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Send all manuscripts and related correspondence to the Editors. Information for "Seasonal Field Notes" should be sent to the Bird Reports Coordinator (see inside back cover). Art work and questions about the art should be sent to the Assistant Editor for art (see left column). Manuscripts that deal with Wisconsin birds, ornithological topics of interest to WSO members, and WSO activities are considered for publication. For detailed submission guidelines, see pages 131–132 of the Summer 2007 issue (Vol. 69, No. 2) or contact the Editors. As a general guide to style, use issues after Vol. 60, No. 1, 1998.

Front Cover: The "dick, dick, dickcissel" was heard in every county in Wisconsin in the summer of 2012, including from this Dickcissel photographed by Michael Huebschen at Buena Vista Marsh in Portage County on 25 June 2012.

Passion for Birds Should Equal Passion for Conservation

I was reminded of something again the other day that I have been aware of now for several decades. When it comes to bird conservation, Noel Cutright has been out in front of many of us for a very long time.

I say that after stumbling across a "President's Statement" that Noel wrote early in 2004 during his one-year return engagement as WSO president. (He had given birth to this column during his first term as president in 1986.) The 2004 statement was entitled "Let's Be Passionate" and explored whether we—as individuals or as a Society—were doing enough in any facet of bird conservation: legislation, education, research, communication., action, and cooperation.

That same question leaped out of our members' responses to the survey that Noel and Randy Hoffman, another former WSO president, initiated as part of our current strategic planning effort. Conservation activities are **critically important** to many of our members who not only value the society's contribution to bird research, but want to see WSO move even further beyond "enjoying" birds and do more to protect them.

That same message came from non-members we surveyed. One-third of the non-member respondents stressed an interest in seeing WSO be more conservation-minded, with a focus on habitat protection, conservation of threatened species, and scientific studies. Said one respondent: "I suppose if I were to join it would be because of a greater emphasis on birds (i.e., conservation) than on birding, as my perception is that the WSO is somewhat focused on these kinds of things and less on conservation."

Writing a decade ago, Noel voiced a concern that was reflected in both the survey and in the planning committee's discussions: "I'm frustrated when I read recent surveys that indicate that there are more people who watch birds than hunt or fish, and that birding is the fastest-growing outdoor activity in America. But where are these masses when it comes to bird conservation? Too often, it seems they take things for granted or find bird conservation as a distraction to avian enjoyment. I constantly ask myself, how do we move birders and wildlife viewers from recreation to bird conservation efforts, including land purchases, cooperative agreements with agencies, donations and contributions, willingness to support alternate funding strategies for wildlife programs, and more. Birding and conservation **must** go hand-in-hand."

I guess that's one of the key reasons that I'm a member of WSO. That's why I've long helped raise money to protect WSO's land at Honey Creek and pushed to see us lend more financial support to efforts like the Bird Protection Fund of the Natural Resources Foundation. It's why I'm helping stage events for

the Great Wisconsin Birdathon and why I serve as state coordinator for Bird City Wisconsin.

Ten years ago Noel was urging us all to tell our legislators how dangerous our world had become for migrating birds, citing just the sort of hazards that Bird City is working to fight: outdoor cats, agrochemicals, speeding cars, reflective windows, illuminated skyscrapers, and tall communication towers.

Noel quoted author Scott Weidensaul: "I tell my birder friends, count and enjoy the passing migrants—but also make a vow to spread the message. Carry the gospel. Lobby. Plead. Harangue. Cajole. Badger. Do whatever it takes. For tens of millions of years, birds have blessed the skies with flight and majesty. Now it's time for us to do our parts."

As we celebrate International Migratory Bird Day this year, let's keep that thought front and center.

Arrivals/Departures: Looking for a New Editor

When they jointly undertook the job as co-editors of *The Passenger Pigeon*, WSO's flagship publication, I know for a fact that neither Bettie nor Neil Harriman expected to still be turning out four journals a year more than a decade later.

I *also* know that one of my most important jobs as president is to find a suitable successor(s) for them. And I have less than a year to get it done.

