to jack pine. In his study area spruce made up only 3% of the trees, but around Spruce Grouse locations spruce made up 32% of the trees. Jack pine, on the other hand, made up >90% of the trees in the study area as a whole, but around Spruce Grouse locations it made up only 51% of the trees. Thus, spruce was used at a rate disproportionately higher than its availability. This finding was substantiated in one of our survey areas, where jack pine was a significant component in addition to upland and lowland spruce, and we found one of our two highest Spruce Grouse densities. But our findings differed from Robinson's in that his observations were in upland spruce and jack pine, while ours were always associated with lowland spruce.

These findings from other states indicate that the habitat situation for Spruce Grouse in Wisconsin is unique, and that extrapolating research from other states may lead to ineffective management. We found a strong association with the upland-lowland edge in the Chequamegon study area that was not found in any of the Minnesota or Michigan work. Moreover, jack pine was emphasized as a primary habitat for Spruce Grouse in the other studies, but it is an uncommon habitat type in the Chequamegon study area, with red

pine and upland spruce being the dominant upland coniferous types.

Jack pine, however, is abundant in some other parts of Wisconsin. One area with an especially high acreage of jack pine is Douglas County (Fig. 3), but here there are only a few Spruce Grouse observations associated with black spruce swamps in the Brule River State Forest (Fig. 2). Moreover, the Northern Highland State Forest exhibits only a few Spruce Grouse locations (Fig. 2), though it has abundant upland coniferous forest (Fig. 3). With these patterns we hypothesize that upland coniferous forest alone does not provide suitable habitat for Spruce Grouse in Wisconsin. When it is combined with abundant black spruce-tamarack swamp in the landscape, however, it can provide essential habitat for male display sites and brood rearing.

Habitat management recommendations—

Our recommendation for Spruce Grouse habitat management in the Chequamegon National Forest is to conserve landscapes that have large areas of black spruce-tamarack forest with adjacent upland conifer types of upland spruce, jack pine, or red pine. In these landscapes, management that converts stands from coniferous to deciduous or mixed deciduous-coniferous may be eliminating potential Spruce Grouse habitat. For example, the suitability of a black spruce swamp for Spruce Grouse may be adversely affected if adjacent upland spruce were converted to an aspen-spruce mix.

In the absence of additional data we tentatively recommend applying this

management recommendation other parts of Wisconsin, but additional data are needed to determine how Spruce Grouse are using other areas of the state. Even within the Chequamegon National Forest where this work was conducted, we cannot currently predict how Spruce Grouse would respond to habitat manipulations beyond the loss of conifer habitat in areas with swamp-upland edge. Intensive radio telemetry work is needed on more birds across a wider study area before detailed management recommendations can be made. As of this writing the Wisconsin DNR and USDA Chequamegon-Nicolet National Forest have expanded the telemetry project on the Chequamegon and are tracking 14 new Spruce Grouse in 2008-2009, with potential for adding several more collared birds in spring, 2009.

Population status and monitoring recommendations—

We are commonly asked about the size of the Spruce Grouse population in Wisconsin. Scott (1943) gave a rough estimate of 516 to 820 individuals. Based on our limited surveying we think this range is probably low for the current Spruce Grouse population in Wisconsin, but we hesitate to give an estimate. There simply has not been sufficient monitoring of this bird to justify anything but a very broad, perhaps meaningless, range for their population estimate.

The consequences of this insufficient monitoring are exacerbated by the extreme inconspicuousness of this bird. Despite many combined years of conducting research and various recreational pursuits in Wisconsin forests, all three authors never observed Spruce Grouse in Wisconsin until we conducted surveys explicitly to detect them. But after our radio telemetry work we are convinced that we have probably walked directly by many Spruce Grouse in our lifetimes without a hint of their existence. There were a few instances when we used radio telemetry to determine exactly which tree a bird was located in, but were unable to visually locate the bird.

A broad, systematic monitoring effort is needed to determine the status of the Spruce Grouse population in Wisconsin and to provide more details on their distribution. Our observation database, though it reveals a coarse distribution pattern, is based mostly on anecdotal observations, and does not allow for comparisons of abundance between areas that a more systematic monitoring effort would provide. Broad monitoring is a necessary precursor to more intensive research, because it indicates where research should be targeted (Probst and Gustafson 2008), and it provides necessary data to locate individual birds for capturing and radio-tagging.

The survey protocol and GIS habitat assessment we used was effective for finding Spruce Grouse. The current statewide distribution map (Fig. 2) can be used to determine where this protocol and assessment can be most effectively implemented to understand Spruce Grouse status, distribution, and habitat use in Wisconsin. In addition to the Chequamegon study area, surveying is needed in eastern Oneida and Vilas Counties and much of the Nicolet National Forest. Moreover, surveys in the Northern Highland-American Legion State For-

est and northwest Wisconsin (Douglas and Bayfield Counties) are needed to determine Spruce Grouse abundance in areas dominated by upland coniferous forest with limited lowland coniferous forest. Other areas of the state such as Douglas, Iron, and Marinette Counties have abundant conifer swamp habitat, yet contain few Spruce Grouse observations. Surveys in these areas would reveal whether the population is truly low, or if the limited number of observations is simply due to few opportunities to detect them because of a small human population or limited public land.

Spruce Grouse are crucial for future research, monitoring, and management considerations in Wisconsin. The Spruce Grouse population in Wisconsin is vulnerable to extirpation or steep declines in population size. They have a limited, isolated distribution in the state, and there is a risk of ineffective or harmful management because of ignorance about their population status and habitat requirements. Further, Spruce Grouse have the potential to be an important flagship species for habitat conservation because of their beauty, mystique, approachability, and popularity among the general public.

In addition, they have the potential to serve as an early indicator of the effects of climate change on Wisconsin's boreal forest habitat. Scheller and Mladenoff (2005) identified white spruce, red pine, and jack pine as species most vulnerable to extirpation in Wisconsin as a result of moderate warming over the next 100 years. Before these tree species would be extirpated there would likely be stand and tree structural changes occurring because of heat-related stress. Even small

changes in food, thermal cover, or vulnerability to predation could significantly impact the availability and quality of Spruce Grouse habitat. With Spruce Grouse on the southern edge of their range this would likely result in range contraction or extirpation, making Spruce Grouse a potential "canary in the coal mine" for climate change in Wisconsin.

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Mike Worland has worked in Rhinelander since 2002 as a Wildlife Research Technician with Wisconsin DNR Science Services. He assists with research on Spruce Grouse, Golden-winged Warblers, old-growth forest birds, and American Martens. He obtained a B.S. degree in Wildlife Ecology in 1993 from Northwest Missouri State University and an M.S. degree in Conservation Biology in 2008 from the University of Minnesota, St. Paul.

Karl Martin holds a B.S. degree in Wildlife Ecology from UW-Madison, an M.S. degree in Wildlife Science from Oregon State University, and a Ph.D. in Forest Ecology from Oregon State University. He was a Research Scientist with Wisconsin DNR Science Services in Rhinelander from 2000–2008 focusing his research on forest-wildlife habitat relationships. In 2008 he was hired as the Wildlife and Forestry Research Section Chief with Wisconsin DNR in Madison where he currently resides.

Larry Gregg is a retired WDNR research scientist who spent most of his career in Park Falls involved with field work on northern forest birds. Although continuing to dabble in wildlife research, he and his spouse are now focusing their efforts on birding and photography while they spend time with their children and grandchildren scattered across the United States.



Carving of Greater Yellowlegs by Jack Bartholmai

Herding Sparrows: an Exploration of Methods to Capture Grassland Birds

Michael J. Guzy

1057 Eldon Way Edgerton, WI 53534 mjguzy@hughes.net

Terding sparrows? Why is that guy Thiding under a tarp in the middle of a pasture? Sometimes what ornithologists are observed doing makes very little sense at first glance, even to other ornithologists. Field research often poses challenges that require unconventional solutions and often opportunities for the one doing the research to look like an idiot. In this paper, I discuss some of the ways we addressed challenges my crew and I faced in capturing grassland birds so we could band them as part of my dissertation work (2001–2004) at UW-Madison. While my later focus was on Eastern Meadowlarks, initially I was evaluating which species could be captured in sufficient numbers to be research subjects. I was particularly interested in being able to follow birds to see how far they moved and what habitats they used over the course of the breeding season. Most of our attempts to capture grassland birds took place after we finished the main part of the day's work, namely searching for and monitoring grassland bird nests. Banding made a welcome change from walking back and forth across fields, and the crews of neezers

(a now-obsolete term for people who search for bird nests) had fun seeing the birds up close. I hope discussing some of the techniques we tried will help other researchers save some time as they are facing similar challenges. I also present some observations we were able to make because we were working with marked birds.

A lot of ornithological research can be conducted simply by observing birds in the field. Counting birds for population assessment, observations of general habitat use, migration patterns, and many studies of behavior are just a few of the topics that can be explored without the need to identify birds as individuals. Some topics cannot be addressed through these types of observations, however. We know that we can find meadowlarks in pastures, prairies, hay, and crop fields, but does an individual observed in a hay field spend all of its time in that habitat? Does the nest we found in July, located 10 meters away from a nest that we found in May, belong to the same pair? Is that Henslow's Sparrow I just saw feeding chicks a male or a female?

When you need to be able to iden-



Figure 1. Mist nets ready for capturing birds. Nets are easily seen when viewed along their length (right side of photo), but virtually invisible when viewed from a perpendicular position (left portion of photo). Note small dark spot just below trees and just right of photo center—this is a meadowlark caught in the net.

tify individual birds, the work becomes a bit more challenging and time-consuming. For most species this can only be accomplished by capturing each bird and marking it in some way such that an observer can detect the mark from a distance. Some common ways to mark birds include colored leg bands and radio transmitters. One of the major challenges is capturing the



Figure 2. Adult male Henslow's Sparrow.



Figure 3. A group of sparrow herders moving a bird toward the nets.



Figure 4. Juvenile Henslow's Sparrow captured in a mist net as it moved through the grass "canopy."

birds in the first place. Understandably, most birds are reluctant to allow themselves to be grabbed and given little colored bands for their legs, or a nice radio transmitter to wear. Because of this reluctance, many techniques have been developed to capture birds, and books have even been written about the subject (Bub 1991, McClure 1984).

My research took place in southwestern Wisconsin, in and around the Military Ridge Prairie Heritage Area (MRPHA; between and south of Mount Horeb and Ridgeway, WI). This part of the state is mostly agricultural with a relatively high percentage of the land in grass and a relatively low percentage in crops compared to other areas of the state. There are also numerous prairie remnants. were interested in grassland-obligate species (those requiring open grassland for nesting and not requiring trees or shrubs; Sample and Mossman 1997). Some of the species that can be found in the MRPHA include Eastern Meadowlark, Bobolink, Upland Sandpiper, Sedge Wren, Dickcissel, and Grasshopper, Henslow's, and Savannah Sparrows. My field crews and I

were attempting to capture and mark birds with color bands and, in the case of Eastern Meadowlarks, attach radio telemetry transmitters so we could identify and follow individuals to monitor nesting activity and habitat use. Color-banded birds that returned in subsequent years could be identified without re-capturing them, as well.

One very successful way to capture many species of birds is with mist nets (Fig. 1). Mist nets are made of very fine material, like that used in a hair net, hung from strings such that the material forms pockets and, when birds hit the net, they fall into the pocket and get tangled in the netting. The idea is that the nets are placed in such a way that they are virtually invisible to the birds that then fly into the nets as they move through or between vegetation. In a forest or shrubby habitat, it is usually very easy to place the nets in such a way that birds are intercepted as they move between shrubs or trees. The nets can be placed in shadow and against a background that makes the nets very difficult to see. In open grasslands, the nets can only be placed in the open where the sun can reflect off the net. the wind blows the nets (and there is no background vegetation to mask the movements), and there aren't discreet clumps of vegetation to move between. So much for making them invisible. Also, we were working with territorial breeding birds so we couldn't expect birds to be moving throughout a field, but mostly just within their individual territories. Our objective was to maximize captures for the effort expended.

Because we were working with territorial birds, we were faced with two rather obvious choices: 1) put up so

many nets in a field that an individual bird couldn't move far without encountering a net, even within its own territory; or 2) target each individual bird by setting up a few nets within its territory, and once that bird was captured, move the nets to the next territory. In either case, more time was required than we had available to make the effort worthwhile (it takes a while to set up and take down nets). However, we noticed that as we moved through a field searching for nests, Henslow's Sparrows (Fig. 2) would often move in front of us for distances that far exceeded territorial boundaries. Also, most sparrows seemed reluctant to fly more than a meter or so above the top of the grass. What if we set up nets in a central location and herded birds into them? The neezers were game, so we gave it a try.

We put up mist nets in a line of up to 6 nets totaling 80 or 90 meters long. We pushed the nets down into the grass and close to the ground to try to prevent birds going under the nets. Then we located a bird sitting in view on a stalk of grass and started herding. Okay, picture this: eight or ten people running in a line through a field waving shirts and hats in the air and yelling for no obvious reason. What would you think if you saw this going on as you drove by a field? In retrospect, we were probably lucky nobody called the sheriff.

Herding consisted of a line of people moving slowly towards a perched bird, spread out enough that the bird usually wouldn't fly around the line of herders, until the bird was near the net (Fig. 3). When we were close enough that we thought we could get the bird into the net, we ran towards it, yelling and waving. Henslow's spar-

rows could be herded over 300 meters into the nets, but it really didn't work very well for other species. Species other than Henslow's Sparrows would try (usually successfully) to return immediately to their territories once we herded them past the boundaries.

We did manage to capture other species incidentally (especially juveniles), but usually not because we herded them from any distance. In some cases, such as with Grasshopper Sparrows, we drove a bird near the nets into an adjacent territory and the ensuing chase by the territory holder took both birds into the nets. This only happened a few times, though, not enough to count on for captures. Most of the incidental captures occurred as birds moved undetected through the "canopy" of grass, and were often females or juveniles. We were able to capture 85 Henslow's Sparrows of which 34 were males, 32 were females, and 29 were juveniles (Fig. 4). Many of the females and most of the juveniles were captured incidentally, while most of the males were herded into nets. We saw very few juvenile Henslow's Sparrows in the fields except when they were in the nets. Other species captured in much smaller numbers included Sedge Wrens, Grasshopper, Field, and Savannah Song, Sparrows, Bobolinks, and on one occasion, juvenile Barn Swallows.

We quickly realized that while herding had potential for capturing Henslow's Sparrows, it really wasn't worth the effort for other species. It was fun, though, and gave us a break from the other tasks when we needed it. Our purpose for continuing banding in this manner was to try to detect birds returning to nest in subsequent

years. One thing it showed us was that there were a *lot* more birds in the grass than we could see or hear, especially juveniles later in the season.

I decided to focus on Eastern Meadowlarks as my main species for banding. The main reasons for this decision were that meadowlarks were large enough to carry a radio transmitter that had a battery life sufficient to last through the summer (Fig. 5) and because we were finding more nests of meadowlarks than any other species. Also, meadowlarks often perch on fences and other elevated perches such that color bands could be seen relatively easily. We could easily put transmitters on chicks before they left their nests (Fig. 6), but I would have to find a reliable way to capture adult meadowlarks. In addition, I tried to put transmitters on Upland Sandpipers (Fig. 7) when I could to examine their movements, even though the sample size would be small. I decided to concentrate on female and juvenile meadowlarks because I was particularly interested in female behavior, and there was very little known of the movements of juveniles once out of the nest. All males were given color bands when captured, but only a few of the very early captures received transmitters as well. This choice eliminated one capture method that usually works fairly well for many species: luring the male into a net using a taped meadowlark song or call. The male comes looking for the intruder in his territory and blunders into the net in his excitement. Unfortunately, this usually doesn't work for females.

Because we were locating nests as the main part of my research, we not only had particular female and juvenile birds on which to focus trapping efforts, we could get a lot more information to work with per bird for the effort expended (i.e., nest success, number of nesting attempts per female, distance females and juveniles moved from the nest, etc.). In talking to several people who had tried to capture meadowlarks in the past, it sounded as though mist nets were not a particularly effective method of capture because both sexes of meadowlarks often detected the nets, and they tend to climb rapidly when taking off, thus flying over the nets. In our herding efforts, we had observed meadowlarks obviously detecting and swerving around or over our nets. Note that meadowlarks are absent from the above list of incidental captures. As it turned out, I should have talked to a few more folks early on!

Discouraged with mist nets for the most part (at least for meadowlarks), I decided to explore some other methods. One advantage I had was that I was after birds for which we had already located their nests, so I had a focal point for my efforts. In addition to monitoring nests by checking them every few days, we were setting up video cameras at some nests to monitor predator activity. The video equipment comprised a small camera at the nest and a battery-powered video recorder located 25 m away. We could plug a small monitor into the recorder to check the nest without having to approach and disturb the nest. This developed into the idea of using a bow net to capture the adults since I could see when a bird (typically a brooding female) was on the nest and I would know exactly when to spring the trap.

A bow net is a tool often used by



Figure 5. Adult Eastern Meadowlark with transmitter in place (note the dark line of the antenna across the left side of the tail feathers). After release, the bird will preen the transmitter into the feathers so that only the antenna hanging past the tail feathers will be visible.

hawk trappers. It is a circular frame covered with netting, and the frame folds in half via coil springs (Fig. 8a and 8b.). The net is held in the folded position by a hook. When a bird is safely within the area the net will cover, the hook is pulled and the net snaps over the bird. For hawk trapping, a lure bird (usually a Rock Pi-

geon or House Sparrow) is used to attract the raptor to the net; in my case, the "bait" was the nest. One concern with this method was that it did cause disturbance right at the nest in addition to the potential disturbance of the video camera. Because of this, I tried to minimize the risk of nest abandonment by only putting bow



Figure 6. A group of Eastern Meadowlark nestlings fitted with transmitters and ready to be returned to the nest. This group is about nine days old.



Figure 7. Upland Sandpiper receiving a transmitter. A loop of elastic is put over each leg so the transmitter sits in the middle of the bird's back. Note that bands have already been applied to its legs.

nets at nests that were near hatching or had chicks, a time in the nest cycle when abandonment is typically less likely. I placed the net with the hook toward the video recorder, ran my trigger cord along the path of the video cable, clamped the net open so it couldn't be tripped accidentally, and left it in place until the next day. By leaving the net without attempting to trap immediately, it gave the adults a chance to get used to it without the additional disturbance of having me lying in the grass nearby. The next day, I attached the video monitor to the recorder to see if an adult was present and if not, I removed the clamp and got ready to trap the next adult that came to the nest.

One problem that quickly became apparent was that meadowlarks (especially the males) tend to sit on a high perch (when available) if they aren't at the nest or foraging, and this means they can see what you are doing very easily. A person lying in the grass, even 25 meters from the nest, wasn't something they were very comfortable having nearby. Also, it gets hard to lie still when the local ant population finds you, not to mention all the deer flies, mosquitoes, and other critters. I now know what a meadowlark warning call sounds like very well, thank you. An essential piece of my banding kit for field operations is a tarp to spread my gear on, so this was pressed into service as camouflage. A sauna has nothing on sitting under a tarp in the middle of an open field in late June. Fortunately, once I was covered, most of the meadowlarks forgot there was a lunatic nearby fairly quickly, so the wait was usually a half-hour or less. A few birds, though, were either extremely suspicious or knew the chicks

were sufficiently stuffed and didn't return for over an hour. When a bird did come to the nest, I could see them on the monitor and trip the bow net. Then it was a race to the nest to grab the bird before it could get under the net frame. Although rather time-consuming, it worked fairly well with few escapes. I managed to capture and band 4 males and 19 females using this method.

While relatively successful, the bow net technique had several drawbacks (besides the ants and tarp-sauna). This method was very time-consuming, and the number of attempted captures per day was limited to the number of bow nets available and the time available for the bander (me) to spend away from other activities. In some cases, nests were very close to a road or were in fields with public access, making the placement of video equipment likely to attract attention of passers-by. At these nests the equipment couldn't be left for the birds to become accustomed to it so abandonment was a real concern. I either had to hope the birds would come to the nest quickly, or try another trapping method. Also, a nest found at the laying stage or early incubation could fail before it reached a point where I felt comfortable trapping, and when this occurred valuable data were lost because the adults couldn't be followed to detect subsequent nesting attempts, if any.

No birds were injured using the bow nets, but unfortunately, 3 birds did abandon their nests, likely because of my trapping efforts. The above drawbacks, especially the abandonment, prompted a re-examination of trapping methods.

One unconventional way that mist

nets were effective was in the case of birds that sat very tight on the nest, flushing at the last possible moment when approached. Two people would string a single net between two poles at a distance away from a marked nest and then carry the net to the nest. They would then lay the net on the ground over the nest, tuck the edges down in the grass, and then flush the bird. In most cases, the bird would get tangled in the net and we could grab it before it could work itself loose. Sometimes a bird would run out from under the net, especially in very tall grass where we couldn't keep the net edges fully on the ground. This method worked particularly well with Upland Sandpipers (thank you Dr. Cherri Grotto-Trevor for the suggestion), but only on rare occasions with meadowlarks because they tended to nest in taller grass and would often flush before we could get the net down.