The Society regularly rotates its presidents and vice presidents on a two-year cycle. But its other officers—treasurer, secretary, and editor—have generally served much longer terms. Right now, however, we are in a two-year period that will see all three of those jobs change hands:

- Bettie and Neil plan to retire in May of 2014. They took over The Pigeon in mid-2003, succeeding R. Todd Highsmith, who had edited the journal for 5 1/2 years.
- Christine Reel, who has served as treasurer since 2002, is retiring at the May 2013 convention in Ashland, where members are expected to elect Mickey O'Connor, avian zookeeper and bird bander at the Milwaukee County Zoological Gardens, to succeed her.
- The 2012 convention in Middleton saw the retirement of Secretary Jane Dennis, who was succeeded by Jenny Wenzel, after serving the Society for 16 years.

Knowing the importance of finding a qualified successor, I asked Bettie to spell out the job requirements. Here was part of her reply, which I shared in an article six months ago in the Badger Birder:

- The editor (or editors) of *The Passenger Pigeon* needs to have an excellent knowledge of English: vocabulary, grammar, and punctuation.
- An excellent understanding of the birds found in Wisconsin and knowledge of the Wisconsin birding community makes the job easier. There

are many outstanding birders in our organization who would be willing to assist with specific bird questions or review an article. There are currently eight authors who contribute to each volume, plus an Art Editor.
- The Pigeon Editor must be able to set the rules and deadlines for the journal, adhere to them, and get all contributors to do so as well.
- Being an Editor requires one to be organized and detail-oriented, able to communicate clearly, concisely, and firmly to authors and potential authors, but also diplomatically.
- The more computer-knowledgeable the Editor is, the easier the job will be.

If you are willing to consider undertaking this volunteer position for WSO, please contact me at cschwartz3@wi.rr.com or 414-416-3272. Or you can reach Bettie at 920-233-1973 or bettie@new.rr.com. She is eager to answer any and all of your questions about this important position in the state's ornithological community.

And anyone else can and should take the time to call or write Bettie just to say thank-you for a job well done.

Arrivals/Departures of Another Sort

I'd also like to pass along a shoutout to WSO stalwart Bob Domagalski from Ryan Brady, who chairs WSO's Records Committee:

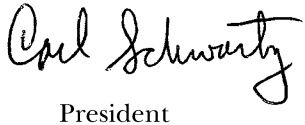
"Two of Bob's keystone documents detailing WSO Records have now been updated on the WSO web site. Previously up to date as of 2009, the documents are now current through Spring and Summer 2011 for Arrivals/Departures and Wisconsin Rare Bird Records, respectively. These documents can be viewed on the Records page of the WSO website at http://wsobirds.org/. Many thanks to Bob for his tireless efforts in maintaining these valuable lists."

I not only can second that salute (and mention that Bob also is WSO's long-time Christmas Count compiler), I also can share some emails from satisfied users of WSO's evolving records systems (one of the Society's core functions):

Tom Wood of Menomonee Falls (Waukesha County) added: "The new method of searching for a particular species in the Arrivals/Departures records works quite well with Internet Explorer. Thanks, Bob."

From Kerry Beheler of Mount Horeb (Dane County): "Sincere thanks to all the techno-marvelous people who are making this system so easily accessible to the list users. MUCH appreciated!"

To which Ryan replied: " Be sure to send some thanks along to WSO web administrator Paul Jakoubek as well!"



President

American Kestrel by Steve Fisher

Habitat Associations of the Eastern Whip-poor-will (*Antrostomus vociferus*) in a Heterogeneous Landscape

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ABSTRACT

The Eastern Whip-poor-will (Antrostomus vociferus) *is a nocturnal bird whose abundance is declining throughout much of its breeding range. The reasons for this decline are unknown, but loss of suitable breeding habitat has been implicated. We established 60 study sites in five counties of central Wisconsin to study habitat associations of breeding Eastern Whip-poor-wills. Sites included dry upland forest tracts of >1 ha. We measured 14 microhabitat variables at each site to describe forest structure. Tree species composition and soil structure also were determined for each site. Factor analysis was used to derive a smaller subset of composite habitat variables, and logistic regression analysis was used to relate presence-absence of Eastern Whip-poor-wills to the composite habitat variables, tree species composition, and soil structure. Singing male whip-poor-wills were present at 30 sites and absent from 30 sites. Presence of whip-poor-wills in a tract was related negatively to composite variables representing herb cover, forest stature, and understory density. Presence of Eastern Whip-poor-wills was related positively to proportion of* Pinus banksiana *and negatively to* Fraxinus pennsylvanica, Acer rubrum, *and* Quercus alba *in a tract. Whip-poor-wills also were associated with soils with increasing sand content. Thus, presence of Eastern Whip-poor-wills was related positively to younger forest tracts with an open understory dominated by pioneer tree species that thrive in sandy soils, but they avoided more mature tracts with more undergrowth and later-successional or mesic species and water-retaining soil. Preserving forested tracts adjacent to open recently-cleared*

areas may ensure the persistence of Eastern Whip-poor-wills in central Wisconsin and elsewhere.