While attending a conference during the winter after my second field season, I had the opportunity to talk with several people who were also in the midst of research that included banding meadowlarks. One successful method being used for capturing birds was placing mist nets near nests, but not too close (i.e., 5 or 10 meters away) and then flushing the birds into the nets. Two nets were placed forming a right angle, with the nest inside the angle. The nest could be approached from the side away from the nets, and the adult(s) tended to fly directly away from the person and toward the nets. As it turned out, the nets used in this way worked quite well for us as well (Fig. 9). This method had several advantages over our previous efforts. Because the nets weren't

right at the nest, abandonment wasn't as much of a concern and we could trap at any stage in the nesting cycle. We could stay farther away from the nest than when using the video camera and bow net, so the birds seemed less concerned with our presence. We could see when the bird(s) approached the nest and flush them when they were within the "capture zone" rather than the bird having to be right at the nest. On occasion, both adults were caught at the same time, something that never happened with a bow net. Under the right conditions, one person could trap at several nests simultaneously within a field. This method also allowed one to maintain at least a little of their dignity!

What did I learn from all of this? Mist nets worked well when birds were distracted, such as being chased by another bird (or people), or in the case of inexperienced birds (like the juvenile Barn Swallows). Otherwise, nets were usually detected and avoided by most species, presumably because wind and sunlight made the nets obvious to flying birds. However, the portion of the net below the "canopy" of grass was apparently relatively difficult to see, at least based upon our incidental captures. Bow nets can work well but have major limitations, especially if you don't have video cameras available.

SOME RESULTS

Here I offer some anecdotal observations we were able to make because of having marked birds. These observations come more under the heading of "natural history" than any kind of statistical analysis. Additional results





Figures 8a. and b. (a) A bow net being set by the author. The nest is located in the center of the circle formed by the sprung net. (b) The net is folded over and the trigger is set to hold the net open. Once activity is observed at the nest, a string is pulled to release the net which snaps over, capturing the adult bird beneath it.



Figure 9. Adult Eastern Meadowlark awaiting removal from a mist net



Figure 10. Brood patch of a female Eastern Meadowlark. This large, bare, highly-vascularized area on the lower belly increases the efficiency of heat transfer to the eggs. Male meadowlarks do not have a brood patch because they do not participate in incubation.

have been presented elsewhere (Guzy and Ribic 2007, Guzy 2005, and Guzy et al. 2002).

One aspect of bird behavior that can only be studied when you have marked birds is site fidelity, that is, the return of birds to the same area in subsequent years. Of the 85 Henslow's Sparrows we captured, only one male was observed in later years in our study fields. Of course, Henslow's Sparrows can be very difficult to see, much less their legs, so it is likely that there were others as well that we just didn't find. Also, birds may have returned nearby, but to fields that we were not working in. None of the 35 meadowlarks banded prior to the final season were detected in later years. This isn't an entirely unexpected outcome, but we had hoped to find at least some of the meadowlarks since they are easier to see than many of the other species and we were searching the same fields for nests each year. Grassland birds are adapted to an ecological system that has frequent disturgrazing), (fires, vegetation conditions they find in one year can't necessarily be expected the following year, thus site fidelity is expected to be lower than in forest birds. Unless there is some catastrophic event (fire, logging, etc.), forest birds can expect very similar conditions from year to year, so those that have good territories tend to return to them.

Banding also makes it possible to know where birds have moved if a banded bird is recovered later. One adult female Eastern Meadowlark was found dead at Houston, Texas, 15 October the same year it was banded. That bird had lost its transmitter shortly after it was banded on 27 May, so it only had leg bands when found. It had traveled over 1450 kilometers.

Radio telemetry allowed us to find birds without seeing them first, a great advantage in time expended, data collected, and reduced frustration. It also allowed us to recover birds that had been killed or died, something virtually impossible otherwise.

In our study area, juvenile meadowlarks tended to stay near their nest, but not near their siblings, for the first week or so following fledging. As they got older, the chicks started getting more mobile but still remained in the nest field. Females stayed close to the fledglings during this period, as well. Older fledglings (those near independence) could be seen pursuing adult birds in flight and begging. Once the juveniles were on their own (about 21 days), most moved out of their nest field into nearby fields, but we know at least two moved greater distances. One juvenile was found 8.8 km from where it was hatched, and another, from a different nest, moved 6.6 km.

We put radios on 41 juvenile meadowlarks during the study. Of these, two lost their transmitters (or possibly had them removed by predators), while 8 were most likely killed by predators. Some transmitters were not recovered, but their locations were constant for several days in woods, so we assumed they had been killed and carried into the woods by predators. It appears that the predators (species unknown) preferred their food without hardware because when we did recover a transmitter and/or carcass, we usually found feathers, the transmitter, the leg with the band, and little else. Not all deaths were because of predators, however: one bird was

found dead with a broken leg (the leg without a band), and one was found dead with no sign of the cause of death. I suspect the latter bird died of exposure as it had only been out of the nest one day and we had heavy dew and near-freezing temperatures over night. Three juveniles disappeared within a week of fledging, while seven birds were monitored for less than a month before contact was lost. We can only speculate what happened, but they may have been killed and the radio destroyed by the predator, the radio may have failed (but the bird was still alive), or they may have moved far enough away that they were out of the area we were checking for radio signals. During the four field seasons we were working, only two adult meadowlarks were known to be killed (other than the one found in Texas). One female's transmitter was found with feathers, and another female, unbanded, was found partially eaten within a meter of her nest (which had also been depredated). The latter bird was found as I was preparing to set up nets to try to trap her.

For many species of grassland birds, males cannot be distinguished from females based on their plumage. One big advantage to banding birds is that, because we have the bird in hand, we can often determine the sex of the bird based on measurements and/or the presence of a brood patch (for meadowlarks, present only in females; Fig. 10). Since the sexes of marked individuals are known, we can observe differences in behavior by sex. While chicks were in the nest, both sexes visited the nest but females tended to spend a lot more of their time near the nest than did males. Three males on which we put transmitters were most often found on or near a favorite perch, and could often be heard giving alarm calls when they saw people nearby. We know males fed chicks at the nest because of the video cameras, but for the three we monitored, it appeared the females did most of the work.

We managed to get transmitters on two Upland Sandpipers. One bird disappeared within a few days of its nest being depredated, while the other bird was tracked for over a month after its eggs hatched. This bird was often flying when we located it, but it was usually over or near the field where it had nested.

Overall, we learned a lot about field techniques and the value of having marked birds. While marking birds is a very time-intensive activity, it often yields valuable information unobtainable otherwise. It is helpful to have multiple methods for capturing birds at your disposal, too, because what works for one species doesn't necessarily work for others, and the "standard" method may not work in all situations.

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Mike Guzy grew up on Missouri, where he earned his B.S. in Fisheries and Wildlife from the University of Missouri-Columbia. He studied the forest bird community in the mountains of North Carolina for his M.S. at North Carolina State University, and completed his Ph.D. in Wildlife Ecology at UW-Madison in 2005, studying grassland birds. Mike recently returned to Wisconsin after teaching in Illinois, and currently lives in Edgerton with his wife and son. He is a licensed bird bander and conducts educational programs using live raptors.

Bird Banding Records for Heckrodt Wetland Reserve, Menasha, Wisconsin

Sheldon J. Cooper

Department of Biology and Microbiology University of Wisconsin-Oshkosh Oshkosh, Wisconsin 54901 920.424.7091 cooper@uwosh.edu

INTRODUCTION

Bird banding data are useful in many research and management projects. For example, capture and recapdata may provide valuable information in regards to migration pathways, population estimates, and survival rate and life-span of birds. Most of my own research focuses on the seasonal energetics of small, nonmigratory birds (reviewed in Cooper 2007). I use mist nets to capture focal species for my research. Since June 2005, I have been capturing Blackcapped Chickadees and Downy Woodpeckers at Heckrodt Wetland Reserve in Menasha, Wisconsin. Once captured, birds are transported to the University of Wisconsin-Oshkosh for measurements of metabolism. All birds are then taken back to Heckrodt after testing (usually one day after capture), banded, and released at the site of capture. As part of my ongoing research, I band and release all birds captured in my mist nets. Here, I present the species banded, numbers of individuals of each species banded,

and recapture data for these species from Heckrodt Wetland Reserve.

METHODS

Heckrodt Wetland Reserve is a 30.8 hectare urban nature center with a variety of habitats that include forested wetland, cattail marsh, open water, open prairie, and upland forest. Near the visitor center is a bird feeding station consisting of several feeders with several types of bird food including black-oil sunflower, peanuts, suet, millet, and cracked corn.

Birds were captured with mist nets before 1000 hours (CST) at Heckrodt Wetland Preserve, Menasha, Wisconsin (44° 12′N, 88°25′W) during the summer and winter from 2005 to 2008. Generally, a single 12 m long, 2.6 m high, 30 mm mesh size net was placed near the bird feeders that are adjacent to the visitor center at Heckrodt. Summer trapping was from 28 May to 30 August and winter trapping took place from 3 January to 28 February. Body mass was measured to the nearest 0.1 g upon capture with a

portable electronic balance. Wing chord, tail length, and visible fat depots in abdominal and furcular regions were also scored upon capture but these data are not presented here. Many of the Black-capped Chickadees and Downy Woodpeckers that were captured were transported to the University of Wisconsin-Oshkosh in individual cages for metabolic measurements as part of a larger study on seasonal energetics of small birds. All birds captured were banded with a U.S. Fish and Wildlife Service aluminum band and released at the site of capture. Birds were banded under Master Permit #22934 and chickadees and woodpeckers used for metabolic tests were collected under (SCP.NER131) and federal state (MB003340-1) permits.

RESULTS

In all, 267 individuals of nineteen species of birds were banded during the four summer and three winter trapping seasons (Table 1). Eighteen species were banded in the summer while only ten species were banded in the winter. These individuals were banded during 28 days in summer and 14 days in winter. Total mist net hours were not recorded during the entire study. Of the nineteen species banded, five species had individuals that were recaptured (Table 2). The numbers of recaptures listed in Table 2 only include the first time a bird was recaptured. In most cases, birds were only recaptured once. However, one Black-capped Chickadee was recaptured five times over the three-year trapping period.

The two highest species totals were

100 Black-capped Chickadees and 38 Downy Woodpeckers. The mean number of chickadees banded per year was 25 ± 4.2 (SD) and the mean number of Downy Woodpeckers banded per year was 9.5 ± 1.7 (SD).

DISCUSSION

The overall diversity of birds banded at Heckrodt is relatively low. However, this is largely due to setting up nets only at the feeder station near the visitor center. In addition, birds were not captured and banded during migration. Spring migration brings many species of warblers through Heckrodt (personal observation). Black-capped Chickadees were captured in the greatest numbers followed by Downy Woodpeckers. I calculated population density estimates for chickadees and Downy Woodpeckers assuming that the mean number of birds banded per season is an indication of population size. This is a slight underestimate since it ignores birds that were recaptured. Mean density for Black-capped Chickadees was 81.1 birds/100 ha and Woodpeckers Downy was 30.8 birds/100 ha. This population density estimate for Downy Woodpeckers is markedly above average values reported for forest habitats from Oklahoma, but is below the maximum estimate of 49.4 birds/100 ha (Baumgartner and Baumgartner 1992). The population density estimate for Blackcapped Chickadees is greater than those reported from Massachusetts (50 birds/100 ha, Smith 1992).

Recaptures of nonmigratory species occurred both in summer and winter although a higher percentage of birds

Table 1. Numbers of birds banded at Heckrodt	Wetland Reserve during summer 2005 - 2008 and
winter 2006–2008.	

Species	Summer	Winter	
American Goldfinch	5	0	
Black-capped Chickadee	53	47	
Brown-headed Cowbird	3	0	
Blue Jay	7	0	
Brown Creeper	0	1	
Chipping Sparrow	10	0	
Common Grackle	10	0	
Dark-eyed Junco	0	14	
Downy Woodpecker	23	15	
Hairy Woodpecker	13	4	
House Finch	12	7	
House Wren	2	0	
Nashville Warbler	1	0	
Northern Cardinal	13	2	
Red-breasted Nuthatch	3	2	
Red-bellied Woodpecker	6	2	
Red-headed Woodpecker	1	0	
Warbling Vireo	1	0	
White-breasted Nuthatch	6	4	
Totals	169	98	

was recaptured in the summer. This is most likely due to the increased number of days spent trapping in the summer rather than higher mortality in winter. For chickadees it has been shown that feeding stations such as Heckrodt increase winter survival (Brittingham and Temple 1988). Recapture rates for nonmigratory, resident species ranged from 10% to 47.1%, with Hairy Woodpeckers being

the species with the highest percentage recapture rate.

ACKNOWLEDGMENTS

This research was supported by Faculty Development Grants from the University of Wisconsin-Oshkosh. Tracey Koenig, the Executive Director of Heckrodt Wetland Reserve graciously allowed me to band birds on the reserve property. Shauna Basil,

Table 2. Number of banded birds that were recaptured at Heckrodt Wetland Reserve during summer 2005–2008 and winter 2006–2008.

Species	Individuals Banded	Number of Recaptures	% Recaptured
Black-capped Chickadee	100	31 (18)	31.0
Chipping Sparrow	10	1 (1)	10.0
Downy Woodpecker	38	13 (11)	34.2
Hairy Woodpecker	17	8 (6)	47.1
White-breasted Nuthatch	10	4 (2)	40.0

Note: The number of recaptures in parentheses is the number of individuals that were recaptured during the summer.

Chris Cousineau, and Andrea Holzbauer helped trap birds during portions of this research.

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Smith, S. M. 1991. The Black-capped Chickadee: Behavioral Ecology and Natural History. Cornell University Press, Ithaca, NY. Sheldon Cooper is an associate professor in the Department of Biology and Microbiology at the University of Wisconsin-Oshkosh. He spent three years in the Department of Biology at the University of Wisconsin-Stevens Point before moving to Oshkosh. He grew up in northwestern South Dakota and received his B.S. in biology from Northern State University in Aberdeen, South Dakota and then got his master's degree in biology from the University of South Dakota. He got his Ph.D. in biology from Utah State University.

50 Years Ago in The Passenger Pigeon

All four issues of Volume 21 contain articles titled Wisconsin's Favorite Bird Haunts.

The Haunts articles cover Chippewa Falls, Fish Lake, the Arlington area around Goose Pond, the Green Bay area, and the Portage/Pardeeville area. Now that the WSO has published its most recent revision of this keystone publication, it would be interesting to compare the differences between these haunts in 1959 and 2009. I think some comparison articles would make for nice reading in *The Badger Birder*. Anyone wish to give it a try?

Issue 1 contains an *In Memoriam* for S. Paul Jones, a WSO Past President, who died on 26 January 1959. He began studying birds at the age of 30 and maintained migration records for the next 42 years; he also was an enthusiastic educator. In January 1960, the S. Paul Jones Naturalists Club (Society) held its first meeting in the Oconomowoc area. Faced with declining membership, the organization ceased operation a few years ago. As WSO Historian, I recently received two large boxes containing the very complete and well organized archive of **all** of the group's documents that were placed in plastic sleeves and then placed in large, 3-ring binders. These materials, which includes a binder containing Paul's bird lecture notes from the 1940–50s, will be placed in the WSO Archive Room that is maintained at the UW-Green Bay.

Also included in the materials is a sizable quantity of the organization's patch. If anyone collects such ornithological patches, which features an owl, I will be happy to send you a patch if you contact me. If anyone has **ANY** historical information pertaining to Wisconsin's birds, I will gladly accept these materials and place them in WSO's historical archive.

Issue 1 also contains a *By The Wayside* note on the first nesting record of mockingbird for Wisconsin that occurred in July 1958, east of Avon in Rock County.

Excerpt from Vol. 21(1), 1959, by WSO Historian Noel J. Cutright, 3352 Knollwood Road, West Bend, WI 53095. h. 262. 675. 2443, w. 262. 268. 3617, noel.cutright@we-energies.com.



Ospreys at Nest by Jack Bartholmai

Lessons From the Seasons: Spring 2008

Randy Hoffman

305 Fifth Street Waunakee, WI 53597 608. 849. 4502 ecurlew@hotmail.com

 $m{\mathsf{T}}$ n the birding world, understanding lacksquare of migration is usually a long-term cumulative process. Occasionally, data can provide enlightenment almost instantaneously. Such a moment occurred earlier this summer in Andy Paulios' office while we were discussing the nuances of the spring 2008 migration. Both of us pined over the lateness of the migration. After several minutes of banter, Andy pulled up graphs for five species of flycatcher on ebird. To my enlightenment, the data indicated, yes indeed, the flycatcher migration was late, but not by much.

My mind quickly hit neurons that stored memory from penning last spring's lessons. My personal records were used for that compilation and they were quite divergent from the ebird data with respect to flycatchers, but not the other species. Why was this so? Two light bulb moments hit me at the same time—the power of ebird data and my own personal bias regarding species groups.

First, the data found in ebird will get more robust and predictive as the volume increases. In many ways, the data collection system is an extension of the Wisconsin Checklist Project. Over the course of the first five years of that project, several hundred birders submitted weekly checklists to the project. Data provided by these volunteers led to the publication of the informative Wisconsin Birds: A Seasonal and Geographical Guide (1987) by Stanley A. Temple and John R. Cary, University of Wisconsin Press, Madison, WI. This book provides geographical format with a probability of seeing a particular species in a particular area. It also provides graphs on seasonal changes giving a time reference for peak migration. The only obvious drawback to the project was form submission fatigue.

Ebird collects the same type of information plus much more. Of the many improved data collection methods, the best in my opinion is the geographical functions. The ability to precisely locate the birding location can permit accuracy much better than mere county information. Probably the most important aspect is the personal nature of the data. A birder can view his/her records. The ability to have instant updates of life and location lists is very important to many avid birders, thus, a potential resolution to form fatigue.

The second part of my enlightenment revolves around my personal bias in data collection. My favorite bird groups include rails, sparrows, shorebirds, warblers, and thrushes. I know I do a much better job of collecting field notes and numbers of birds seen at a locale for these groups. Flycatchers are down on my list of favorites, although I really do like Vermillion Flycatchers. I realize my personal record-keeping for flycatchers is spotty, which most likely led to inaccurate data being presented in the Spring 2007 Lessons. For example, I make tick marks in my field journal for each individual warbler for every warbler species encountered in my birding travels. Repetition over the course of time helps me mentally get a picture of how many. I do not do the same meticulous record-keeping for flycatchers.

With the exception of Eastern Phoebe, flycatchers are notoriously late migrants. Let's look at a larger data set to improve upon last spring's list, starting with chronologically the earliest spring arrivals from Wisconsin's records.

Eastern Kingbird—Earliest arrival record is 25 March. Peak numbers compiled for various locations are mid-April for Guatemala, and mid-May in Ohio. Temple and Cary indicate big numbers start showing up in early May, but the peak numbers do not occur until 25 May in the south and 1 June in the north. Ebird confirms a 21–31 (late) May peak.

Yellow-bellied Flycatcher—Earliest arrival record is 1 April. Peak numbers compiled for various locations are late April for Panama, mid-May in Costa Rica, and late May in Ohio. Temple and Cary indicate numbers increase

in mid-May, but the peak numbers do not occur until 28 May in the south and 1 June in the north. Ebird confirms a 21–31 (late) May peak.

Great Crested Flycatcher—Earliest arrival record is 2 April. Temple and Cary indicate numbers start showing up in early May, but the peak numbers do not occur until 1–20 May in the south and 15–25 May in the north. Ebird confirms a 11–20 (mid-) May peak.

Eastern Wood-Pewee—Earliest arrival record is 10 April. Peak numbers compiled for various locations are early May for Oklahoma, and 15–20 May in Ohio. Temple and Cary indicate numbers start showing up 5–15 May, but the numbers gradually increase with peaks occurring around 28 May. Ebird confirms a 21–31 (late) May peak.

Least Flycatcher—Earliest arrival record is 10 April. Peak numbers compiled for various locations are late April for Oklahoma, and 10–15 May in Ohio. Temple and Cary indicate numbers start showing up 1–10 May, but the numbers gradually increase with peaks occurring around 21 May. Ebird confirms a 11–20 (mid-) May peak.

Alder Flycatcher—Earliest arrival record is 20 April. Peak numbers compiled for various locations are early May for Panama, mid-May in Mexico, 12 May–18 June in Iowa, and 30 May in Illinois. Temple and Cary indicate numbers start to increase in mid-May, but the peak numbers do not occur until 28 May in the south and 5 June in the north. Ebird confirms a 21–31 (late) May peak with many northern locations the peak maybe 1–5 June.

Willow Flycatcher—Earliest arrival record is 27 April. Peak numbers compiled for Ohio indicate an 20 May–5

June peak. Temple and Cary indicate numbers start to increase in mid-May, but the peak numbers do not occur until 1 June. Ebird confirms a 21–31 (late) May peak with many locations not seeing birds until early June.

Olive-sided Flycatcher—Earliest arrival record is 27 April. Peak numbers compiled for various locations are early May for Panama, mid-May in Mexico, and late May in Illinois. Temple and Cary indicate numbers start to increase in mid-May, but the peak numbers do not occur until 28 May. Ebird confirms a 21–31 (late) May peak with many northern locations peaking 1–5 June.

Acadian Flycatcher—Earliest arrival record is 2 May. Temple and Cary indicate numbers start showing up 2–10

May, but the numbers gradually increase with peaks occurring around 28 May. The low numbers of reported sightings may not be an accurate indicator for this species. Acadians seem to appear on territory with little migration movement noted in Wisconsin. Ebird confirms a 11–20 (mid-) May peak.

The data evaluated over the last five years reflect the power and potential of ebird. When we see that Olive-sided Flycatcher on 4 June and record it as a very late migrant, it may be flying through at peak time. Also, the data point out the incredible numbers of birds migrating in late May and early June. Birders may want to consider expanding their spring migration observation by a few more weeks.



Sandhill Cranes by Delia Unson and Chuck Heikkinen

The Spring Season: 2008

Karl David

6880 Beechnut Drive Racine, WI 53402 david@msoe.edu

MG, kan U believe it! Warblerz@highcliffstatep.ark R 2 die

Is this the future of seasonal reporting in the Passenger Pigeon? I hope not! But, increasingly, it's looking that way, as fewer and fewer people supplement their reports with much in the way of commentary. That was certainly the case this spring. Fortunately, two members of the old school did supply their impressions, so here they are!

Robbye Johnson, in Douglas County, said it was "an odd spring, following a colder winter with more snow than we have seen in a long time. Bird migration was sporadic. Some species seemed early, then would disappear, only to return later in larger numbers, mixed in with others that were early. Or they would wait, and show up with birds that were on time. The overlap made for some odd combinations. Not sure I have had [American] Tree Sparrows and Chipping Sparrows together before. Never have seen so many Fox Sparrows. Also had lots of white-crowns. All staying a long time, singing with Lincoln's and a Harris's in my yard. Nice to wake up to."

"Flycatchers were *really* late." A check of her report indeed confirms this: she had only 4 of the 10 regular

species, Eastern Phoebe in fact being the sole representative of the family until literally the final week of the reporting period!

Daryl Tessen, in Adams, Brown, Burnett, Calumet, Columbia, Dane, Dodge, Douglas, Fond du Lac, Grant, Green, Green Lake, Iowa, Kenosha, Manitowoc, Marquette, Outagamie, Ozaukee, Portage, Racine, Rock, Sauk, Sheboygan, Walworth, Waupaca, and Winnebago Counties, summarized the season as "the spring that would not come, and when it occasionally did, only stayed briefly. The migration was late—period! It also was one of the strangest in recent memory. Besides many species arriving one or two weeks late, there were very poor, sporadic waves. This was especially true during May. Fair to good numbers of flycatchers, thrushes, and warblers were still arriving at the end of May. On field trips we had to work hard just to end up with trip lists that were down only 10-30 species from normal."

Sounds bad, but read on . . . in the end, the sheer weight of observer effort and dedication still produced a decent total number of species, with some really interesting rarities, as always!



WEATHER AND BIRDS

March was cool and dry, with a fairly good storm on the 21st dropping as much as 8 inches of snow on the southern part of the state. April was rainy, windy, and again on the cool side. It was the northern tier's turn for punishment, with "significant snow accompanied by hurricane force winds" [Randy Hoffman] on the 11th there. May was dry and quite cool, especially in the eastern half of the state, where as usual, most of the birding activity

was reported, resulting perhaps in a slightly skewed impression of the season. Judy Haseleu reported that the big Washburn County lakes didn't open up until 2 May. The late leaf-out had its advantages, making passerine birding significantly easier [Jim Frank].

RARITIES

The Wisconsin Society for Ornithology Records Committee voted favorably on reports for the following

unusual species (number in parentheses refers to the number of distinct locations involved, not the total number reports accepted): Wigeon, Cinnamon Teal, Barrow's Goldeneye, Pacific Loon, Swainson's Hawk, Snowy Plover, Black-necked Stilt, Long-billed Curlew, Ruff, Slatybacked Gull, Black-legged Kittiwake, Bewick's Wren, Virginia's Warbler, Black-headed Grosbeak, Blue Grosbeak, Painted Bunting, Bullock's Oriole, Hoary Redpoll (3). The Virginia's Warbler record is Wisconsin's first; as a single-observer sighting without photographic evidence, it falls into the "Hypothetical" category. Snowy Plover is the state's fifth record. The Long-billed Curlew record is the state's ninth and the first since 1975. Bewick's Wren falls into the category of an extirpated breeder, and was last recorded in 1991. See the species accounts and "By the Wayside" for details.

The Committee also voted favorably on unusually early arrivals for American White Pelican, Louisiana Waterthrush, and Wilson's Warbler. See the next section and the species accounts for details.

ARRIVALS AND DEPARTURES

The only clearly unambiguous first arrival record set this season was for Pacific Loon, with the fifth accepted spring record also becoming the earliest [24 March]. Disregarding a nineteenth century newspaper report, we would have set a new early arrival date for American White Pelican, but a few individuals overwinter in Brown County every year now as well. Second earliest arrival dates were set for

Black-bellied Plover and Blackburnian Warbler, with the second earliest date for Louisiana Waterthrush tied as well. And the all-time earliest date was tied for Wilson's Warbler and Yellowbreasted Chat.

In the more problematic category of "departures," the only event of any real significance was the continuation of a recent trend of Black-legged Kittiwakes appearing later in the spring, with this year's 15 May sighting establishing the second latest date on record. And, as an artifice of the calendar, the "latest" Black-headed Grosbeak "record" was established with the appearance of one in Bayfield County on 31 May. In this case, the significance is diminished by the existence of two summer records.

STATISTICS

Sixty-nine observers submitted written reports to the Wisconsin Society for Ornithology. Their reports were fleshed out by adding selected ones from 18 Wisconsin Bird Network and 58 more eBird reporters, for a grand total of 145 contributors and cited ob-[observer "teams" being servers counted as a single observer]. Integrating eBird reports into the data is an evolving process, and this year I focused on using them to supplement information on first arrivals, last departures, and maximum numbers of individuals. I also did a "trial run" for 8 selected species, looking at all the eBird data for them to see how many more county reports would thereby be generated. See Table 1 for results.

Thirty-four of Wisconsin's 72 counties received what I have been calling "comprehensive" coverage, i.e. at least

Species	counties by WSO reports	eBird added counties	Total
Gray Partridge	1	1	2
Northern Bobwhite	2	1	3
Least Bittern	2	3	5
Cattle Egret	1	7	8
Bl-crowned Night-Heron	. 7	10	17
Northern Goshawk	4	5	9
Eurasian Collared-Dove	1	1	2
Eastern Screech-Owl	5	7	12

Table 1. Example of county reports added by ebird data.

one report consisting of 25 or more species was submitted to the WSO. This compares with 43 such counties last year; it appears more and more observers are resorting exclusively to eBird for their reporting! Milwaukee and Winnebago Counties tied for "comprehensive" reports, with 4 each. An additional 29 counties received "incidental" coverage, i.e. all reports consisted of fewer than 25 species [this set of counties includes Wisconsin Bird Network and eBird contributions]. Thus 9 counties are unrepresented in this season's report. I actually could have selectively thrown in some eBird data just to achieve what might well have been a first in these annals, namely a report in which every county was represented! But that seemed too arbitrary, and so I let things stand as they were. So, the unrepresented counties are Chippewa, Iron, Lincoln, Menominee, Oneida, Polk, Richland, Shawano, and Vernon.

The total number of species seen was 313, compared to 313 last year. Varied Thrush had appeared in 6 of the previous 9 Spring Season reports, but was missed this year. By far the most prominent miss though was White-winged Crossbill: apparently the last time it was absent from the Spring roster was way back in 1983! I

thank Jesse Peterson for digging up this interesting tidbit of information.

THE ACCOUNTS

These 24 widespread, common, and mostly sedentary species are not included in the species accounts: Canada Goose, Mute Swan, Mallard, Ring-necked Pheasant, Wild Turkey, Cooper's Hawk, Peregrine Falcon, Rock Pigeon, Mourning Dove, Great Horned Owl, Barred Owl, Red-bellied Woodpecker, Downy Woodpecker, Hairy Woodpecker, Pileated Woodpecker, American Crow, Black-capped Chickadee, White-breasted Nuthatch, European Starling, Cedar Waxwing, Northern Cardinal, House Finch, American Goldfinch, and House Sparrow.

Abbreviations: BOP = beginning of period; EOP = end of period; TTP = throughout the period; WSO = Wisconsin Society for Ornithology.

REPORTS (1 MARCH-31 MAY 2008)

Greater White-fronted Goose—The big numbers were in Columbia, Lafayette, and Dane Counties, peaking at 475 individuals in Columbia County on 13 April (Prestby). The earliest report fell on 2 March (Lafayette County, Romano). Svingen had 2 lingering individuals in Douglas County on 17 May. Also reported from Green, Dodge, Waukesha, and Outagamie Counties.

Snow Goose—Sontag reported 42 individuals in Manitowoc County on 3 March, a figure slightly exceeded at mid-month in Kewaunee [67] and Marinette [50] Counties. Betchkal filed the last of 11 county reports from Columbia County on 10 May.

Ross's Goose—The earliest report, 13 March, also featured the largest number, 35 (Ozaukee County, Uttech). Smaller numbers were then found in Dane and Outagamie Counties, with a final report from Dodge County of 9 birds on 29 March (Tessen).

Cackling Goose—Thiessen reported 40 in Dane County on 16 March. Tessen found smaller numbers in Columbia and Dodge Counties on 29 March, with a final report of 200 individuals coming from Columbia County on 13 April (Prestby). Also found in Barron and Winnebago Counties.

Trumpeter Swan—Reported from 13 counties, TTP in Barron County (Carlsen) and with a maximum of 140 already on 1 March in St. Croix County (Betchkal). Four extreme southwestern counties (Grant, Lafayette, Green, and Iowa Counties) were included in the tally.

Tundra Swan—Apparently overwintered in Dane County (Thiessen). Tessen's 2,000 individuals in Outagamie County on 10 April eclipsed all other counts. Found in 17 counties, with a departure date of 17 May in Douglas County (R. Johnson).

Wood Duck—Reported on 1 and 2 March in Kenosha (Hoffmann) and Lafayette (Romano) Counties respectively. Yoerger had the maximum in the latter county, finding 150 birds there on 30 March.

Gadwall—Reported at BOP in Kenosha, St. Croix, and Door Counties, with 3 more counties added by 4 March. The high count fell in Dane County on 18 March, when Prestby reported 110 individuals.

Eurasian Wigeon—Thiessen documented a male in Dane County on 15 and 16 March, a shade on the early side for the spring occurrence of this species in Wisconsin.

American Wigeon—Hoffmann had the only BOP report, in Kenosha County. Rothman tallied 241 individuals in Dodge County on 15 April.

American Black Duck—Found in 15 counties, with a maximum count of only 16 reported from St. Croix County on 30 March (Persico).

Blue-winged Teal—First reported on 15 March in Kenosha County (Hoffmann). Kollath had 280 individuals in Jefferson County on 29 April.

Cinnamon Teal—A male (Fig. 1) was found in Brown County, with documentation provided by T. Wood on 21 May and Wojtyla on 30 May.

Northern Shoveler—Reported at BOP in Kenosha County (Hoffmann). Evanson already encountered 250 individuals in Dane County on 4 March.

Northern Pintail—Present at BOP in Kenosha (Hoffmann) and Dane (Thiessen) Counties. Schultz estimated 180 individuals in Green Lake County on 3 May.

Green-winged Teal—Noted at BOP in Kenosha (Hoffmann) and Door (Lukes) Counties. The high count consisted of 100 individuals in Jefferson County on 21 April (Kollath).

Canvasback—Thiessen had 500 in Dane County on 1 April, Ziebell 1,100 in Winnebago County on 10 April.

Redhead—Ziebell counted 1,300 in Winnebago County on 22 March, Sontag 850 in Manitowoc County on 8 April.

Ring-necked Duck—First appeared in Grant County on 6 March (Romano). Kavanagh's tally of 1,400 in Florence County on 20 April far exceeded all other counts.

Greater Scaup—Reported from 17 counties throughout the state. Tessen estimated a flock of at least 10,000 birds in Manitowoc County on 8 March.

Lesser Scaup—Found in 27 counties [compare previous species], with a huge 15,000-bird flock reported by Tessen on 2 April in Winnebago County.

Harlequin Duck—Up to 3 individuals were in Sheboygan County until at least 26 April (Brassers), which was also the latest date given for the period. Frank reported a male courting a female Common Goldeneye in Ozaukee County on 15 April. Found also in Milwaukee County (2 March, T. Wood) and, quite unusually, in Pierce County on 15 March (Sirvio).

Surf Scoter—Besides reports from 5 Lake Michigan counties, others came this season from Iowa (15 April, Romano), Green Lake (3 May, Tessen,) and Dane (8 May, Evanson) Counties. Frank had 6 individuals in Ozaukee County on 13 March. First reported on 4 March in Milwaukee County (Gustafson) and last on 26 May in Manitowoc County (Sontag).

White-winged Scoter—Found in most Lake Michigan counties and further in Marathon (12 May, Schaufenbuel) and Douglas (14 May, Svingen) Counties. First and last reports both came from Sontag in Manitowoc County, spanning the period 1 March to 20 May. Uttech noted a concentration of 60 individuals in Ozaukee County on 13 April.

Black Scoter—Frank located 3 birds in Milwaukee County on 24 April, Tessen 3 in Manitowoc County on 27 April. A final report came from Tessen in Douglas County on 21 May.

Long-tailed Duck—Two large flocks were reported on Lake Michigan, both on 9 March: 1,860 birds in Ozaukee County (Uttech) and 1,500 birds in Manitowoc County (Sontag). Also sighted in 4 more Lake Michigan counties, with the last report falling on 15 May, a single individual in Door County (Siebel).

Bufflehead—Kavanagh registered 360 individuals in Florence County on 20 April. Tessen's 28 May Columbia County report appeared to be the latest.

Common Goldeneye—Sontag counted 450 individuals in Manitowoc County on 12 March, a figure topped by Paulios with 800 individuals in Kewaunee County on 15 March. Lingered in Waushara County until 24 May (Evanson) and in Racine County until 28 May (Gustafson).

Barrow's Goldeneye—A male (Fig. 2) was documented early in the period in Sheboygan County (2 March, Sontag).

Hooded Merganser—Reported from 29 counties, with a maximum of 126 individuals found in St. Croix County on 29 March (Persico).

Common Merganser—Found TTP in Door (Lukes) and Douglas (R. Johnson) Counties. Tessen estimated 5,000 individuals in Winnebago County on 2 April.

Red-breasted Merganser—Present TTP in Door County (Lukes). High count consisted

of 243 individuals found on 10 March in Racine County (Howe).

Ruddy Duck—No BOP reports, but was found on 2 March in Lafayette County (Romano). Tessen and Prestby respectively provided independent estimates of 600 and 700 individuals in Dodge County on consecutive days (17 and 18 April).

Gray Partridge—Noted virtually TTP by J. Holschbach in Manitowoc County, and additionally seen on 6 April in a less frequently recorded location, Columbia County (Helland).

Ruffed Grouse—Seen in 14 counties, with the southern third of the state represented only by Iowa and Sauk Counties. Kavanagh gave a high count of 12 in Oconto County on 21 May.

Spruce Grouse—In addition to more or less expected reports from Vilas (16 March, T. Wood) and Forest (22 March, Baumanns) Counties, Evanson encountered it on 26 April in Sawyer County.

Sharp-tailed Grouse—Seen in Taylor, Price, Burnett, and Douglas Counties, with R. Johnson reporting over 50 individuals in the last-named county on 22 April.

Greater Prairie-Chicken—All three reports came from Portage County, with Otto counting 110 individuals there on 1 March.

Northern Bobwhite—Fojut saw 6 in Kenosha County on 5 April. The other two reports came from Tessen near EOP in Grant and Sauk Counties.

Red-throated Loon—Appeared first (4 individuals) on 27 March in Sheboygan County (Tessen). R. Johnson saw 6 individuals in Douglas County on 26 April. Last seen in Manitowoc County on 27 May (Sontag). The most unusual of the 7 county locations was Eau Claire County, where Polk saw it on 19 April.

Pacific Loon—An individual found by Schaufenbuel in Sheboygan County on 24 March becomes the fifth accepted spring record and, by a considerable margin, the earliest, eclipsing a 16 April 1983 date in Ozaukee County.

Common Loon—Relatively late, with a 26 March Tessen sighting in Brown County heralding about half a dozen first county reports the last week of the month. Richmond gave the



Figure 1. The Cinnamon Teal in Brown County in May 2008 was photographed by Joel Trick.



Figure 2. Seth Cutright photographed the Barrow's Goldeneye at Sheboygan North Point on 12 March 2008.

highest totals, 73 individuals in Marathon County on 17 April.

Pied-billed Grebe—Seen first by the Brassers on 22 March in Sheboygan County. Ziebell saw 42 individuals in Winnebago County on 10 May.

Horned Grebe—A good spring, with 26 county reports. They began and ended with Mil-

waukee County sightings on 2 March (T. Wood) and 13 May (Gustafson). In between, numbers peaked with R. Johnson's report of 200 individuals in Douglas County on 26 April.

Red-necked Grebe—Arrived on 8 April in Waupaca County; Tessen's sighting there of 30 individuals on that date also represented the seasonal high count. Ziebell had it the next day in Winnebago County; the remaining 5 county

reports all came from the northwestern quarter of the state.

Eared Grebe—A good total of 6 county reports, spread throughout the state, beginning on 17 April in Dodge County (Tessen) and ending on 18 May in Manitowoc County (Sontag).

Western Grebe—the overwintering individual found by W. Rohde in Walworth County was last reported by him on 1 April.

American White Pelican—Discounting overwintering birds (a recent phenomenon, including birds in Brown County again this year) and a very old 9 March 1866 Dane County newspaper report, a new early arrival date was established when Reimer saw a flock of 6 birds in Winnebago County on 14 March. The largest concentration consisted of Schultz's 420 individuals in Green Lake County on 29 April. Increasingly widespread, the species was reported from no fewer than 22 counties.

Double-crested Cormorant—Once again successfully overwintered in Brown County with the American White Pelicans (Tessen). The earliest migrants were recorded by Ziebell in Winnebago County on 15 March. Sontag encountered over 2,000 individuals in Manitowoc County on 8 May.

American Bittern—Thirteen county reports, starting with an 11 April sighting by Huf in Milwaukee County. Counts of 6 individuals were achieved in Winnebago (Ziebell) and Marathon (Betchkal) Counties on 10 and 24 May respectively.

Least Bittern—Noted only in 6 southeastern counties. Vargo's 1 May Milwaukee County report was the earliest. No indication that more than 1 individual might have been seen was given in any of the reports.

Great Blue Heron—Noted at BOP in Kenosha (Hoffmann) and St. Croix (Persico) Counties. Active observers gave representative arrival dates of 6 March in Grant County (Romano), 14 March in Waukesha County (Gustafson), and 3 April in Marinette County (Campbell). Maercklein noted 75 individuals in St. Croix County on 30 April.

Great Egret—Arrived in Sauk County on 26 March (Romano). The 17-county distribution was strikingly U-shaped, with no reports from the north-central part of the state. Jackson gave a maximum figure of 51 individuals in La Crosse County on 27 May.

Snowy Egret—Hoffmann filed this season's only report: 2 individuals in Kenosha County on 26 April.

Cattle Egret—Reported from 8 counties, all in an east-west band across the south-central part of the state. Initial sightings came on 19 April in Iowa (Roenneburg) and Jefferson (Schilke) Counties, the former also representing the season's high count of 8 individuals. McLeod also reported 7 birds from Green Lake County on 3 May.

Green Heron—Recorded first in Winnebago County on 16 April (Ziebell). McLeod reported 6 individuals in Buffalo County on 9 May.

Black-crowned Night-Heron—Seventeen reporting counties was a very good number, all within an arc from Green to Wood to Door Counties. The first date given was 29 March (Winnebago County, Ziebell). Schilke saw a maximum of 9 individuals, in Manitowoc County on 22 May.

Turkey Vulture—BOP reports received from Winnebago (Ziebell) and Taylor (Risch) Counties. Stutz counted a high of 60 in Grant County on 4 May.

Osprey—First arrival on 24 March in Kenosha County (Hoffmann); not reported next until 3 April (Dane County, Evanson). Brabant counted 8 individuals in Sauk County on 3 May. Reported from 21 counties.

Bald Eagle—Widespread and numerous TTP, with a Trempealeau County report of 66 individuals on 10 March (Betchkal) the high count.

Northern Harrier—Present at BOP in Kenosha (Hoffmann) and Clark (Risch) Counties, a 2 March Walworth County sighting (Jacyna) closely following. S. Fisher saw 12 individuals in Marathon County on 20 April. Reported from 26 counties.

Sharp-shinned Hawk—Oksiuta tallied 16 migrants in Bayfield County on 21 April. Reported from 20 counties TTP.

Northern Goshawk—The 9 county reports TTP extended south to Dane (16 March, Tessen) and Milwaukee (22 March, Mueller) Counties.

Red-shouldered Hawk—Present at BOP in St. Croix County, where the maximum count of 4 was also given on 10 May (Persico). Next

seen on 15 March in Dane County (Evanson). Only 9 county reports overall!

Broad-winged Hawk—Uttech filed the earliest report, 15 April in Ozaukee County. Numbers peaked at 50 on 25 April (Door County, Siebel). Found in 22 counties.

Swainson's Hawk—A soaring individual in Marquette County was an unexpected treat for the WSO White River Marsh field trip participants on 3 May; Tessen provided documentation.

Red-tailed Hawk—Oksiuta counted 74 individuals in Bayfield County on 21 April.