INTRODUCTION

Eastern Whip-poor-wills (*Antrostomus vociferus*) are nocturnal migratory birds that nest locally throughout the northeastern United States and southeastern Canada. Because of their cryptic coloration and nocturnal activity, little is known about the behavior and ecology of Eastern Whip-poor-wills, and much of the available information is anecdotal (Cink 2002). In recent years, breeding bird surveys have revealed a decline in Eastern Whip-poor-will abundance in many parts of its breeding range (Sauer et al. 2005), including throughout the midwestern (Temple et al. 1997) and northeastern United States (Veit and Petersen 1993) and in Canada, where it is listed as threatened due to a >30% decline in population sizes over the past decade (Anomymous 2009). Although there are many possible explanations for this decline, the most frequently cited is loss of suitable nesting habitat.

Eastern Whip-poor-wills nest on the floor of dry and well-drained forests (Mousley 1937), but small (<1 ha) isolated forest patches within agricultural matrices are not utilized (Cink 2002). In Wisconsin, Robbins (1991) characterized whip-poor-will nesting habitat as oak forest. However, in other parts of their geographical distribution, whip-poor-wills are found in forests that range from purely coniferous to purely deciduous (Wilson 1985, Garlapow 2007, Wilson and Watts 2008). Whip-poor-wills apparently require open areas for foraging (Tyler 1940), and a key element of habitat use by foraging whip-poor-wills is sparse ground cover (Eastman 1991, Garlapow 2007). However, they may nest in forest tracts with either an open (Wilson 1985, Wilson and Watts 2008) or dense understory (Wilson and Watts 2008). Thus, Eastern Whip-poor-wills generally nest in forested sites that are adjacent to openings that are used for foraging (Tyler 1940, Wilson 1985, Wilson and Watts 2008).

In a loblolly pine (*Pinus taeda*) plantation in North Carolina, regenerating forest edges and open regenerating stands following timber harvesting have the highest Eastern Whip-poor-will densities, suggesting that such habitats provide food or breeding resources not readily available in forest interiors (Wilson and Watts 2008). Thus, landscape configuration no doubt influences the abundance of whip-poor-wills (Wilson and Watts 2008).

Because of the whip-poor-will's decline in abundance across large parts of its breeding range, determining habitat requirements of local populations and instituting subsequent management strategies for this bird is a priority (Donovan et al. 2002). Grand and Cushman (2002) recommended maintaining the integrity of habitat patches to protect Eastern Whip-poor-wills. However, quantitative descriptions of habitat associations of the whip-poor-will are sparse, and site-specific data related to forest structure, floristic composition, and soil drainage capacity are needed for local and regional conservation efforts. Accordingly, our study relates presence and absence of Eastern Whip-poor-wills in central Wisconsin to habitat

structure, tree species composition, and soil structure.

Study Area

The study area is located in the central sand plain geographic region of Wisconsin, a poorly-drained lowland formed mostly upon sandstone. The region is covered predominantly by river and glacial lake deposits, glacial drift, and large marshes and swamps (Vogeler 1986). Based on Eastern Whip-poor-will locality data (Temple and Cary 1987, Anonymous 2002), five counties (Green Lake, Marquette, Waushara, Adams, and Juneau) were selected for study. These counties were selected because they had whip-poor-wills summering in multiple locations (personal observation) and contained many tracts of forest that lay within a matrix of marshes and agricultural fields. We used Benzschawel (2001) to locate accessible public land in the study area. Sites were selected if they were dry upland forest tracts of >1 ha and were solely natural forest growth rather than commercial timber plantings. Although the study sites shared those criteria, the landscape was sufficiently heterogeneous to provide forest stands that varied considerably in age, structure, plant species composition, and soil type. We included 60 study sites in our study area (20 sites in Adams County, 16 in Waushara County, 13 in Juneau County, 7 in Marquette County, and 4 in Green Lake County). Sites were at least 2 km apart, and the most distant sites were approximately 50 km apart.