Rough-legged Hawk—Widespread, with 23 county reports. The Shillinglaws found 13 in Calumet County on 20 March, S. Fisher 27 in Marathon County on 29 March. Seen on 31 May by the Baumanns in Portage County.

Golden Eagle—Fewer sightings than in recent years: 25 March, Waushara County, Evanson; 12 April, Green County, Evanson; 4 May, Bayfield County, Oksiuta.

American Kestrel—Yoerger found 18 individuals in Calumet County on 13 April.

Merlin—Two clearly separated clumps of reports from 4 northeastern and 5 northwestern counties. Surprisingly, no reports earlier than 16 April, when Sontag saw it in Manitowoc County. It was seen in that county again as late as 12 May (J. Holschbach). Reported at EOP in Door (Lukes) and Douglas (R. Johnson) Counties.

Yellow Rail—Howe encountered the first 2 individuals in Walworth County on 19 April. Schilke had 3 in Marquette County on 19 May, followed by a Tessen 20 May Burnett County report.

King Rail—Reported by Tessen on 3 May in Green Lake County and again by Hoffman on 16 May in Columbia County.

Virginia Rail—First noted by Howe on 6 April in Walworth County, where the same observer found 8 individuals on 22 May. Reported in 12 counties, with a strong southeastern bias, the exception being an R. Johnson Douglas County report on 22 May.

Sora—Considerably more widespread than the previous species, with 20 county reports. The earliest came on 2 April (Dane County, Stutz). Ziebell's count of 208 individuals in Winnebago County on 10 May dwarfed all others.

Common Moorhen—Seen in Winnebago County (10 May, Ziebell) and in 6 southeastern counties, the earliest report coming from Waukesha County on 24 April (Mertins). Tessen saw 6 individuals in Columbia County on 28 May.

American Coot—Tessen noted 18 individuals at BOP in Ozaukee County. The largest of 3 four-figure totals consisted of 5,300 birds that Romano saw in Grant County on 9 April.

Sandhill Crane—No BOP reports for the second consecutive year; first noted on 2 March in Walworth County (Jacyna). Szymczak achieved a maximum count of 250 individuals on 5 April in Waukesha County.

Black-bellied Plover—An arrival on 14 April in Manitowoc County (Sontag) is the second earliest on record, bested only by a 12 April 1992 date in Dodge County. However, the overall showing was not impressive, with only 5 reporting counties total. Kollath saw 15 individuals in Jefferson County on 20 May, and the last report was of 6 birds in Douglas County on 26 May (R. Johnson).

American Golden-Plover—Seen in 5 southern counties, beginning on 6 April in Milwaukee County (T. Wood) and ending on 19 May in Columbia County (Stutz). Romano had a very good showing of 203 in Lafayette County on 7 May.

Snowy Plover—Reichhoff and Schultz supplied photographic and written documentation for Wisconsin's fifth record, an individual found by the former observer in Green Lake County on 27 May (Fig. 3).

Semipalmated Plover—Arrived on 25 April in Barron County (Carlsen). Michael had 63 individuals in Dodge County on 21 May, Tessen 30 in Fond du Lac County on 31 May. Reported from 16 counties.

Piping Plover—Schilke reported 2 individuals in Kewaunee County on 27 April. R. Johnson next saw it in Douglas County on 13 May. Noted in Manitowoc County on 18 May (Tessen) and again in Douglas County on 25 May (T. Wood). Finally, 2 individuals were seen in Racine County on 28 and 29 May (Gustafson, Howe).

Killdeer—In Winnebago County at BOP (Ziebell), followed by 2 March arrivals in Wal-



Figure 3. Snowy Plover photographed in Green Lake County by Tom Schulz on 27 May 2008.

worth (Jacyna) and Lafayette (Romano) Counties. Schrank counted 20 individuals in Dodge County on 5 April.

Black-necked Stilt—was photographed (Patterson) in a flooded field at the corner of KK and Hwy 23 in Fond du Lac County on 30 May (Fig. 4).

American Avocet—The first of 4 county reports was an individual seen on 25 April in Racine County (Fare). Lorenz next had 15 in Dane County on 2 May. Sontag noted it in Manitowoc County from 14 to 26 May, with T. Wood adding a Columbia County report on 17 May.

Spotted Sandpiper—Spotted first on 17 April by Hale in Jefferson County. None of the 24 county reports referred to more than a handful of birds.

Solitary Sandpiper—Evanson filed the first report from Green County on 12 April. Seen in 16 counties, with a high count of 12 coming from A. Holschbach in Iowa County on 4 May.

Greater Yellowlegs—Arrived in Grant County on 2 April (Romano). Found in 26 counties until EOP, with Tessen's 75 individuals in Dodge County on 17 April the maximum.

Willet—Seen in 7 Lake Michigan counties and additionally in Dane, Sauk, and Portage Counties. Sontag tracked the earliest arrivals on

18 April in Manitowoc County until EOP, with a maximum of 38 on 5 May. That total was bettered twice, however, with 71 individuals reported in Kenosha County on 26 April (Hoffmann) and 78 in Dane County on 2 May (Stutz).

Lesser Yellowlegs—Arrived in Manitowoc County on 6 April (J. Holschbach). Found in 25 counties until near EOP, with Tessen seeing 100 individuals apiece on 2 May in Calumet and Outagamie Counties.

Upland Sandpiper—Initial sighting in Ozaukee County on 17 April (Frank). Hoffmann saw 7 individuals in Kenosha County on 26 April. Reported from 11 counties.

Whimbrel—A big year for this species, featuring even an "inland" report from Columbia County (23 May, Doeppers). Seen first in Manitowoc County (15 May, Sontag); one of two big flocks was sighted there on 24 May, also by Sontag, and estimated at 130 individuals. The Martins saw a perhaps even bigger flock, estimating 150 individuals in Door County on 23 May. Also noted in Douglas County on 17 May (R. Johnson).

Long-billed Curlew—Wisconsin's ninth record, and the first since 1975, went into the record books as Epstein carefully documented an individual in Juneau County on 18 May.



Figure 4. Black-necked Stilt in a flooded field in Fond du Lac County was photographed by Sue Patterson on 30 May 2008.

Hudsonian Godwit—First reported on 14 May (Barron County, Carlsen). Michael saw 4 individuals in Dodge County on 21 May, Tessen 3 in Fond du Lac County on 31 May. Seen also in Columbia, Dunn, and Burnett Counties.

Marbled Godwit—Present in Manitowoc County from 23 April to 18 May (Sontag). Stutz reported 3 individuals in Columbia County on 19 May, where it was still present at EOP (Tessen). Found also in Milwaukee, Dodge, Marinette, Barron, and Douglas Counties.

Ruddy Turnstone—Turned up in Sheboygan and Winnebago Counties on 13 May (Brassers and Ziebell respectively). Schilke noted 150 in Manitowoc County on 22 May, Campbell 41 in Marinette County on 27 May.

Red Knot—Hoffman encountered 7 individuals in Dane County on 25 May. Ziebell added another in Winnebago County on 28 and 29 May.

Sanderling—Eight individuals in Sheboygan County on 10 May constituted the first sighting (Tessen). Frank had the high count, 42

birds in Manitowoc County on 29 May. Notable was an interior sighting in Columbia County (27 May, Tessen).

Semipalmated Sandpiper—The first of the 13 county sightings came on 26 April, when Jackson saw it in La Crosse County. Numbers peaked at 30 in Fond du Lac County on 31 May (Tessen).

Least Sandpiper—Jackson's 26 April sighting in La Crosse County was the only report for that month. West reported 100 individuals in Sauk County on 29 May. Found in 18 counties, the most widespread of the "peeps."

White-rumped Sandpiper—Appeared on 4 May in Dane County (Evanson). Twenty individuals were in Columbia County on 21 May (Prestby). Also seen in Dodge, Fond du Lac, Manitowoc, and Burnett Counties.

Baird's Sandpiper—Tessen noted it in Dodge County from 14 to 27 May, and Hoffman reported 9 individuals in Columbia County on 25 May. Also found in Racine, Door, and Burnett Counties.

Pectoral Sandpiper—The first of 12 county reports came on 12 April from Michael in Dodge County. Numbers peaked at 63 on 24 April (Lafayette County, Romano). Still present at EOP in Manitowoc County (Sontag).

Dunlin—Early reports came in from Racine County on 16 April (Gustafson) and from Manitowoc County the next day (Tessen). Schultz noted 300 in Green Lake County on 22 May. Found in 16 counties.

Stilt Sandpiper—Hoffman reported 3 in Dane County on 12 May, Paulios 4 in Columbia County on 15 May. There were no other reports.

Ruff—Schultz and T. Wood documented a female on 16 and 18 May respectively in Green Lake County.

Short-billed Dowitcher—Sontag reported it on 6 May in Manitowoc County; the high count of 60 was also achieved there, on 17 May (Trick), and Sontag again noted it there as late as 23 May. Reported from 12 counties.

Long-billed Dowitcher—The earliest of 7 county reports was filed by the Lukes in Door County on 19 April, the latest on 20 May in Dane County (Martin). Frank tallied 11 individuals in Ozaukee County on 4 May.

Wilson's Snipe—No March reports were noted; earliest date given was 10 April in Winnebago County (Ziebell). Paulios found 25 in Green Lake County on 18 April. Reported from 19 counties.

American Woodcock—Schneider's 5 March Fond du Lac County report was the earliest. Howe noted 17 individuals in Walworth County on 28 March. Found in 20 counties.

Wilson's Phalarope—Seen in 13 counties, starting with Dane County on 19 April (Schilke). Tessen noted 12 individuals there on 7 May, with Ziebell adding 14 in Winnebago County on 10 May.

Red-necked Phalarope—Found on 3 occasions: 14 May, Dodge County, Tessen; 16 May, Columbia County, Bucci; 31 May, Fond du Lac County, Tessen.

Black-legged Kittiwake—Continuing a recent trend of later seasonal sightings, a subadult bird described by Sontag in Manitowoc County on 15 May becomes the second latest Spring Season date on record.

Bonaparte's Gull—Not reported until 30 March (Rock County, Yoerger). The largest flocks were estimated at 1,800 birds in Dodge County on 17 April (Tessen) and 2,000 in Green Lake County on 30 April (Schultz).

Little Gull—For a change, there were no Lake Michigan county reports, but an individual spent the period from 17 to 27 April commuting between Dodge (Michael) and Fond du Lac (Tessen) Counties.

Laughing Gull—Fissel reported an individual in Sheboygan County on 29 May.

Franklin's Gull—An 8 April report from Jackson in La Crosse County remained the only one until 15 May, when Bruce found it in Winnebago County. Thiessen had 2 individuals in Dane County on 27 May, while Sontag tracked an individual in Manitowoc County from 19 May to EOP.

Ring-billed Gull—C. Wood reported a flock of around 2,500 in Kewaunee County on 13 March.

Herring Gull—Svingen reported a flock of around 4,000 in Douglas County on 19 April.

Thayer's Gull—Present until at least 30 May in Douglas County (R. Johnson), with Svingen recording 4 individuals there on 19 April. Also noted in Milwaukee, Ozaukee, Sheboygan, and Manitowoc Counties.

Iceland Gull—Winter birds lingered in Sheboygan, Manitowoc, and Douglas Counties. The latest date noted was 19 April in Douglas County (Svingen).

Lesser Black-backed Gull—Seen in Sheboygan County on 24 March (Schaufenbuel), in Douglas County from 6 to 19 April (Svingen) and in Dane County on 6 May (Thiessen).

Slaty-backed Gull—The well-studied overwintering individual in Douglas County was last seen on 12 April (Svingen).

Glaucous Gull—Present in 6 counties, with a final report coming on 23 May from Winnebago County (Bruce). The seasonal maximum was 19, achieved in Douglas County on 9 March (Svingen) and again in Manitowoc County on 1 April (Sontag).

Great Black-backed Gull—Seen in 6 counties until at least 18 May (Sheboygan County, Tessen). Tessen also found the largest

concentration, 20 individuals in Manitowoc County on 8 March.

Caspian Tern—Arrived quite early for the second straight year, with the Lukes reporting it on 4 April in Door County for the third earliest arrival time on record. Sontag first saw it in Manitowoc County on 8 April, and he had over 200 individuals there by 19 May. Recorded in 15 counties.

Black Tern—Recorded in 12 counties, St. Croix County (30 May, Persico) the only one not in roughly the southeastern quarter of the state. Earliest arrival on 25 April in Waushara County (Evanson). The largest number of individuals seen was 80, in Columbia County on 28 May (Tessen).

Common Tern—Seen first in Racine County on 11 April (Jarvis). Sontag recorded close to 2,000 individuals in Manitowoc County on 20 May. Recorded in 11 mostly lakefront counties.

Forster's Tern—The most widespread tern, with reports from 23 counties throughout the state, starting with a report on 10 April in Waukesha County (Gustafson). Arrived in Manitowoc County the next day, with Sontag recording a seasonal maximum of over 200 individuals there on 8 May.

Eurasian Collared-Dove—Reported twice: an individual in Grant County on 6 March (Romano), and 2 birds in Columbia County on 29 March (Tessen).

Yellow-billed Cuckoo—Reported only from 5 southern counties, the earliest being Dane County on 6 May (Mettel).

Black-billed Cuckoo—Seen in 8 counties scattered across the state, with Mooren in Oconto County recording the first on 9 May. Stutz had 3 individuals in Dane County on 24 May.

Eastern Screech-Owl—Reported from 12 counties in roughly the southern half of the state. Prestby encountered 3 individuals in Ozaukee County on 14 April.

Snowy Owl—Richmond reported on two individuals that were splitting their time between Brown and Kewaunee Counties on 14 March. No other reports were received.

Long-eared Owl—Reported on three dates in May in Jefferson (Stutz), Marathon

(Schaufenbuel), and Douglas (Tessen) Counties.

Short-eared Owl—The first of 5 seasonal reports came on 26 March from the Shillinglaws in Sheboygan County. Lorenz counted 12 individuals in Portage County on 12 April. The remaining reports were on 13 April in Milwaukee County (T. Wood), 30 April in Washburn County (Haseleu), and 30 May in Dane County (Thiessen).

Northern Saw-whet Owl—Recorded between 13 March and 22 May in Manitowoc, Forest, Taylor, Washburn, and Douglas Counties, in that order, probably a coincidence but at least suggesting a possible southeastern to northwestern migrational movement.

Common Nighthawk—First reported by Romano in Lafayette County on the fairly late date of 7 May. Eventually recorded in 17 counties, with a maximum number of 19 given by Evanson in Adams County on 30 May.

Whip-poor-will—Returned to Dane County on 21 April (Martin). Three individuals were noted twice, first in Jefferson County on 10 May (Stutz) and then in Douglas County on 22 May (Tessen). There were 9 county reports.

Chimney Swift—Seen first by Lesak in Dane County on 17 April; Prestby had the seasonal high count of 150 there as well on 10 May.

Ruby-throated Hummingbird—An arrival date of 18 April (Milwaukee County, Smith) was on the early side. Seen next on 26 April in Kenosha (Hoffmann) and Sawyer (Gagliardi) Counties. Lorenz enjoyed 20 hummers in Grant County on 10 May.

Belted Kingfisher—Present at BOP in Sauk (Romano), St. Croix (Persico), and Barron (Carlsen) Counties. Earliest possible first arrivals were on 2 and 6 March in Lafayette and Grant Counties respectively (both Romano).

Red-headed Woodpecker—A few are usually reported at BOP, but not this year. However, the first report, on 20 March in Lafayette County (Romano), seems too early to be a true migrant, representing perhaps a previously undetected or wandering overwinterer. Haseleu had 4 individuals at BOP in Washburn County in 2006, so one also wonders about her sighting there on 3 April. There were 2 or 3 more April reports, with many May reports leading to a final total of 18 counties, the same as in 2007. Paulios counted 8 individuals in Grant County on 9 May.



Figure 5. A Wyalusing State Park (Grant County) Yellow-throated Warbler male was digiscoped on 24 May 2008 by Seth Cutright.

Yellow-bellied Sapsucker—One March report, on 26 March in Outagamie County (MHNC). Tessen had 10 individuals in Winnebago County on 16 April. Widespread throughout the state.

Black-backed Woodpecker—Reported three times this season, with 3 individuals noted in Douglas County on 22 April (R. Johnson). Singles were found in Burnett County on 20 May (Tessen) and in Vilas County on 24 May (T. Wood).

Northern Flicker—No fewer than 7 BOP reports, ranging as far north as St. Croix (Persico) and Door (Lukes) Counties. R. Johnson reported over 100 individuals in Douglas County on 20 April.

Olive-sided Flycatcher—The fourth April arrival date on record was given by the Lukes as 29 April in Door County. Only reported in 8 counties, with Hoffman finding 4 individuals in Dane County on 28 May.

Eastern Wood-Pewee—Tessen's 2 May Outagamie County report was the earliest, with Mettel finding it in Dane County the next day as well. Found in 23 counties throughout the state by season's end.

Yellow-bellied Flycatcher—Golden-McNerney's 14 May Milwaukee County report was the earliest. Brady noted 8 individuals in Bayfield County on 26 May for the maximum. Reported from 12 counties.

Acadian Flycatcher—Reported in 9 counties in the southern third of the state, starting

on 14 May in Dane County (Graham). Stutz had 8 individuals in Sauk County on 25 May.

Alder Flycatcher—First detected in Rock County on 15 May (Tessen). Prestby counted 15 individuals in Dane County on 27 May. Oddly enough for a "northern" species, 8 of the 10 reporting counties were in the southern third of the state. Perhaps not that many breeding birds had arrived on territory yet by EOP?

Willow Flycatcher—Far more widespread than the previous species, with 17 county reports that began on 3 May in Rock County (Klubertanz). Schoenwetter saw 11 individuals in Dane County on 30 May.

Least Flycatcher—The first of 24 county reports for this most widespread *Empidonax* flycatcher, and the only April report, came on 26 April in Dane County (Stutz). Persico had the high count, 16 individuals, seen in St. Croix County on 17 May.

Eastern Phoebe—Upwards of 20 counties had March arrival dates in 2007; this year, there were only 5, with the earliest (Iowa County, A. Holschbach) as late as 22 March [hardly a record though, as it did not arrive until 4 April in 1984!]. Stutz saw 20 individuals in Dane County on 9 April.

Great Crested Flycatcher—Two April reports: 26 April in Dane County (Graham) and 27 April in Manitowoc (J. Holschbach) Counties. Stutz saw 8 in Dane County on 7 May. Had appeared in 25 counties by EOP.

Eastern Kingbird—E. Wood first reported it on 24 April in Juneau County; there were 2



Figure 6. The Summer Tanager seen on 3 May 2008 at Riveredge Nature Center (Ozaukee County) was recorded by Seth Cutright.



Figure 7. The Summer Tanager at a bird bath in Door County was photographed on 7 May 2008 by Roy Lukes.

further April reports. Seen eventually in 29 counties, with a high count of 12 birds in Portage County on 18 May (Prestby).

Loggerhead Shrike—Three reports: 28 April, Ozaukee County, Sundell; 29 April, Brown County, Baumanns; 12 May, Sauk County, Hoffman.

Northern Shrike—Lingered in 12 counties from the winter season until 20 April, when the last reported individual was seen in Florence County (Kavanagh).

White-eyed Vireo—First noted in Racine County on 26 April (Fare). In Walworth County on 4 May (Jacyna). Tessen saw 4 in Green County on 15 May and another in Ozaukee County on 18 May. Hagner filed the final report from Milwaukee County on 31 May.

Bell's Vireo—Seen first in Green County on 12 May (Matney). The remaining 4 reports came towards the end of the month, with Romano topping out at 4 individuals in Iowa County on the very last day. Seen also in Grant and Dane Counties and, away from its breeding range, in Winnebago County from 21 May to EOP (Bruce).

Yellow-throated Vireo—An arrival date of 23 April (Dane County, Martin) ties for third earliest ever. Next recorded on 2 May in Sauk County (Romano). Stutz logged 12 individuals in Grant County on 4 May for the high count.

Blue-headed Vireo—Stutz reported 2 individuals in Dane County on 27 April. The seasonal maximum was also recorded there, 10 individuals seen by Prestby on 7 May. Reported from 20 counties.

Warbling Vireo—Appeared on 27 April in Milwaukee County (Szymczak). Prestby reported 15 individuals in Dane County on 27 May. Did not arrive in Douglas County until 31 May (R. Johnson). Recorded in 25 counties.

Philadelphia Vireo—Found in 7 widely scattered counties, between 2 May (La Crosse County, Jackson) and 30 May (Douglas County, R. Johnson).

Red-eyed Vireo—Returned first to Walworth County on 4 May (Jacyna). Arrived in Douglas County on 26 May (R. Johnson). Persico reported 12 individuals in St. Croix County on 30 May. Recorded in 24 counties.

Gray Jay—T. Wood reported on 2 birds feeding on a deer carcass in Forest County be-

tween 14 and 16 March. The same observer also saw them in Vilas County on 16 March and then again on 23 May. Also reported from Douglas County (11 May, R. Johnson). See also the Boreal Chickadee account!

Blue Jay—Brady estimated migrating flocks in Bayfield County on 14 May to total about 800 birds.

Common Raven—The southernmost of the 12 reporting counties was Adams County (25 April, Evanson). Svingen had up to 19 individuals [on 9 March] TTP in Douglas County.

Horned Lark—Mueller reported the largest flock this season, 200 birds in Calumet County on 8 April.

Purple Martin—A 14 April arrival date (Rock County, Klubertanz) is the third latest on record. Stutz recorded 50 individuals in Jefferson County on 10 May. Recorded in 22 counties, none of them in the northern tier of counties.

Tree Swallow—The two March dates were 16 March in Dodge County (Frank) and 28 March in Winnebago County (Ziebell). Schilke reported a staggering 5,000 individuals in Manitowoc County on 26 April. Reported in 31 counties.

Northern Rough-winged Swallow— Mueller filed the earliest report, on 7 April in Jefferson County. Jackson saw 150 in La Crosse County on 3 May. Reports were received from 28 counties.

Bank Swallow—Dodge (Tessen) and Buffalo (Mueller) Counties tied for the earliest arrival date of 17 April. Persico's 32 individuals in St. Croix County on 14 May was the highest count mentioned. Seen in 20 counties, with the northern tier [like Purple Martin] unrepresented.

Cliff Swallow—Earliest report on 17 April (Manitowoc County, Tessen). Jackson had 150 individuals in La Crosse County on 16 May. Like Purple Martin and Bank Swallow, the northern tier of counties was again absent from the list of 24 reporting counties.

Barn Swallow—Reported from 30 counties, beginning on 5 April in Dodge County (Schrank). Schilke reported 500 individuals in Manitowoc County on 26 April.

Boreal Chickadee—T. Wood felt he was being watched while watching this species in

Vilas County on 16 March, and indeed a Gray Jay had flown in seemingly to do just that! The Baumanns had 2 birds come to a feeder in Forest County on 22 March, saying it was the first time in 38 years they'd seen that happen.

Tufted Titmouse—Found TTP in 10 southern counties and in Barron County (Carlsen). Stutz detected 8 individuals in Grant County on 4 May.

Red-breasted Nuthatch—Widespread, with reports from 26 counties throughout the state.

Brown Creeper—At BOP in Kenosha (Hoffmann) and Jefferson (Hale) Counties and TTP in Taylor County (Risch). Siebel noted 30 in Door County on 25 April. Representative arrival/departure dates included 16 March to 27 April in St. Croix County (Persico).

Carolina Wren—Graham reported no fewer than 6 individuals in Dane County on 24 May. Also found in Grant (25 April, Romano) and Milwaukee (10 May, T. Wood) Counties.

Bewick's Wren—E. Wood encountered a singing bird (and recorded it) in Monroe County on 6 May. This was the first accepted record of this species in the state since 1991.

House Wren—Arrived in Ozaukee County on 17 April (Frank). Prestby reported 40 in Dane County on 3 May.

Winter Wren—Seen first by Hale in Jefferson County on 5 April. Reported from 11 mostly eastern counties, with Corbo seeing an astonishing 50 individuals in Milwaukee County on 18 April.

Sedge Wren—Huf's 18 April Milwaukee County report was considerably ahead of all others. Reported from 17 widely scattered counties, with Ziebell counting 210 individuals in Winnebago County on 10 May.

Marsh Wren—Also first seen by Huf (26 April) in Milwaukee County. Seen in 15 counties, with only 1 of them northeastern [compared to 4 for the previous species]. Ziebell's 10 May Winnebago County count finished with 285 individuals.

Golden-crowned Kinglet—No BOP reports. The first migrants were noted in Winnebago County on 29 March (Ziebell). Persico had 40 indiviudals in St. Croix County on 13 April, where it had arrived on 30 March. Reported from 17 counties.

Ruby-crowned Kinglet—Arrived on 4 April in Waukesha (Szymczak) and Winnebago (Bruce) Counties. In St. Croix County from 5 April to 24 May, with a maximum number there of 74 on 19 April (Persico). Tessen counted over 100 individuals in Calumet County on 18 April.

Blue-gray Gnatcatcher—First seen by Hagner in Milwaukee County on 12 April. Stutz had 40 in Grant County on 4 May. Seen in 23 counties, including Burnett, Washburn, Marinette, and Door Counties.

Eastern Bluebird—Noted at BOP in Kenosha (Hoffmann) and Waukesha (Gustafson) Counties; also seen on 2 March in Lafayette County (Romano). Stutz had 25 individuals in Grant County on 4 May.

Townsend's Solitaire—A date of 19 April for an overwintering individual in Sheboygan County (Brassers) represents the third latest spring departure on record. Noted also on 22 March in Bayfield County (Bartelt) and on 25 March in Door (Kiles) County.

Veery—Appeared on 25 April in Dane County (Prestby). Stutz counted 8 individuals in Sauk County on 25 May. Reported from 17 counties.

Gray-cheeked Thrush—Arrived on 1 May in Dane (McDowell) and Winnebago (Shillinglaws) Counties. Still in Door County on 31 May (Siebel). There were 13 county reports; among western counties, only St. Croix County (17 May, Persico) was represented.

Swainson's Thrush—Szymczak's 26 April Waukesha County arrival was the earliest reported. Appeared in 3 more counties by the end of the month. A high count of 15 was given in Dane County by Prestby on 7 May. Appeared in 21 counties overall.

Hermit Thrush—Earliest report was on 3 April in Waukesha County (Gustafson); that observer last had it there on 1 May. Present in Manitowoc County (Sontag) between 7 April and 7 May. Huf reported 40 individuals in Milwaukee County on 18 April. Seen in 21 counties

Wood Thrush—The first of 21 county reports came from Szymczak in Waukesha County on 22 April. There was one other April report (26 April, Kenosha County, Hoffmann). A maximum of only 10 birds could be garnered, in Jefferson County on 10 May (Stutz).



Figure 8. Black-headed Grosbeak in Bayfield County on 31 May 2008 by Ryan Brady.

American Robin—Already widespread at BOP, with a dozen or so counties so reporting it. Arrived in Douglas County on 29 March (R. Johnson). Persico counted 240 individuals in St. Croix County on 30 March.

Gray Catbird—Seen on 26 April in Kenosha County (Hoffmann), on 27 April in Dane County (Stutz), and on 28 April in Waukesha County (Gustafson). Persico counted 21 individuals in St. Croix County on 17 May.

Northern Mockingbird—For the second year in a row, all sightings were in May only. Howe reported an individual in Racine County on 5 May. McDowell next saw it in Dane County on 14 May, and Tessen found one in Rock County on 15 May.



Figure 9. Black-headed Grosbeak at a feeder by Tim Oksiuta on 31 May 2008 in Bayfield County.



Figure 10. A Bullock's Oriole visited oranges at the home of Mark Meisberger in Walworth County on 27 April 2008.

Brown Thrasher—A very early individual was discovered by Szymczak in Milwaukee County on 28 March, the second report not coming until 7 April (Waukesha County, Gustafson). Evanson counted 12 individuals in Green County on 19 April.

American Pipit—Found in 15 counties, all south of a line from Grant to Outagamie Counties. The first birds were 9 individuals Evanson

found in Green County on 12 April. Six birds in Milwaukee County on 27 April (K. David) had increased to 40 by 13 May (Gustafson). Michael found a flock of about 200 of them in Dodge County on 21 May. Last reported on 26 May by Uttech in Ozaukee County.

Bohemian Waxwing—The lone report was of a huge flock of perhaps 500 birds, found by Richmond in Langlade County on 18 April.



Figure 11. The Bullock's Oriole visiting a suet feeder also was photographed by Mark Meisberger on 27 April 2008.

Blue-winged Warbler—Appeared on 16 county reports, as far north as Barron and Marinette Counties. Simultaneous first sightings came on 26 April in Dane (Stutz) and Kenosha (Hoffmann) Counties. Stutz also saw the largest number, 10 birds on 25 May in Sauk County.

Golden-winged Warbler—Appeared on 29 April in Dane County (Stutz). Eventually turned up in 17 counties, with a maximum report of only 4 individuals (17 May, St. Croix County, Persico).

Blue-winged × **Golden-winged Warbler**—Tessen reported a "Brewster's" Warbler on 13 May in Winnebago County. Thiessen saw a "Lawrence's" Warbler in Dane County (no date given).

Tennessee Warbler—The sole April report was of a Dane County individual Stutz found on 27 April. Persico saw 48 individuals in St. Croix County on 17 May. Reported in 19 counties.

Orange-crowned Warbler—Early arrivals on 16 April in Milwaukee County (Corbo) and on 18 April in Calumet County (Tessen). Golden-McNerney counted 8 individuals in Milwaukee County on 6 May. Turned up in 18 counties, with a final appearance on 26 May in Florence County (Kavanagh).

Nashville Warbler—McDowell turned up the first individual, on 24 April in Dane County. There were two good counts: Persico had 26 in St. Croix County on 17 May, with Kavanagh adding 44 in Oconto County on 21 May. Seen in 26 counties.

Virginia's Warbler—Documentation was accepted by the WSO Records Committee for an individual found by Lubahn in Milwaukee County on 10 May. With no previously accepted records, a single observer sighting without photographic evidence such as this one puts the species on the "hypothetical" state list.

Northern Parula—Made early appearances in Waukesha County on 17 April (Gustafson) and in Milwaukee County on 23 April (Zehner). Ten individuals were seen in Dane County on 8 May (Stutz). There were reports from 19 counties.

Yellow Warbler—E. Wood's 22 April Monroe County report was the earliest. Szymczak found 56 individuals in Waukesha County on 3 May for the high count.

Chestnut-sided Warbler—No April reports, Huf recording the first in Milwaukee

County on 2 May. Kavanagh noted 80 individuals in Oconto County on 21 May. Seen in 23 counties.

Magnolia Warbler—Also missed in April, with a Dane County report on 1 May (Gold) the first. Hansen noted 40 individuals in Milwaukee County on 17 May. Reports came in from 19 counties.

Cape May Warbler—Generally arrives somewhat later than the previous two species, so a first arrival of 4 May (Dane County, Hoffman) is well in line. Hoffman also had the high count, 14 individuals on 14 May in Trempealeau County. Reported from 17 counties.

Black-throated Blue Warbler—As always, far more prevalent in the eastern half of the state: 11 roughly contiguous counties there reported it, with outlying reports from Dane and Douglas Counties thrown in. First seen by Tessen on 2 May in Calumet County. E. Wood reported 4 individuals in Dane County on 11 May.

Yellow-rumped Warbler—An individual overwintering at a feeder in Manitowoc County persisted into the reporting period (Ozarowicz). There was also an 8 March report from Kenosha County (Kaplan), at a location where it has also been known to overwinter. Remaining reports began on 7 April (Waukesha County, Gustafson). Tessen estimated that more than 700 individuals were in Calumet County on 18 April.

Black-throated Green Warbler—Arrived in Waukesha County on 22 April (Szymczak). Stutz had 25 individuals in Dane County on 6 May. Reported from 24 counties.

Blackburnian Warbler—A. Holschbach found the second earliest individual on record with a sighting on 20 April in Dane County; the all-time record is 18 April, set in 2002, and also in Dane County. Also early in Kenosha County on 27 April (Hoffmann). Hansen turned up 6 individuals in Milwaukee County on 17 May. Found in 22 counties.

Yellow-throated Warbler—Reports this season from Grant County on 4 May (Stutz), Dane County on 6 May (Schilke), Kenosha County (2 separate individuals) on 10 May (Hoffmann, Sedloff), Waukesha County on 24 May (Gustafson), and finally Sauk County on 27 May (Tessen). (See Fig. 5).

Pine Warbler—Jacyna's Walworth County sighting of 7 April would have been the earliest

ever but for the extraordinary spate of 4 late March arrivals in 2007. Reported from 17 counties, with Kavanagh seeing 10 in Brown County on 1 May.

Kirtland's Warbler—Up to 8 singing males and 3 or 4 females were found in Adams County late in the season, with about 400 Brown-headed Cowbirds in the vicinity eager to get in on the action. Nesting activity was detected by 29 May (Trick).

Prairie Warbler—Five reports were a good number for this peripheral species: 3 May, Dane County (Thiessen); 5 May, Ozaukee County (Schwartz); 8 May, Racine County (Gustafson); 19 May, Milwaukee County (K. Johnson); 26 May, Walworth County (Jacyna).

Palm Warbler—First arrival in Calumet County on 17 April (Reimer). Prestby estimated 100 individuals in Dane County on 7 May. A Burnett County date of 20 May (McInroy) was the latest filed.

Bay-breasted Warbler—The first of just 12 county sightings occurred in Dane County on 6 May (Stutz). Hoffman reported 5 individuals in Pepin County on 22 May. In Bayfield County at EOP (Oksiuta).

Blackpoll Warbler—Found on 7 May in Lafayette (Romano) and Brown (Tessen) Counties. Evanson saw it the next day in Dane County, where Prestby also registered the seasonal high count of 12. Seen in 19 counties.

Cerulean Warbler—Found first on 30 April in Dane County (McDowell) and eventually in 7 additional southern counties. Tessen reported 4 individuals in Rock County on 15 May.

Black-and-white Warbler—A considerably early first arrival date of 8 April in Dane County (Lorenz) was not seconded until 25 April, when it showed up in Jefferson County (Hale). In Milwaukee County from 30 April (Zehner) until 25 May (K. David). Persico reported 14 individuals in St. Croix County on 17 May. Reported from 25 counties.

American Redstart—Not reported until 1 May (Dane County, Martin). Stutz had 30 individuals in Sauk County on 25 May.

Prothonotary Warbler—Found in 8 southern counties and in Outagamie County (8 May, Mosquito Hill Nature Center). The earliest report concerned an individual found in Grant

County on 4 May (Stutz). Gustafson saw 3 individuals in Dodge County on 31 May.

Worm-eating Warbler—First reported by Hoffmann in Kenosha County on 10 May. Hoffman saw 2 birds in Grant County on 12 May. Seen again on 26 May in Dane County (Evanson) and on 27 May in Sauk County (Tessen).

Ovenbird—First seen in Milwaukee (Bontly) and Waukesha (Gustafson) Counties on 25 April. Kavanagh counted 77 individuals in Oconto County on 21 May. Reports received from 25 counties.

Northern Waterthrush—Reported from 20 counties, with about half a dozen of them the last week of April, starting with a 23 April Mosquito Hill Nature Center (Outagamie County) report. Stutz had 40 individuals in Jefferson County on 10 May.

Louisiana Waterthrush—McDowell's 3 April Dane County documented report ties for second earliest ever, bested only by a 30 March [1988] date. Found next in Manitowoc County (Sontag) on 14 April. Stutz counted 6 individuals in Sauk County on 25 May. Also reported from Grant and Iowa Counties.

Kentucky Warbler—Wilson reported the first one in Milwaukee County on 7 May. Tessen had 4 in Grant County on 28 May. In between, seen in Kenosha (10 May, Hoffmann) and in Rock (15 May, Tessen) Counties.

Connecticut Warbler—Earliest report received on 13 May from Taylor County (Risch). Reported from 10 counties statewide.

Mourning Warbler—Appeared on 10 May in Jefferson (Stutz) and Dodge (Tessen) Counties. The final tally for the season was 14 counties, with no indications of sightings of more than 1 individual.

Common Yellowthroat—Sightings on 24 April were noted in Grant (Romano) and Dane (Brabant) Counties. Stutz saw 30 individuals in Jefferson County on 10 May.

Hooded Warbler—Reported first in Dane County on 1 May (Prestby). The more northerly of the 11 county sightings included a 6 May Taylor County report (Risch) and a Monroe County observation on 29 May of 7 singing males apparently competing for the attention of a single female (E. Wood).

Wilson's Warbler—The all-time early arrival date of 20 April [1977] was tied when Stutz



Figure 12. Hoary Redpoll by Ryan Brady in Bayfield County on 23 March 2008.



Figure 13. Hoary Redpoll by Tim Oksiuta in Bayfield County on 12 April 2008.

encountered and documented an individual in Dane County on that date. Not reported again until 2 May (Walworth County, Howe). Persico saw 14 individuals in St. Croix County on 17 May. Reported from 19 counties.

Canada Warbler—A first arrival date of 13 May (Winnebago County, Tessen) is notably late. Bontly reported 6 individuals in Milwaukee County on 29 May. Seen in 15 counties.

Yellow-breasted Chat—Two Dane County appearances on 28 April, in 1990 and in 2003, had jointly held the record for the earliest all-time arrivals. This year, they are joined by Prestby's sighting of an individual on the same date in the same county. The number of individuals in this recent stronghold of the species in the state had built up to 4 by 23 May (Evanson). Seen also in Grant, Iowa, Waukesha, and notably Door (11 May, Lukes) Counties.

Summer Tanager—In chronological order, seen this season in Taylor, Ozaukee (Fig. 6), Dane, Door (Fig. 7), Milwaukee, and Dodge Counties. The earliest report came on 28 April (Taylor County, Risch), the latest on 31 May (Dodge County, Michael), the last sighting raising the possibility of the fifth summer record since 1900 [the species nested in the state before then].

Scarlet Tanager—One April report (26 April, Milwaukee County, Szymczak). Hoffman found 23 individuals in Grant County on 12 May, Stutz 6 in Sauk County on 25 May. Present on 23 county reports.

Eastern Towhee—Noted on 8 April in Manitowoc County (J. Holschbach) and on 12 April in Green County (Evanson). McLeod had 20 individuals in Buffalo County on 9 May.

American Tree Sparrow—Kavanagh still had 75 individuals in Florence County on 8 April. Late dates in southern counties included 19 April in Milwaukee County (K. David) and 21 April in Waukesha County (Gustafson). Last noted in Door County on 23 May (Lukes).

Chipping Sparrow—Seen first in Door County by the Lukes on 6 April. The high count was 60 (10 May, Florence County, Strelka).

Clay-colored Sparrow—Wilson had an early individual in Milwaukee County on 20 April. Reported from 22 counties, with a high count of 28 achieved in St. Croix County on 26 May (Persico).

Field Sparrow—A find on 16 March in Lafayette County (McDaniel) could have been an overwintering bird. Remaining reports, beginning on 11 April (Manitowoc County, Sontag) undoubtedly referred to returning migrants. Seen in 22 counties, with a maximum number of 31 given in St. Croix County on 17 May (Persico).

Vesper Sparrow—Reports began on 2 April (Dane County, Evanson). Reported from 15 widely scattered counties, with a maximum of only 6 individuals (4 May, Sauk County, Romano) given.

Lark Sparrow—Certainly present at its traditional location in Sauk County through much or even most of April, but documented only by Romano, who first saw it there on 2 May and had 5 individuals by 9 May.

Savannah Sparrow—Early dates included 21 March in Dane County (Stutz) and 6 April in Winnebago County (Bruce). Prestby had 40 individuals in Portage County on 18 May.

Grasshopper Sparrow—Seen on 20 April in Jackson County (Schrinner) and on 24 April in Lafayette County (Romano). Prestby counted 15 individuals in Iowa County on 22 May. Seen in 12 counties, as far north as St. Croix and Door Counties.

Henslow's Sparrow—Romano found 10 individuals in Iowa County on 20 April, which was also the earliest arrival date. Found in 8 widely scattered counties as far north as St. Croix County, where Persico found 3 individuals on 30 May.

Le Conte's Sparrow—Seen on 27 April in Dane County (Thiessen), on 10 May in Ashland County (Sharp), and on 20 May in Burnett County (Tessen).

Nelson's Sharp-tailed Sparrow— Tessen's 20 May Burnett County report was the only one received.

Fox Sparrow—Tessen noted that 5 individuals overwintering in Outagamie County persisted into the spring. His last date for the species there was on 19 April. An early apparent arrival date was 8 March in Dane County (Stutz). R. Johnson noted 26 individuals in Douglas County on 30 April, which was also the latest date received. Reported from 20 counties.

Song Sparrow—At or near BOP in Walworth, Kenosha, Milwaukee, and Waukesha

Counties. Mettel estimated 100 individuals in Dane County on 3 April. Reached Douglas County on 7 April (R. Johnson).

Lincoln's Sparrow—Arrived in Dane County on 18 April (Stutz) for the earliest report. Noted in Door County between 20 April and 22 May (Lukes). Prestby saw 25 individuals in Dane County on 7 May. Present in 19 counties.

Swamp Sparrow—In Kenosha County at BOP (Hoffmann). Otherwise, first reported on 18 March in Milwaukee County (Zehner). Ziebell counted 188 individuals in Winnebago County on 10 May.

White-throated Sparrow—Overwintered in Kenosha (Hoffmann) and Outagamie (Tessen) Counties, and probably also in Milwaukee County, with Zehner giving a 3 March date there. She also noted it as late as 28 May. Stutz estimated 150 individuals in Dane County on 26 April, Tessen 100 in Winnebago County on 2 May.

Harris's Sparrow—As usual, left a trail on a compressed time scale through a number of counties from southeast to northwest. Actually seen first in Taylor County on 6 May (Risch), followed by Dane County (Brabant) the next day and St. Croix County (Persico) the day after that. Persico reported 4 individuals by 17 May, with departure the following day. The last individual was then seen in Douglas County on 22 May (Tessen).

White-crowned Sparrow—Jacyna checked on an overwintering individual at a Walworth County feeder on 5 March. The first migrants arrived in Waukesha County on 23 April, remaining until 16 May (Gustafson). Romano had similar arrival and departure dates in Lafayette County, 24 April to 22 May. The most individuals (60) were reported in Milwaukee County on 7 May by Hansen. Last reported in Door County on 24 May (Lukes).

Dark-eyed Junco—Southern county lingerers included birds in Green Lake County on 3 May (Tessen) and in Milwaukee County on 19 May (O'Connor). Brady reported 225 individuals in Bayfield County on 20 April.