Methods

Sampling procedures—In Wisconsin, whip-poor-wills have been confirmed nesting (with eggs) from 7 May to 9 July (Robbins 1991). We therefore established study sites from 1 to 30 June 2002, when whip-poor-wills were most likely to be on their nesting territories. We searched for whip-poor-wills within each site on warm, still nights throughout the study period. Because whip-poor-wills call most actively at dawn and dusk and during moonlit nights (Cooper 1981, Wilson and Watts 2006), we searched for whip-poor-wills between sunset and one hour after sunset, one hour before dawn to dawn, and throughout nights with bright moonlight.

To determine if whip-poor-wills were present in a forest tract, we listened for Eastern Whip-poor-will vocalizations. If no birds were vocalizing (whip-poor-wills could be heard up to 1 km away on a quiet night in the study area (unpubl. observation), we used a portable tape recorder to play the Eastern Whip-poor-will song (Elliott et al. 1997) for 20 sec and listened for responses. If no birds were heard after 1 min, we repeated this procedure and listened again. If there was still no response, we marked our position with a global positioning unit (Magellan Meridean Gold, Smyrna, TN) and labeled it as a site without whip-poor-wills. We returned to those sites at least two other times in June to verify, by listening and playback, the absence of whip-poor-wills. If we heard one or more whip-poor-wills or a bird responded to playback at a site, we used a high-powered flashlight to locate the bird. After locating the individual, we marked the position with a

Table 1. Descriptions of microhabitat variables measured in this study.

Variable	Description
Canopy height	Maximum height of the canopy directly above the sampling station
Overstory tree density	Number of overstory trees within a 100-m^2 circle centered on each sampling station
Understory tree density	Number of understory trees within a 100-m^2 circle centered on each sampling station
Shrubs ≥1 m in height	Number of such shrubs within a 5-m^2 circle centered on each sampling station
Shrubs <1 m in height	Number of such shrubs within a 5-m^2 circle centered on each sampling station
Herbaceous plant cover	Relative cover of herbaceous plants within a 5-m^2 circle centered on each sampling station
Leaf litter cover	Relative cover of leaf litter within a 5-m^2 circle centered on each sampling station
Bare ground cover	Relative bare ground within a 5-m^2 circle centered on each sampling station
Logs 5–10 cm in diameter	Number of such logs within a 5-m^2 circle centered on each sampling station
Logs 11–20 cm in diameter	Number of such logs within a 5-m^2 circle centered on each sampling station
Logs>20 cm in diameter	Number of such logs within a 5-m^2 circle centered on each sampling station
Mean tree distance	Mean distance to the closest tree in each of the four cardinal compass directions, starting from the center of a sampling station
Mean tree diameter	Mean diameter at breast height (dbh) of those four trees
Forest type	A value from 1 to 5 to characterize a sampling station along a continuum of forest types from purely deciduous to purely coniferous.

global positioning unit and labeled it as a site with Eastern Whip-poor-wills present. We attempted to equalize the number of sites where whip-poor-wills were present with those where they were absent.

We measured 14 microhabitat variables at six to 12 sampling stations within each of the 60 sites (Table 1). Stations were randomly selected within a site, and larger tracts had more stations for more complete representation. Canopy height was measured as the distance from the forest floor to the highest point in the canopy above each station using a laser range finder (± 1 m; Bushnell Yardage Pro Scout, Overland Park, KS). We recorded the number of overstory trees within a 100-m^2 circle at each station. A free-standing woody plant was considered an overstory tree if its diameter at breast height (dbh, 1.3 m from the forest floor) was ≥10 cm and was ≥3 m in height. Trees meeting these size criteria were counted even if dead or dying. We recorded the number of understory trees within a 100-m^2 circle centered on a station. An understory tree was defined as a free-standing woody plant <10 cm dbh but ≥ 3 m in height. We recorded both the numbers of shrubs <1 m in height and those ≥ 1 m in height within a 5-m^2 circle at each station. Shrubs were defined as woody plants that were <3 m in height.