Lapland Longspur—Lingered in 12 counties from the winter season, with the final report coming on 27 May in Dodge County (Michael). Tessen had found 200 birds there on 5 April, but the largest flock (550 individuals) was found in Columbia County on 6 April (Paulios).

Snow Bunting—Also still to be found in 12 counties, many of them the same as for the previous species, with the least expected perhaps being Lafayette County (2 March, Romano). Tessen found a huge flock of perhaps 900 in Outagamie County on 26 March, Carlsen an even bigger one (1,200?) in Barron County on 12 April. Carlsen also filed the final report for the season there on 1 May.

Rose-breasted Grosbeak—A sighting on 21 March in Marathon County (Raymond-Wood) far more likely represents a previously undetected overwintering individual than an early migrant. It would be about the ninth such record. Returning migrants were first spotted on 26 April, in Kenosha (Hoffmann) and Dane (Stutz) Counties. Kavanagh saw 64 individuals in Oconto County on 21 May. Found in 29 counties.

Black-headed Grosbeak—A male bird documented by Brady and Oksiuta (Figs. 8 & 9) at a Bayfield County feeder on 31 May had apparently been there for a couple of weeks already. The previous latest spring record [May 29] is thus moved ahead [back?] two days, where it will of course stay!

Blue Grosbeak—A bird singing in Rock County was well documented between 15 and 19 May (Frank, Gustafson, Tessen, West).

Indigo Bunting—An arrival in Taylor County on 22 April (Risch) was on the early side for this species. Seen next on 26 April in Kenosha County (Hoffmann). Stutz counted 10 individuals in Dane County on 24 May.

Painted Bunting—Hoffman had a brief look at a singing male in Grant County on 12 May.

Dickcissel—Present by EOP in 5 southwestern counties and in Douglas County (22 May, R. Johnson). Noted first in Rock County on 10 May (Yoerger). That sighting, of 2 individuals, was also the only one that mentioned seeing more than one bird.

Bobolink—Returned to Iowa County on 22 April (A. Holschbach), with no further reports until 1 May (Taylor County, Risch). R. Rohde counted the most individuals, 70, in Dodge County on 17 May.

Red-winged Blackbird—BOP sightings claimed in only three counties (Kenosha, Waukesha, and Winnebago Counties). First noted in Douglas County on 6 April (R. John-

son). Stutz estimated 2,000 individuals in Dane County on 9 April.

Eastern Meadowlark—Widespread, with reports from 30 counties throughout the state. One BOP report, in Door County (Lukes). Found in Grant County as early as 6 March (Romano). Frank had 20 individuals in Ozaukee County on 17 April.

Western Meadowlark—Found in but 9 counties, all to the southwest of Walworth, Portage and St. Croix Counties. Iowa County had the first report, on 20 March (Romano). Prestby found an encouraging 18 individuals in Portage County on 18 May.

Yellow-headed Blackbird—Found in a band of 12 counties from Kenosha County in the southeast to Burnett County in the northwest. The first report came from Gustafson in Waukesha County on 8 April. Hansen found 30 individuals in Dodge County on 20 April.

Rusty Blackbird—Evanson found it in Dane County on 7 March, with Thiessen reporting 100 individuals there by 29 March. The maximum however for this declining species was an encouraging 700, counted by Cutright in Dodge County that same day. Reported from 16 counties.

Brewer's Blackbird—There were reports on 22 March from Racine (Gustafson) and Door (Lukes) Counties. Richmond encountered 60 individuals in Langlade County on 22 April. Reported from 16 counties.

Common Grackle—Only 1 BOP report (Winnebago County, Bruce), but seen in Waukesha County on 3 March (Gustafson). Otherwise, arrived rather late, reaching Douglas County on 8 April (R. Johnson). Stutz tallied 500 individuals in Dane County on 9 April.

Brown-headed Cowbird—Early reports on 3 and 6 March in Winnebago (Shillinglaws) and Waukesha (Gustafson) Counties respectively. Epstein estimated 220 in Monroe County on 13 April.

Orchard Oriole—Arrived on 29 April in Jefferson County (Kollath). Subsequently appeared in 17 more counties, as far north as St. Croix (6 May, Persico) and Door (7 May, Lukes) Counties. Betchkal's count of 12 individuals in Trempealeau County on 22 May was the highest.

Bullock's Oriole—A photographically documented (Figs. 10 & 11) sighting in Walworth

County from 25 to 27 April (Meisbergers) becomes the fourth official state record.

Baltimore Oriole—First seen in Jefferson County on 25 April (Hale). Tessen found 20 individuals in Brown County on 7 May, while Kavanagh counted 30 in Oconto County on 21 May.

Pine Grosbeak—The Lukes tracked it from BOP to 30 March in Door County. The Baumanns reported "a few" in Forest County on 22 March.

Purple Finch—Widespread, with reports from 21 counties in all parts of the state. Evidence of lingering in southern counties included a 24 May sighting of 2 individuals in Waukesha County (Gustafson). The high count was 15, obtained by Stutz in Dane County on 3 May.

Red Crossbill—Reported by the Lukes in Door County on 26 March. Far less expected was a report of no fewer than 41 [!] individuals in Monroe County on 29 May (E. Wood).

Common Redpoll—Reported from 16 counties, the southern border of the reporting region formed by Barron, Taylor, Winnebago, and Sheboygan Counties. Gagliardi estimated a maximum of 200 individuals in a Sawyer County recording span of 30 March to 26 April. A Burnett County report the next day (McInroy) was the final one.

Hoary Redpoll—Documented twice in Bayfield County (22 March, Brady [Fig. 12] and 13 April, Oksiuta [Fig. 13]) and once in Langlade County (30 March, Richmond).

Pine Siskin—Many "hit and run" sightings at feeders, often late into the season. For example, O'Connor's only sighting in Milwaukee County consisted of 3 birds seen on 5 May only. On the other hand, Persico saw anywhere from 1 to 3 individuals from BOP to 17 May in St. Croix County. Last reported in Marinette County on 29 May (Campbell), again apparently the first time that observer had seen it for the season. The high count was 15 in Dane County on 26 April (Stutz). Recorded in 14 counties scattered throughout the state.

Evening Grosbeak—The Baumanns encountered "a large flock" in Forest County on 22 March. On 11 April Brady saw 61 individuals in Bayfield County. The Lukes concluded the seasonal report with a Door County appearance on 4 May.

CONTRIBUTORS AND CITED OBSERVERS

Betsy Bartelt, Ida & Ty Baumann, Steve Betchkal, Marilyn Bontly, Craig Brabant, Ryan Brady, David & Margaret Brasser, Paul Bruce, Bob Bucci, Gwyneth Calvetti, Joan Campbell, Nathan Carlsen, Daryl Christensen, Sam Corbo, Seth Cutright, Guy David, Karl David, Mike DeWitt, Dan Doeppers, Eric Epstein, Jan Esposito, Marty Evanson, Rick Fare, Jeffrey Fisher, Stephen Fisher, Peter Fissel, Pat Fojut, Matthew Fraker, Jim Frank, Scott Franke, Cathy Gagliardi, Malcolm Gold, Regan Golden-McNerney, Nate Graham, Dennis Gustafson, Chuck Hagner, Karen Etter Hale, Brian Hansen, Judy Haseleu, Ginny Helland, Mark Hodgson, Randy Hoff-Hoffmann, man, Ron Aaron Holschbach, Jim Holschbach, Eric Howe, Judith Huf, John Idzikowski, Dan Jackson, Joe Jacyna, Gerry Janz, Rebecca Jarvis, Karen Johnson, Robbye Johnson, Calvin Kaplan, Kay Kavanagh, Tom & Lucy Kile, Tom Klubertanz, Roy Knispel, Nolan Kollath, Adrian Lesak, Dennis Lorenz, Meaghan Loy, Steve Lubahn, Roy & Charlotte Lukes, Robin Maercklein, Bart Martin, Mark & Sue Martin, Michael Matney, Carol McDaniel,

Mara McDonald, Mike McDowell, Bob McInroy, John McLeod, Mark & Sandy Meisberger, Tom Mertins, Lisa Mettel, Larry Michael, Tom Mooren, Mosquito Hill Nature Center, Bill Mueller, Mariette Nowak, Michelene O'Connor, Tim Oksiuta, Jim Otto, Dory Owen, Mary Ozarowicz, Randy Parlee, Sue Patterson, Andy Paulios, Matt Paulson, Larry Persico, Jesse Peterson, Sue Peterson, Janine Polk, Tom Prestby, Jane Raymond-Wood, Joey Reichhoff, Andrew Reimer, Nancy Richmond, Ryan Rickaby, Paul Risch, Mary Roenneburg, Ronald Rohde, Wayne Rohde, John Romano, Andrew Rothman, Chari Rutledge, Joe Schaufenbuel, Paul Schilke, Daniel Schneider, Ruth Schoenwetter, Eve Schrank, Joan Schrinner, Jon Schubbe, Tom Schultz, Carl Schwartz, Bruce Sedloff, Janice Sharp, John & Fawn Shillinglaw, Kirk Shillinglaw, Barbara Siebel, Larry Sirvio, Astrid Smith, Charles Sontag, Jean Strelka, Aaron Stutz, Roger Sundell, Peder Svingen, Andrea Szymczak, Daryl Tessen, Steve Thiessen, Joel Trick, Robin Tyser, Tom Uttech, Tim Vargo, Chris West, Todd Wilson, Matthew Wojtyla, Chris Wood, Eric Wood, Tom Wood, Quentin Yoerger, Norma Zehner, Tom Ziebell.

"By the Wayside"—Spring 2008

Documentation for interesting species includes Cinnamon Teal,
Barrow's Goldeneye, Pacific Loon, Whimbrel,
Long-billed Curlew, Black-legged Kittiwake,
Townsend's Solitaire, Virginia's Warbler,
Yellow-throated Warbler, Summer Tanager,
Black-headed Grosbeak, Blue Grosbeak,
Painted Bunting, and Hoary Redpoll.

CINNAMON TEAL (Anas cyanoptera)

30 May 2008, Green Bay, Brown County—This bird was seen in a marshy impoundment with a small channel around the marsh, in the Ken Euers Natural Area. Canada Geese, Marsh Wrens, and Yellow-headed Blackbirds were also present. On approaching I noticed a duck perched on a partially submerged log with one leg tucked up toward his belly. The other leg was yellow in color. The overall appearance of the duck's head and side was a cinnamon-brown color. Initially, I did not see the bill, but the top of the head was a darker color, almost black. The back of the duck had feathers that were two-toned in coloring, black on the edges and a light tan through the center of the feathers. After approximately five minutes, the duck raised his head, and I could see a somewhat flat, black bill. Shortly after, duck began to preen stretched out its wing. I could clearly

see a light blue wing patch that reminded me of the Blue-winged Teal patch. The duck was considerably smaller than the Canada Goose that swam by. The bird remained on the log for the duration of the observation [45 minutes], occasionally preening its feathers and stretching its wing.—Matthew Wojtyla, Green Bay, WI.

BARROW'S GOLDENEYE (Bucephala islandica)

2 March 2008, Sheboygan, Sheboygan County—Although I have found Barrow's Goldeneye in the Pacific Northwest and Montana, finding the bird in Wisconsin was elusive and required many outings to Milwaukee and more recently to Sheboygan. Responding to a post made by Seth Cutright that the bird was found in its usual place at the mouth of the Sheboygan River, we quickly ran down to Sheboygan, arriving about an hour and a half after the post. As with other sojourns to Mil-

waukee and Sheboygan, the bird was again not found. And, not knowing for sure if the bird was a male or a female, I was searching for either possibility, looking carefully at head shape, bill color and plumage differences. After an hour of scoping, I was about to give up and call this yet another of those all too familiar birding experiences. To my delight, however, a male Barrow's Goldeneye was found about a quarter of a mile to the west, swimming with four male Common Goldeneyes, which made comparisons trouble free. The bird was striking in appearance, and I was immediately drawn to the tear-drop white mark in the loral area. The bill was dark and appeared blunted or shorter, an effect of the steeper slope of the nasal angle. Interestingly, the shape of the head, with its characteristic anterior-posterior elongation, was not necessarily an obvious field mark. Much easier to find was the checkerboard patch on the wing replacing the thin black lines on a white background radiating down the sides of the wing of a Common Goldeneye. The black mark bisecting the breast and side. resembling an "epaulet," was also evident, as this is not a characteristic feature of Common Goldeneye.

An interesting side note: because I was looking carefully at both male and female Common Goldeneyes, it was revealing that I found several female goldeneyes that had yellow bills, but they were definitely not Barrow's Goldeneyes. On these female Common Goldeneyes, the bill and head shape were not correct for Barrow's Goldeneye, making the bill color of the female only a screening tool, and certainly not the field mark that is critical to the identification of Barrow's

Goldeneye.—Charles Sontag, Manitowoc, WI.

PACIFIC LOON (Gavia pacifica)

24 March 2008, Sheboygan, Sheboygan County—A small dark loon found near a Red-throated Loon was identified as a Pacific Loon around 1:00 P.M. and seen for twenty minutes. The bird was first seen in flight off the south wall of the breakwater from the South Pier Drive parking lot. In flight, it appeared the same size as the Red-throated Loon, but not as thin in wing or body. On the water it had a seemingly small, mostly dark, straight bill that did not appear to have any upward tilt. In overall shape it seemed too small, chunky, and short to be a Common Loon, having in addition a rounded crown shape continuing smoothly into the nape, a feature also not associated with the latter species.

Though I could not compare the bird side by side with the Redthroated Loon, it was a darker-necked bird with a dark hind neck diffusing into a lighter area on the throat. I could not discern any "necklace" features. It lacked any strong white about the eyes and had a dark upper back, body, and sides. It probably never came within 300 yards, but conditions were perfect for scoping, with only a mild chop on the water and the sun at my back causing no shimmer. The loon fed actively after landing. It did not seem to associate closely with the Red-throated Loon, A Pacific Loon should have a sharply delineated separation of the light and dark neck markings, which this bird didn't really have; it may have been in a transitional plumage, as the Horned Grebe I had seen earlier had been.—*Joe Schaufenbuel, Stevens Point, WI.*

WHIMBREL (Numenius phaeopus)

23 May 2008, Harvey Road, Columbia County-About to move on after havobserved a good number of shorebirds and in around ephemeral pond beside the road, I noticed two more large shorebirds in some nearby corn stubble. One was clearly brighter than the other, but I could discern little detail for several minutes, as neither bird moved. Finally the brighter colored one began to do so, and one look at the long twotoned bill with a slight upward curve, plus the general coloring, said "Marbled Godwit." A moment later it stretched its wings to a skyward point, revealing beautiful cinnamon inner underwings and thus definitively eliminating Hudsonian Godwit and Willet. After another minute or two, the other bird began to stir and took a few steps, immediately revealing a long sharply decurved blackish bill with the curve mainly in the outer half of the bill. Wow! What struck me at that moment was the beauty of that curve, a beauty that was enhanced with the bill open. I have seen Whimbrels near, or on, ocean beaches in Georgia, Texas, California, and Washington, but I never expected to see one so far from the Great Lakes shores in Wisconsin. Although the bill was of considerable length, it was smaller by half than that of the Long-billed Curlew, a species I have observed in five states.—Dan Doeppers, Madison, WI.

LONG-BILLED CURLEW (Numenius americanus)

18 May 2008, Mauston, Juneau County—Driving west on Highway 82 around 6:00 P.M., I scanned a flooded field and noticed a shorebird and a male Mallard next to each other and roughly equal in size. About a mile later I realized this was odd, so I did a U-turn and returned to the spot. Both birds were still there, the shorebird not as portly as, and longer-legged than, the Mallard. A nearby Killdeer appeared tiny. The bill was strongly decurved and appeared three times (or more) as long as the head. The head was dark, with no distinct pattern. The general aspect of the plumage was tan/buff on the back and wings. Some feathers had flecks with blackish speckles. The outer primaries were darker. The legs were of course long, though not as long as on a heron or a crane. The tail was short, buff-colored, and barred with narrow black bands. The bird raised its wings over its head several times, exposing rich cinnamon wing linings, paler cinnamon-buff sides, with a few darker flecks towards the neck. The bird was silent and didn't interact with the other birds present, contenting itself with preening and stretching. Truly a bird conceived by Dr. Seuss, "all field mark!"—Eric Epstein, Norwalk, WI.

BLACK-LEGGED KITTIWAKE (Rissa tridactyla)

15 May 2008, Manitowoc, Manitowoc County—While I was walking on the east wall of the containment vessel in Manitowoc Harbor shortly after the city had conducted one of its gull ha-

rassment exercises, a gull approached me that displayed the distinctive "M" wing pattern, but was the wrong size to be a Little Gull. As it flew past me, among a group of mostly Ring-billed Gulls, it immediately became apparent to me that this was a subadult Black-legged Kittiwake. It landed in the Lake with two Ring-billed, two Herring, and one Thayer's Gull, about 150 feet from where I was standing. The bird was only slightly smaller than the Ring-billed Gulls. While the bird was swimming, the other critical field marks were recorded. The bill was smaller than the Ring-billed Gulls' bills and all black to the feathered part of the face. The markings on the head were similar to those on a subadult Bonaparte's Gull, sporting a black auricular area, but the nape was saddled in a black/dark gray band. There was an additional dark smudge behind and around the eye that seemed more extensive than the similar markings on a Bonaparte's Gull. What surprised me on this bird, as well as on the sub-adult Black-legged Kittiwake I saw in Sheboygan last year, was the lack of a pronounced carpal bar when the bird was seen swimming or standing. Except for a smudge in the wing area where the carpal bar would be found on the Little Gull, the bar was certainly diminished or partially covered on these birds, and could have been easily overlooked on casual observation. The black feet, however, did not go unnoticed. The dark terminal band on the tail was seen as the bird was landing, but seemed to be "fading" in appearance, giving the tail a wedge-like profile because the central tail feathers were white. The back was mostly gray and slightly darker than the Ring-billed

Gulls that were in the immediate area. Although direct comparison with the Bonaparte's Gull was not possible, several were standing on the containment shoreline about 300 feet away or flying in the area. It was obvious that this bird was larger. The bird to my knowledge was not seen again, and it may have been one of the "casualties" of the gull harassment program.— Charles Sontag, Manitowoc, WI.

TOWNSEND'S SOLITAIRE (Myadestes townsendi)

22 March 2008, Kohler-Andrae State Park, Sheboygan County-I had last seen this bird on 20 January, and had made several trips since then without seeing the bird. Today I learned why I had so much difficulty. When I walked up to the Nature Center, a birder from Illinois named Paul informed me that the solitaire was still there and in the juniper where it was seen many times during the winter. I could not see it, and I am quite certain I would not have found it without Paul's help. He apparently has spent some time with this bird and knew where it liked to perch. He searched with the scope and found the eye of the bird! It was well concealed in the branches but the descending sun in the west certainly illuminated the white eye ring. I was highly impressed with Paul's spotting skill, and by concentrating with my 10 × 42 binoculars I was able to see some of the field marks even though the solitaire moved only about two inches during the entire observation. Paul thought this was the laziest bird he had ever seen. During one trip he had seen the solitaire prostrate itself on the snow patch on this very branch. We agreed it had no real need to move. It was well concealed, sheltered from cold east winds by the Nature Center a few feet away, and had clusters of berries to pluck just inches away. Until it feels a need for a mate or some waxwings strip the tree of berries, it may well remain.—Thomas Wood, Menomonee Falls, WI.

19 April 2008, Kohler-Andrae State Park, Sheboygan County—We went to the Nature Center parking lot to attempt to find this bird. Another birder had just seen it in the cedar in front of the building. We were joined in our search by Jeff and Christine Zimmerman. After a few minutes, the bird popped out from the inside to the outer branches of the cedar, ate some berries, and perched in several positions for an extended period of time, giving us excellent 20-foot views of the field marks: very prominent white eye ring, white outer tail feathers, buffy wing patches on a dark gray bird about the size and shape of a robin. No vocalization.—David and Margaret Brasser, Sheboygan, WI.

VIRGINIA'S WARBLER (Vermivora virginiae)

10 May 2008, Milwaukee, Milwaukee County—I had what I believe was a male Virginia's Warbler around Picnic Area Six in Grant Park in Milwaukee. I got a pretty good and sustained look at this bird. I noted the following: small warbler with a very clean gray head and back, slightly darker gray wings, no wing bars. Yellow in the throat area, the rump, and undertail coverts. The rest of the belly was white. I also saw the white eye ring. I did not see any reddish in the crown.

No olive in the back at all. I also noticed it wagging its tail while foraging. It was foraging in mid-canopy in a brushy island with some trees just south of the parking area.—Steve Lubahn, Milwaukee, WI.

YELLOW-THROATED WARBLER (Dendroica dominica)

10 May 2008, Silver Lake Park, Kenosha County—On our annual May count, I found a small warbler moving actively in and out of the boughs of the pine trees to the north of the beach. Here are my notes made in the field [with an accompanying sketch editor]. Blue from bill over head, back, nape, and all upperparts plus wings and tail. White tail spots, white wing bars, white crescent over eye. Ring around lower half of eye. Gray beak. Yellow throat and breast bib. White belly and underside to tail. Black streaky blotches on flanks. White patch behind ear. Black face from bill, covering mostly bottom or all of eye and back to the white patch. The bird did not sing. Interestingly, Bruce Sedloff had another Yellow-throated Warbler elsewhere in the county on same day.—Ron Hoffmann, Kenosha, WI.

SUMMER TANAGER (Piranga rubra)

29 May 2008, Peninsula State Park, Door County—I found this bird at the Weborg Point Campground near the shelter, dividing its time between an apple and a poplar tree. Probably it was a first-spring male. It had the tanager shape (I am familiar with Scarlet Tanager), but a bit bigger. The bill was thick, colored gray-tan. The legs were

dark. The back was greenish tan, the wings slightly darker and grayer. The belly was yellow. The head and face were a blotchy bright red, as was the neck and chest. A smaller red area was on the back. I especially took note of the wings. They were not dark gray or black, but slightly darker than the back in tone. The bird sang when perched. Its song was a hoarse robinlike warble, somewhat loud. It sang from the poplar tree, not moving much, then flew to the apple tree, staying for a few minutes and moving on occasion. It was only fifteen or twenty yards away, and I watched it for five minutes.—Sue Peterson, Ephraim, WI.

BLACK-HEADED GROSBEAK (Pheucticus melanocephalus)

31 May 2008, Cornucopia, Bayfield County—I received a call indicating this bird had been visiting a feeder in town for the previous several days. Upon arriving on Saturday morning, I found it by hearing its song, which was very similar to that of a Rose-breasted Grosbeak, in the adjacent woodlot. It never came to the feeders while I was there, but I got excellent looks as it foraged in the nearby trees. Size and structure were similar to a Rosebreasted Grosbeak, but the bird sported a black bill and an unmarked orange neck collar, breast, and rump. The orange mixed with yellow on the lower breast and white on the belly and undertail coverts, and the back was black with distinct pale streaks. As in Rose-breasted Grosbeak, the wings were black with multiple white wing bars and other white markings, including white median coverts, whitetipped greater coverts, and white-based primaries forming a white wing patch.—*Ryan Brady, Ashland, WI.*

BLUE GROSBEAK (Passerina caerulea)

17 May 2008, Avon, Rock County— First found by hearing its warbling song. A little like Orchard Oriole song heard down the road, but more melodious, closer to a Purple Finch song, but with a more uniform pace/delivery. I was finally able to locate the source, a bird partially hidden in a tree canopy. It looked almost black at first, but as I moved into better position, I was able to see that it was a deep blue in color over most of the body. The only sharp contrast was a pair of chestnut-colored wing bars. A little black showed in the lores. The bill was very thick, typical of grosbeaks, and conical, a dark charcoal gray in color. Size was larger than Indigo Buntings seen later, but smaller cowbirds.—Dennis Gustafson. Muskego, WI.

PAINTED BUNTING (Passerina ciris)

12 May 2008, Paffenrath Lake Access, Grant County—I first heard a soft warbly song with many phrases. To me it sounded vaguely reminiscent of a Rose-breasted Grosbeak, but softer and more rapid. The bird was perched near the top of a riverside birch tree about fifty feet away. I was between the rising sun and the bird, providing ideal viewing conditions. The front from the undertail coverts to the throat was all red. My impression was the red was similar to the red of an adult male Summer Tanager.

The head was blue with a "red" eye ring. The bird directly faced me, but I did get glimpses of yellowish on the back. After a while, the bird dropped and flew downstream. I did get a flash of a red rump patch in flight. The bird was so colorful and the identification so easy. I did not look for finer field marks.—Randy Hoffman, Waunakee, WI.

HOARY REDPOLL (Carduelis hornemanni)

30 March 2008, Polar, Langlade County—Very small streaked finch

with notched tail, red forehead, black chin. Two white wing bars. Very stubby yellow bill. Bill looked smashed onto face. No pink wash on breast. Much lighter bird in flock of around twenty Common Redpolls under feeder. Appeared somewhat larger, longer-tailed, and fluffier. Much less streaked overall. Streaking was lighter gray in color than the gray/brown of Common Redpoll. Streaking was also finer and was on a lighter (white) background.—Nancy Richmond, Antigo, WI.



Yellow-throated Warbler by Delia Unson and Chuck Heikkinen



Wilson's Phalarope by Delia Unson and Chuck Heikkinen

Wisconsin May Counts—2008

Jim Frank

10347 W. Darnel Avenue Milwaukee, Wisconsin 53224 414. 354. 2594 jcfbirddr@yahoo.com

The eight May Counts in 2008 were at an average level of participation of the past 9 years, but about half of what was normal 15 years ago. Leading the way in participation as usual was Winnebago with 36 participants, followed by Bayfield with 32. Oconto knocked perennial leader Winnebago from the top spot with 182 species to Winnebago's 181 with Milwaukee/Ozaukee following close behind at 176.

The total species list of 236 com-

pares with an average of 244 over the previous 18 years, paling in comparison with the record high of three years ago, 261. The 20 year total for species remains at 297. Red-throated Loon, White-winged Scoter, and Yellow-throated Warbler were tallied for only the third time in 20 years. Making an appearance for only the fourth time in the past 20 years was Whimbrel (37 of them!), and Worm-eating Warbler made its fifth showing in 20 years.

Table 1. The 2008 Wisconsin May Counts

Count	Date	Time	Sky	Wind	Temp	Observ.	Species
Winnebago	5/10	04:00-20:00	Pt Clo.	E 8	40-59	36	181
Bayfield	5/27	06:30-21:00	Fair	SE 6	46-55	32	149
Oconto	5/21	00:01-20:00	Pt Clo.	NW 10	40-67	10	182
Waupaca	5/27	05:30-18:00	Fair	NW?	36-48	5	145
Oconomowoc							88
Sheboygan	5/10	05:00-17:00	Pt Clo.	? 5	40-60	18	138
Milwaukee/Ozaukee	5/10		Pt Clo.	NE 8	35-57	15	176
Kenosha	5/10	04:30-20:30	Fair	NE 10	37-49	3	134

Table 2. Species of note for Wisconsin May Counts 2008.

Species	Count(s) recorded			
Mute Swan	Bayfield, Kenosha			
Trumpeter Swan	Bayfield, Oconto			
Tundra Swan	Kenosha			
White-winged Scoter	Milwaukee/Ozaukee			
Long-tailed Duck	Milwaukee/Ozaukee			
Northern Bobwhite	Kenosha			
Red-throated Loon	Milwaukee/Ozaukee			
Horned Grebe	Winnebago, Milwaukee/Ozaukee			
Red-necked Grebe	Winnebago			
Cattle Egret	Winnebago			
Northern Goshawk	Oconto			
Red-shouldered Hawk	Oconto, Waupaca, Milwaukee/Ozaukee			
Rough-legged Hawk	Bayfield			
Common Moorhen	Winnebago			
American Golden-Plover	Sheboygan			
Willet	Kenosha			
Whimbrel	Oconto			
Marbled Godwit	Bayfield			
Wilson's Phalarope	Winnebago, Sheboygan			
Great Black-backed Gull	Sheboygan			
Eurasian Collared-Dove	Milwaukee/Ozaukee			
Black-billed Cuckoo	Waupaca, Milwaukee/Ozaukee			
Yellow-bellied Flycatcher	Oconto, Bayfield, Waupaca			
Acadian Flycatcher	Oconomowoc			
Philadelphia Vireo	Oconto, Kenosha			
Tufted Titmouse	Milwaukee/Ozaukee			
Carolina Wren	Sheboygan			
American Pipit	Winnebago			
Yellow-throated Warbler	Kenosha			
Cerulean Warbler	Sheboygan, Oconomowoc, Milwaukee/Ozaukee			
Prothonotary Warbler	Oconto			
Louisiana Waterthrush	Milwaukee/Ozaukee			
Kentucky Warbler	Kenosha			
Connecticut Warbler	Kenosha, Milwaukee/Ozaukee			
Hooded Warbler	Sheboygan, Milwaukee/Ozaukee, Kenosha			
Summer Tanager	Milwaukee/Ozaukee			
American Tree Sparrow	Bayfield, Kenosha			
Grasshopper Sparrow	Sheboygan, Oconto			
Henslow's Sparrow	Sheboygan, Winnebago			
Le Conte's Sparrow	Bayfield			
Fox Sparrow	Winnebago, Oconto			
Lapland Longspur	Winnebago, Oconto			
Dickcissel	Waupaca			
Western Meadowlark	Waupaca, Milwaukee/Ozaukee			
Evening Grosbeak	Bayfield, Oconto			

WSO Records Committee Report: Spring 2008

Jim Frank

10347 W. Darnel Avenue Milwaukee, Wisconsin 53224 414. 354. 2594 jcfbirddr@yahoo.com

The WSO Records Committee reviewed 46 records of species for the spring season, accepting 29 of them. Two additional winter season reports were accepted.

Highlights of the spring season included Wisconsin's first hypothetical record of a Virginia's Warbler, the fourth state record of a Bullock's Oriole, a fifth Snowy Plover record, and a tying date for earliest spring record of a Wilson's Warbler.

Observers were notified of the committee's decisions by postcard in the instance of accepted records and by personal letter in the case of records not accepted.

ACCEPTED RECORDS

Eurasian Wigeon-

#2008-028 Dane Co., 15, 16 March 2008. Thiessen.

This wigeon contrasted with the adjacent American Wigeon in having a rusty head, cream-colored crown, along with a black-tipped pale bluish

bill, and black undertail coverts with white in front of that.

Cinnamon Teal—

#2008-009 Brown Co., 21 May 2008, T. Wood; 30 May 2008, Wojtyla.

These observers reported a duck of overall chestnut/cinnamon brown color with buffy back feathers edged in black. The black bill was slightly larger than that of a Blue-winged Teal. The crown, tail, and rear flanks were also black. The light blue wing patch was also evident. Finally, an orangered eye was reported.

Barrow's Goldeneye-

#2008-024 Sheboygan Co, 2 March 2008, Sontag.

This drake goldeneye differed from the associated Common Goldeneyes in having a further extension of black down the flanks, with this black encompassing several white spots. The Common Goldeneyes exhibit more white on the flanks with a few black spots in this white area. In addition, the black of the point of the shoulder area extended down even farther than the rest of the black on the sides of the Barrow's Goldeneyes. The fore-head of the Barrow's rose more steeply than the Common's forehead, the black bill was stubbier than that of the Common, and the white spot on the face of the Common Goldeneyes was elongated into more of a white crescent or teardrop on the Barrow's Goldeneye.

This report is also of interest in that it stated that several female gold-eneyes in the flock had all yellow bills. Closer inspection of the size and shape of the bill did not find the bills to be shorter or stubbier than the bills of the Common Goldeneyes, emphasizing that the color alone is not diagnostic of a female Barrow's Goldeneye. It would only be a screening trait requiring closer inspection of those with all yellow bills.

Pacific Loon-

#2008-012 Sheboygan Co., 24 March 2008, Schaufenbuel.

Seen in direct in-flight and nearby swimming comparisons to a Red-throated Loon, this bird was the same size, but not as thin-winged. The bill was dark, relatively short, and straight. The crown was smooth in contour. The back and hind neck were quite dark. Although no chin necklace was evident, there were some diffuse areas of color between the dark hindneck and white foreneck. No white was evident periocularly.

American White Pelican—

#2008-019 Winnebago Co., 14 March 2008, Reimer.

These six pelicans were swimming near Bald Eagles standing on nearby ice, dwarfing them in silhouette shape. The large orange bills and black wingtips were evident.

This is a record early date for Wisconsin.

Swainson's Hawk—

#2008-011 Marquette Co., 3 May 2008, Tessen.

This report is of a bird seen flying across the road in front of a car. It was described as a buteo with longer wings than a Red-tailed Hawk, a light tail, and light wing coverts contrasting with dark flight feathers. Face, head, and upper breast patterns weren't mentioned.

A considerable number of people may have observed this bird, but only this report was received.

Snowy Plover—

#2008-039 Green Lake Co., 27 May 2008, Schultz (photo), Reichoff.

This very small plover had a very pale, sandy-brown mantle, wings, and crown. The stubby bill was black as were the legs. An incomplete black breast band was evident, absent ventrally, but thick laterally, and there was a thin black band across the white forehead. The expected dark ear patch was just beginning to take on a darker coloration, thus not very striking.

This is Wisconsin's fifth record, the last being in 1992. The previous four reports were along Lake Michigan (3) and Lake Superior (1).

Long-billed Curlew—

#2008-038 Juneau Co., 18 May 2008, Epstein.

This Mallard-sized shorebird had a downcurved bill that was about three times the length of its head. The overall color of the bird was tan/buff with an unmarked, darker brown head and dark primaries. The overall plumage was flecked/speckled with black. When the wings were raised, marked cinnamon-colored underwing linings were evident.

This is Wisconsin's ninth record and the first since 1975. Four of the nine records are from the period of 15–18 May.

Ruff—

#2008-010 Green Lake Co., 16 May 2008, Schultz (photo); 18 May 2008, Wood.

The photograph and written report indicate an overall brownish, fairly large shorebird, close to dowitchersized, with heavy black mantle markings in the appearance of buff-edged, but overall dark feathers. The throat and breast had heavy dark streaks and patches, irregularly dispersed across these areas. The belly and undertail coverts were white and unmarked. For the size of the bird, the bill seemed a bit short and thicker than typical of yellowlegs. The head also seemed a bit small in proportion to the body bulk and was otherwise a pale brown color. Of note were the written and photographic evidence of boldly banded folded tertials/wingtips of a black and chestnut pattern. The only other shorebird with similarly marked folded flight feathers are dowitchers, but those are much narrower bands than the bands noted on this Ruff.

The depth of water in which this bird fed precluded assessment of leg color and the rump pattern wasn't seen with the bird not seen in flight, but the thorough description and the availability of a photograph made the identification possible with numerous other points.

Black-legged Kittiwake—

#2008-025 Manitowoc Co., 15 May 2008, Sontag.

Although distinctly larger than nearby Bonaparte's Gulls, this gull was slightly smaller than the Ring-billed Gulls. The folded gray wing was not crossed by the expected black bar, having only a small amount of black in the area. The short legs were a striking black color; as was the bill. The white head had a black ear spot, and a black collar with an additional black smudge behind the eye. In flight, the front edge of the primaries was black as was a bar extending from the carpus, across the secondaries to the mantle. The slightly notched tail had a black terminal band that was broken by white in the tips of the central retri-

This is the second consecutive May observation along Lake Michigan.

Slaty-backed Gull—

#2008-018 Douglas Co., 6 April 2008, Svingen.

Previously documented and accepted in February and March 2008 reports from the same area, as well as Duluth, Minnesota. This provides a late spring date for the species.

Bewick's Wren—

#2008-029 Monroe Co., 6 May 2008, E. Wood (photo, audio).

This wren was larger than a House Wren, brown above and white below, with a white superciliary line. The tail was fairly long. The audio submission was of a jumble of clear notes and trills—consistent with a Bewick's Wren's complex song.

This is Wisconsin's first accepted record in more than a decade.

Virginia's Warbler—

#2008-031 Milwaukee Co., 10 May 2008, Lubahn.

This small warbler had a clean gray head and back, slightly darker gray wings, and a white belly. There were no wingbars evident. Yellow was reported in the throat area, rump, and undertail coverts. The reddish crown patch was not evident, as is usually the case. As it foraged, the observer noted a lot of tail wagging, a characteristic of the species.

This is Wisconsin's first record of a Virginia's Warbler; as a single observer report it is placed on the Hypothetical list for state. It might be interesting to note that there are five previous reports of this species from Ontario and two from Michigan.

Louisiana Waterthrush—

#2008-040 Dane Co., 3 April 2008, Mc-Dowell.

The photograph of this bird demonstrated the brown back, wings, tail, and crown. The breast was whitish to slightly yellowish-tinged with thin brown longitudinal streaking. Although there was a brown malar stripe, the throat was void of any streaking. The superciliary stripe was also whitish.

This record ties the second earliest record date for Louisiana Waterthrush for Wisconsin. The earliest was a 30 March record, twenty years earlier.

Wilson's Warbler—

#2008-034 Dane Co., 20 April 2008, Stutz.

This small, all-yellow bird surprised

the observer with the clean yellow color to the breast, the olive upperparts, and the black cap.

This ties the record early date for Wisconsin set in 1977.

Rose-breasted Grosbeak—

#2008-021 Marathon Co., 21 March 2008, Raymond-Wood.

A bit smaller than a robin, this bird had a black head, white breast, and red bib.

Black-headed Grosbeak—

#2008-017 Bayfield Co., 31 May 2008, Oksiuta (photo), Brady (photo).

The photograph demonstrates the black head, black back, and black wings, the wings having several white patches and spots apparent. The hefty dark gray bill is obvious. The breast, belly, and collar are all a dull orange color.

The bird reportedly spent two weeks visiting a feeder.

Blue Grosbeak—

#2008-014 Rock Co., 15 May 2008, West (photo), Tessen; 17 May 2008, Gustafson; 19 May 2008, Frank.

This dark blue bird exhibited two chestnut wingbars, black lores, and a dark gray, heavy, conical bill. It was larger than an Indigo Bunting, but slightly smaller than associated cowbirds and redwings. It was often located by its warbly Purple Finch-like song.

Painted Bunting—

#2008-036 Grant Co., 12 May 2008, Ra. Hoffman.

Initial attention was drawn to a soft, warbly song reminiscent of a Rose-

breasted Grosbeak. The underbody of the bird was red from the throat to the undertail coverts, as was the rump. The blue head was noted to have a red eyering and glimpses of the upper back suggested yellowish color.

Eight of Wisconsin's 14 spring records fall between 10–13 May.

Bullock's Oriole—

#2008-042 Walworth Co., 25–27 April 2008, Meisberger (photo).

The photo of the bird at an orange feeder shows the bright orange face and breast contrasting with the black back, wings, crown, eyeline, lores, and throat. The wings had a broad white patch at the level of a wingbar and white edgings to the folded primaries and secondaries. The thin, dark gray bill of an oriole was also apparent.

This is only Wisconsin's fourth Bullock's Oriole record, after November 1952, December 1992, and 3 May 2006 reports.

Hoary Redpoll—

#2008-015 Bayfield Co., 22–28 March 2008, Brady (photo); 13 April 2008, Oksiuta (photo).

#2008-016 Langlade Co., 30 March 2008, Richmond.

These overall paler redpolls received a closer look since paleness alone doesn't rule out Common Redpolls. The crown, auricular, and superciliary areas were white. The bill was smaller and stubbier than most of the Commons. Also of note was the white, unstreaked rump and one streak was noted on the undertail coverts of the Bayfield bird. The Langlade bird seemed slightly larger and longer tailed than the Commons it associated with.

RECORDS NOT ACCEPTED

Cinnamon Teal—

#2008-009 Brown Co., 2 May 2008.

This description simply states the bird had a cinnamon head, neck, body, and belly and that the bill was light gray. No reference was made to an overall size nor shape of the bird, nor size and shape of the bill. Without a more complete description, a Longbilled Dowitcher or Curlew Sandpiper could also fit this wording. In addition, without other reference points, if we make the assumption that the observer meant to describe a duck, the possibility of a hybrid teal is not adequately addressed. It is also unexpected that the bill was not the dark gray/black color typical of the species.

Barrow's Goldeneye-

#2008-035 Brown Co., 26 March 2008.

This brief report mentioned a "spotty gray" body, oval head, and yellow bill. The bill was felt to be shorter than a Common Goldeneye's bill. No head color was given and no reference was made to any other ducks, in particular other goldeneyes, being present for direct comparison. The shape of the head alone is a variable trait in goldeneyes—in that it can be changed by the bird. Again, more information would certainly be useful to assess this difficult-to-make identification.

Pacific Loon—

#2008-012 Sheboygan Co., 27 March 2008.

Seen at unspecified distance in flight and briefly on the water, this loon was reported to have a short, "not as thick," and straight bill, but color wasn't indicated. This report was of a clean demarcation between the dark hindneck and white foreneck instead of a more mottled look indicated by the observer three days earlier. In addition, this report indicated the head and neck to be lighter than the uniformly dark back, instead of relatively uniformly colored with the back in the first report. The presence or absence of white periocularly wasn't specified, nor was the crown's contour mentioned.

Brown Pelican—

Noted in v-shaped flight formation, these 6–7 birds flew silently. They were felt to be the color of Sandhill Cranes, but without trailing legs and probably had the wingspan of Sandhills. The head appeared lighter in color than the rest of the body, but no particular

color was assigned to it. The head was

described as "partially folded"; the bill was described as "long and pointy".

#2008-041 Lafayette Co., ?? April 2008.

The lack of trailing legs seems to detract from the identification as cranes or herons, but the lack of complete color description and beak description leave doubt as to the birds being Brown Pelicans. The seemingly large size, v-formation flight, folded neck, suggestive grayish body tones, and white somewhere in the head area could also be characteristic of Black-crowned Night-Herons.

The lack of binoculars on a canoe trip hindered more exact field marks from being reported.

Black Vulture—

#2008-037 Door Co., 15 March 2008.

This all black raptor was larger than a nearby Rough-legged Hawk, but not large enough to be an eagle. The long black wings exhibited silvery-white primaries, but whether this was noted on the upper or lower surface of the wing wasn't clearly stated. The tail was black, without any contrasting markings, but the relative length/shape of the tail wasn't specified. In flight, "little or no dihedral" was evident. The observer specifically stated that the head and legs were not noticed/seen although no red was evident to the observer in writing the description.

The evidence appears to narrow down to a vulture based on seeming size and dark overall coloration. Although the silvery primaries are consistent with a Black Vulture, a couple of other points leave a shade of uncertainty. The head was acknowledged to specifically not be looked at. The angle and lighting can sometimes allow the head of a Turkey Vulture to appear dark, particularly in younger birds. The wording allowing for some mild dihedral in flight silhouette doesn't eliminate one species or the other from consideration. The silvery flight feathers of a Turkey Vulture should extend across both primaries and secondaries, which wasn't the case in this report, but angle of view can cast some doubt here as well. Perhaps the least variable characteristic would be the tail shape, very short, disproportionately so in a Black Vulture. Unfortunately this contrast in size/shape of the tail isn't addressed in the description. Finally, the short, choppy flaps of a Black Vulture could have been contrasted with the long, deep flaps of a Turkey Vulture

A preponderance of the evidence leads to Black Vulture, but a couple specific bits of evidence weren't supplied to convincingly eliminate a Turkey Vulture.

Prairie Falcon—

#2008-023 Columbia Co., 14 May 2008.

This brief, in-flight observation was of a hawk about the size of a female Cooper's Hawk. It was felt to have a lighter color than a Peregrine and more rounded wings than a Peregrine. In addition, the breast was spotted instead of barred. Unfortunately, no mention of the axillary color pattern was made despite the apparent view of the breast.

The exact wing shape is uncertain, other than the suggestion that they were more rounded than a Peregrine. It wasn't specifically stated that they were falcon-like or accipiter-like. The brevity of the sighting is always a problem in Prairie Falcon reports. Of greatest concern however, is the lack of specific description of the axillary pattern. This would have been the most difficult piece of evidence to dispute.

Black-necked Stilt-

#2008-020 Dane Co., 23 March 2008.

This report was of an in-flight, black and white bird, heading across an open, snow-covered field, seen from a moving car, without the aid of binoculars. It had "black on wings," "black was continuous on back," "black edging up on neck to head," and a "noticeable amount of white on belly and neck." The observer specifically stated that trailing legs were not noted. No comparison in size or shape to any other nearby birds was made.

Without some indication of the size and family of birds this bird fitted into, identification is difficult. In addition, the "black continuous on back" comment isn't consistent with the expected white rump and back of a stilt. Obviously, without some commentary as to the bill and legs, pinning down this identification isn't possible. Thoughts of a dark phase Snow Goose or Ross's Goose could be made on this limited description, because of the insufficient size and shape information.

Western Sandpiper—

#2008-022 Dodge Co., 6 May 2008.

Described as definitely larger than a nearby Least Sandpiper, this bird had black legs, a streaked breast, and light belly along with a "prominent downcurved bill." Also noted was rufous coloration on the crown, auricular area, and scapulars. The observer felt the downcurve of the bill was more prominent than his past experience with the species.

Consideration must be given to White-rumped Sandpipers having a similar rufous color patterns and streaking. The rump was not indicated as having been noted and consideration was not given to this possibility in the similar species discussion. One additional field mark given the good lighting and close distance might have been the all black mandible of the Western vs. the redbrown base to the mandible of a White-rumped.

Ruff-

#2008-010 Green Lake Co., 17 May 2008.

This shorebird was about the size of a Lesser Yellowlegs, but slightly larger and chunkier. It was overall grayish with some "darker markings on some wing feathers." The upper underparts were also grayish with scattered black spots. The bill was "short, dark, and slightly decurved."

The legs were not easy to evaluate

due to the tendency of this bird to consistently seek out belly-deep water to feed in.

While this report is likely of the Ruff seen and photographed by others, it differed in that the other information received was of a brownish bird rather than the grayish bird indicated here. Without seeing the legs or rump and with the vague nature of the markings described by this report, accepting this report by itself as a Ruff is difficult. The only point suggesting this wasn't a yellowlegs is the shorter bill, but the heavier proportion to the bill at the same time wasn't noted.

The subtleties of shorebird identification are more difficult to assess and put into words, but to accept reports, they must be more complete to adequately convey enough information to assess them. Finally, a delay of several weeks before completing such reports hinders the accurate recall of so many subtle characteristics.

Slaty-backed Gull—

#2008-018 Douglas Co., 6 April 2008.

Seen with viewing limited to a resting head-on angle, it was Herring Gull-sized, with a darker gray mantle and a yellow bill with a red spot at the gonys. Leg color was not reported. It was felt to be too large for a Lesser Black-backed and too small for a Great Black-backed Gull.

Without better viewing conditions, all that can be said is this was likely the same Slaty-backed Gull present for the previous 3.5 months in the Duluth/Superior area.

Black-billed Magpie—

#2008-033 Bayfield Co., 18 May 2008.

Reports of this bird were unfortunately just a bit sketchy. Crow-sized and black and white descriptions of the bird were undoubtedly accurate, but not specific as to locations of the colors, the shape of the bill, and thus the family of the bird. Numerous birds are black and white. One report did indicate a long tail. The reports combined leave little doubt about the probable identity of this bird, but without more precise wording, the "picture" remains just a bit "out of focus."

Kirtland's Warbler—

#2008-013 Adams Co., 31 May 2008.

Seen primarily facing away from the observer, a blue-gray head, back, wings, and tail were reported, with black streaks on the back. Two white wingbars were also noted. The observer indicated a white eyering, without notation that it was the expected broken one of a Kirtland's. The yellow throat, breast, and belly were yellow with dark streaks on the sides.

No indication of size was made and no comparison was made to similar species. The unexpected description of the eyering and lack of comparison to similar species such as a Magnolia Warbler leave a bit of doubt to the report.

Again numerous people witnessed this bird, but only this abbreviated report was submitted.

Western Tanager—

#2008-027 Dane Co., 6 May 2008.

This briefly described bird gave no indication of size or bill shape. The black wing had a broken white wingbar (single wingbar?), a yellow eyering, and a bit of red on the throat. The back was dark with a scalloping pattern detected.

Without a size, bill shape, nor indi-

cation of the yellow head, breast, rump, and upper wingbar, we are left with the beginning of a description of a Western Tanager that might also fit a Cape May Warbler or female Baltimore Oriole, among other things.

Blue Grosbeak-

#2008-030 Washington Co., 18 May 2008.

This brief documentation was of a bird "similar to an Indigo Bunting but larger" with buffy upper wing stripe and a thinner second stripe. No mention of the bill size nor black area around the bill was made.

Other than stating it was similar to an Indigo Bunting, no direct color statement was made and there was no specific suggestion of how much larger it was. Indigo Buntings can have brownish wings before maturity, so additional characteristics are useful to help rule out aberrant Indigo Buntings that aren't being directly size-comparisoned to other birds.

Bullock's Oriole—

#2008-032 La Crosse Co., 17 May 2008.

This report simply stated the oriole had black on the throat and through the eye. It also indicated orange color on the bird, but in no specific area.

Without a more complete description including the size of the bird and bill shape, an oriole identification isn't certain. Even if an oriole is accepted based on the limited information, without more specifics, a variety of vagrant oriole species can have the indicated black on the throat and around the eye.



Eastern Towhee by Jack Bartholmai



Tundra Swan by Delia Unson and Chuck Heikkinen

Book Reviews

Birdwatcher: The Life of Roger Tory Peterson. Elizabeth J. Rosenthal, 2008. The Lyons Press, an imprint of The Globe Pequot Press. Hardcover; 437 pages + 16 unnumbered pages of photographs; ISBN 978-1-59921-294-4. \$29.95; \$19.77 at amazon.com

Roger Tory Peterson (28 August 1908–28 July 1996) is an iconic figure in American ornithology. The author, an enthusiastic amateur birdwatcher and an attorney in New Jersey, has interviewed over 100 people as the foundation of this biography. They are listed, with dates, on pages 395–398. As a result, we have a biography rich in personal anecdotes. The chapter notes are given in pages 399-419, followed by 3 pages of "Further Reading," ending with a very complete index, pages 423–437. This is clearly a fine piece of scholarship, but the scholarly apparatus in no way clutters the narrative.

The dustcover says that the author undertook to write the definitive biography of Peterson, and perhaps she has. The style is conversational, gently moving the reader along, and the material is organized into 19 chapters that give structure to the mass of material she had to deal with. The dustcover photograph is identified as being of Peterson working on a plate of shorebirds for Field Guide to the Birds of Britain and Europe, 1952; because the book first appeared in 1954, the given date must be of the photograph itself. As it happens, this charming photograph, even if it is so obviously posed, is not repeated in the bookbook lovers will want to preserve this in a protective sheath. There is a frontispiece, before the title page, of a younger Peterson with, improbably, a Sora perched on his back. The bird is identified as a sora rail [lower case thus].

As is common in newspapers and the like, the bird names throughout are not properly capitalized by the AOU standard, which I find distracting. Further: in a longer quotation on page 8, there is reference to something called "Sand Martins." From the context, it appears they were looking at Bank Swallows, in modern terminology. The oldest bird book I have at hand is Cory, C. B. 1909. The Birds of Illinois and Wisconsin. Field Museum of Natural History, Pub. #131. Zoological Series, volume 9. Even there, the term "Sand Martin" is not used, though Bank Swallow is. Incidentally, neither name appears in the index. "Sand Martin" is mentioned in passing in the appropriate volume of the Bent series, on page 401, but is not included in the index.

Peterson will always be a permanent part of the ornithological literature. Rosenthal makes note of the appearance of some of his vast published work, but there is no detailed bibliography. It would have been almost as big a task to have hunted down every edition and reprinting of his books and papers as it was for the biography itself. There *is* a lengthy bibliography in Devlin and Naismith, "The World of Roger Tory Peterson: An Authorized Biography, 1977." This work, mentioned only incidentally by Rosen-

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thal on page 421, is no longer in print, but is readily available at many usedbook sites, such as abebooks.com, for as little as a dollar or two. It includes stunning, full-color reproductions of some of Peterson's art work. It also has extensive lists of his professional activities, including art exhibits and memberships, together with notes and details of his eight honorary doctorates, of which I find no mention in Rosenthal's biography. Those who want even more on the subject of Peterson may wish to read Carlson, "Roger Tory Peterson: A Biography," University of Texas Press, available in hardcover from their website for \$16.72. All of these cover much the same ground, but from widely different sources. Here, Peterson is credited with having been awarded twenty-three honorary doctorates! They must have come fast and furious after 1977.

Birds in Flight: The Art and Science of How Birds Fly. Carrol L. Henderson, 2008. Voyageur Press, an imprint of MBI Publishing Company, Minneapolis. Hardcover; 160 pages, ISBN 9780760333921; \$25.00; \$16.50 at amazon.com.

This is a celebration of the elegance and beauty of bird flight. The photography is extraordinary, and most readers will savor this book for its beauty alone. But the explanations of basic bird biology and the aerodynamics of flight are handled in such a gentle, non-technical, non-mathematical way that those of us without a degree in engineering can grasp the details. Yes, we have "negative dihedral wings" on page 90, but such terminology is nicely explained and illustrated, and

carefully related to the natural history of birds with such wings. There are fine diagrams of air flow over wing surfaces. The author adopts a classification that distinguishes among six types of wings, with useful, simple terminology.

The photos are of birds throughout the world; the author and his wife, Ethelle, lead international birdwatching trips. Nearly all of the photographs are identified to species, the notable exceptions being the owl on page 72, the hawk on page 99, the gull on page 109, and the (I think) Canada Geese on [unnumbered] page 154. You won't believe the Redbreasted Nuthatch on page 20, becolor reproduction cause the somehow made it white and purple, with a yellow breast. The bird names are not properly capitalized, but birdwatchers probably have learned to take this in stride. The publisher's website says their authors should follow the Chicago Manual of Style, but I find nothing in that book governing capitalization rules adopted by AOU. Pages with at least some text are numbered, but pages devoted solely to a photograph are not numbered, which makes finding something from an index reference tricky. The Forster's Tern on [unnumbered] page 78 is identified by the caption on the facing page 79, but neither page is in the index.

This is a book for the bird lover, not a textbook or a technical monograph. Therefore, the author eschews literature references, but there is a Bibliography of numerous "standard references" on page 156. Some of the titles are older, like Gordon Aymar, 1938, "Bird Flight," but readily available at abebooks.com for \$2–\$4; the

work by Blanche Stillson, 1954, "Wings: Insects, Birds, Men," is likewise easily obtained for \$3–\$7. One could easily amass quite a library on the subject; the current title would be a good place to start.

The Vanishing Present: Wisconsin's Changing Lands, Waters, and Wildlife. Donald M. Waller and Thomas P. Rooney, editors. 2008. University of Chicago Press. Hardcover; xiv + 507 pages + 8 unnumbered pages of color plates between pages 210 and 211; ISBN 978-0-226-87171-4. \$40 at www.press.uchicago.edu; \$32 at amazon.com.

The title of this work refers to our difficulty in understanding how rapidly the status quo is changing. What we may perceive as "normal" is slipping into history. The changes that surround us are often cloaked by the absence of reliable details. We need a firm grasp of the history of environmental change; "documenting change hinges on how well we can unveil the invisible present." To this end, fully fifty experts have contributed to this volume. Their names and addresses are given in full on pages ix-xi; e-mail addresses are omitted, but for most of them can easily be found elsewhere.

With the book in hand, and you will surely want to buy it, you will be struck by the beautiful aerial photograph on the dustcover, credited to Gary Fewless at UW-Green Bay but not otherwise identified. Gary kindly e-mailed me to say that it is the estuary of the Mink River, in northern Door County. The Mink River flows SE into Rowley Bay on Lake Michigan, centered on section 24, R28E, T32N. There are

1757 acres of the estuary owned or managed by Nature Conservancy. At the bottom center of the photograph, one can see a portion of a highway with a large bus heading north. This could have been cropped out; I have to think the authors and editors left it in deliberately, to make the point about human impact—minimal here, but obvious nonetheless.

As the editors acknowledge, this book could have been written to cover the whole nation. "We focus on the changes going on here in Wisconsin because they present a synecdoche for changes under way across North America and around the world." (There is a useful glossary on pages 477–478, where "synecdoche," four syllables, is defined as "a figure of speech in which part of something is used to refer to the whole thing, or when a specific thing is used in place of a more general thing." Wisconsin is a tiny portion of the world, but what has happened here, and is happening, certainly stands for the rest of our planet.)

Throughout the book, organisms are usually identified by their common names; the editors compiled a thorough listing, pages 479–493, with the common names in the left-hand column, the Latin names in the right-hand column. The bird names are not properly capitalized, as is usual in books like this one.

The material is organized into six major categories, each of which is preceded by an uncredited introduction, doubtless written by the editors. Every chapter, 32 of them, deserves close reading, but Part Four: Changing Animal Communities will be of special interest to birders. David Sample and Michael Mossman authored "Two

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Centuries of Changes in Grassland Bird Populations and Their Habitats in Wisconsin"; Stan Temple and John Cary wrote "Wisconsin's Changing Bird Communities"; and in the next section is a contribution by Lawrence Leitner, John Idzikowski, and Gary Casper, "Urbanization and Ecological Change in Milwaukee County."

In Part Four is an unusual contribution by Les Ferge, "Changes in the Butterfly and Moth Fauna." Public attention is mostly drawn to larger mammals, and lepidopterans are paid scant attention. Les makes mention of the practice of springtime spraying of forests with Bacillus thuringiensis, a bacterium which is fatal when ingested by larvae of both butterflies and moths, in an effort to control the introduced gypsy moth. It is by no means specific to that species. Les cites evidence that there may even be local extinctions of adult butterfly populations. (The larvae of gypsy moths particularly eat oaks, and may on occasion defoliate them [temporarily]; however, the Banded Hairstreak and Edward's

Hairstreak [butterflies] oviposit preferentially on oaks, and their caterpillars feed on young oak leaves. Thus, non-target organisms may be affected.)

The understory of woods may be infested with garlic mustard (Cruciferae or Brassicaceae), introduced from Europe, almost to the exclusion of the rest of the normal herbaceous layer. (High Cliff State Park in Calumet County is a particularly bad example of this.) Les Ferge points out that several butterflies that normally oviposit on woodland crucifers turn to garlic mustard when their preferred hosts have disappeared. The eggs hatch and the caterpillars begin feeding on garlic mustard; then they abruptly cease feeding and ultimately starve to death. Local extirpation of certain species has occurred; some butterflies may have enough genetic diversity to adapt to this new host, he points out, or this may be yet another instance of "The Vanishing Present."

-Neil A. Harriman, Co-editor

About the Artists

Jack R. Bartholmai is an amateur wildlife photographer and wood sculptor living near Beaver Dam with his wife Holly. His work appears frequently in local newspapers, travel brochures, calendars, and bird publications. He gives numerous presentations on birds and his work. He is an active member of the Horicon Bird Club. Jack was the 2005 recipient of

the WSO Bronze Passenger Pigeon Award.

Delia Unson and **Chuck Heikkinen** have been birders for 15 years, and have been photographing birds since 2003. They live in Madison, birding and photographing both in and out of that city.



Song Sparrow by Delia Unson and Chuck Heikkinen



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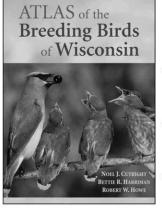


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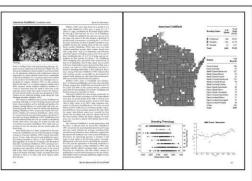
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- Treasurer* Christine Reel, 2022 Sherryl Lane, Waukesha, WI 53188-3142; 262. 547. 6128; christinereel2@gmail.com
- Editors* Bettie and Neil Harriman, 5188 Bittersweet Lane, Oshkosh, WI 54901-9753; 920. 233. 1973; bettie@new.rr.com; harriman@uwosh.edu

COMMITTEE CHAIRS (2008-2009)

- Annual Conventions Scott Baughman, 3043 Rolling Meadows Drive, Sheboygan, WI 53083-8107; 920. 457. 5574; baughman@charter.net
- Awards* Daryl D. Tessen, 3118 N. Oneida Street, Appleton, WI 54911; 920. 735. 9903; bhaunts@sbcglobal.net
- Bird Reports Coordinator* Randy Hoffman, 305 Fifth Street, Waunakee, WI 53597; 608. 849. 4502; ecurlew@hotmail.com
- Badger Birder* Mary Uttech, 4305 Hwy. O, Saukville, WI 53080; 262. 675. 6482; muttech@asq.org
- Bookstore* Don Reel, 2022 Sherryl Lane, Waukesha, WI 53188-3142; 262. 547. 6128; wsobookstore@hotmail.com
- Conservation* William P. Mueller, 1242 S. 45th Street, Milwaukee, WI 53214; 414. 643. 7279; iltlawas@carthlink.net
- Education* Mariette Nowak, N9053 Swift Lake Road, East Troy, WI 53120; 262. 642. 2352; mmnowak@wi.rr.com
- Field Trips* Thomas R. Schultz, N6104 Honeysuckle Lane, Green Lake, WI 54941-9609; 920. 294. 3021; trschultz@centurytel.net; and Jeffrey L. Baughman, W2640 Middle Road, Campbell-sport, WI 53010; 920. 477. 2442; jbaughman@csd.k12.wi.us
- File Keeper Thomas C. Erdman, Richter Museum of Natural History, MAC 212, University of Wisconsin-Green Bay, 2420 Nicolet Drive, Green Bay, WI 54911-7001
- Historian* Noel J. Cutright, 3352 Knollwood Road, West Bend, WI 53095-9414; h. 262. 675. 2443, w. 262. 268. 3617; Noel.Cutright@we-energies.com

Honey Creek

- Hotline (262. 784. 4032) Mark Korducki, 16290 W. Crescent Drive, New Berlin, WI 53151; 262. 784. 2712; korducki@earthlink.net
- Legal Counsel David L. Kinnamon, 9507 N. Wakefield Court, Bayside, WI 53217-1245; 414. 277.
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 Momborshin* Jesse Peterson, 810 Canser Drive, Waynokee, WI 53507 1030; 608, 849, 3109
- Membership* Jesse Peterson, 810 Ganser Drive, Waunakee, WI 53597-1930; 608. 849. 3108; peterson.jesse@tds.net
- Publicity* Ursula C. (Sandy) Petersen, P.O. Box 607, Stoughton, WI 53589; buboarcto@aol.com
- Records* Jim Frank, 10347 W. Darnel Avenue, Milwaukee, WI 53224; 414. 354. 2594; jcfbirddr@yahoo.com
- Records Committee Archivists John Idzikowski, 2558 S. Delaware Avenue, Milwaukee, WI 53207-1908; 414. 744. 4818; idzikoj@uwm.edu; and Brian Boldt, 1126 E. Pleasant Street #201, Milwaukee, WI 53202; 414. 225. 2543; bboldt@excelcomm.com
- Research* Sheldon J. Cooper, Department of Biology and Microbiology, University of Wisconsin-Oshkosh, 800 Algoma Boulevard, Oshkosh, WI 54901; 920. 424. 7091; cooper@uwosh.edu
- Scholarships and Grants* Janine Polk, 1407 Frederic, Eau Claire, WI 54701-4902; 715. 839. 9265; j 1 polk@yahoo.com
- Webmaster* Lennie Lichter, 24703 Lake Road, Cashton, WI 54619; 608. 269. 5847; lennieandmarie@yahoo.com
- Youth Education Coordinator* Barbara Duerksen, 17494 Merry Hill Road, Richland Center, WI 53581; 608. 538. 3820; bduerksen@mwt.net
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