We described the forest floor at each station by estimating the percentage of herbaceous plants, leaf lit-

ter, and bare ground that covered the forest floor within the 5-m^2 circle. Coverage of each of those variables was assigned a value of 0 (0% coverage), 1 (1–25%), 2 (26–50%), 3 (51–75%), or 4 (76–100%). At each station, we also counted the number of fallen trees and branches (logs) that lay within the 5-m^2 circle. Logs were assigned to one of three size groups (5–10 cm, 10.1–20 cm, and >20 cm) based on their greatest diameter.

We measured two variables to describe the openness and stature (size of trees) of the forest. At each sampling point, we placed two 30-cm rods in a perpendicular cross on the forest floor. Lines extending from the tips of those rods divided each station into four equal sections. For each of the four sections, we recorded the distance to the nearest live overstory tree from the center of the cross and calculated the mean distance to each of the four trees. We also measured the dbh of each of those four trees and calculated the mean dbh.

We characterized the forest type within a 100-m^2 circle centered on each sampling station by indicating the percentage of deciduous and coniferous trees and placed each station into one of five forest types. If the trees at a station were all deciduous, then the station was classified as deciduous and assigned a value of 1. If most trees were deciduous and 1–25% of the trees were coniferous, then the station was classified as deciduous mixed and assigned a value of 2. If a station contained >25% and ≤75% coniferous trees, then it was classified as mixed and assigned a value of 3. A station that contained >75% coniferous trees but had at least 1% deciduous trees was classified as coniferous mixed and assigned a value of 4. If all trees at a station were conifers, then it was classified as coniferous and assigned a value of 5.

To describe tree species composition within each site, we determined the species of each tree used for recording distance and diameter at each station. *Quercus rubra* (northern red oak) and *Quercus velutina* (black oak) were encountered throughout the study area. Without the presence of fruits, these tree species were difficult to distinguish in the field, and hybridization ((Jensen and Eshbaugh 1976) further complicated identification. For these reasons, we treated *Q. rubra* and *Q. velutina* as one species, which we designated as the *Q. rubra-Q. velutina* complex.

Forest structure and floristic composition may have been important in habitat use by whip-poor-wills and were influenced largely by the underlying soil. Soil structure also may have influenced nest-site selection by the ground-nesting Eastern Whip-poor-will. For each site, we therefore characterized soil structure. We used the coordinates that were obtained with the global positioning unit for each site and plotted those positions on a US Geological Survey map. We then used those maps to find the sites on US Department of Agriculture Soil Conservation Service soil survey maps to identify the soil type at each study site. There were 21 different soil types represented at the 60 sites, but soils could be separated into six distinct classes. Because soil class is important in determining drainage capacity and plant species composition, we used this information for analysis. The six classes were muck, complex, loamy sand, fine loamy sand, sand, and

fine sand. We ranked classes from least sand content (muck) to highest sand content (fine sand) and assigned a numerical value from one to six to each class.

Data analysis—All statistical analysis was conducted using SAS (2001). To describe forest structure while using the fewest raw habitat variables, we used factor analysis, with each sampling point representing a single observation. Thus, fewer composite variables that retained the structure of the original 14 raw variables were derived from this analysis (Seamon and Adler 1996). Principal axes factoring produced initial communalities that were inserted as diagonals in a preliminary factor analysis (Cureton and D'Agostino 1983). Factors from the preliminary analysis then were subjected to oblique promax rotation to produce a new set of factors (Cureton and D'Agostino 1983). Salient factors were retained based on a scree plot.

The resulting salient factors were used in a multiple logistic regression analysis to relate presence-absence of whip-poor-wills to habitat variables. The dichotomous dependent variable was represented by presence or absence of whip-poor-wills at a study site, and the mean value of each salient factor for a given site represented the independent variables. We constructed a single full model that included all salient factors.

The importance of tree species composition was assessed by calculating the proportions of trees represented by each species at each study site. Many tree species were encountered only rarely. Therefore, we included only tree species that were present in our study sites ≥ 1% of the time and grouped the remaining species into a single category (rare species). We used proportions representing 13 tree species or species complexes as the floristic variables {*Pinus banksiana* (jack pine), *Pinus resinosa* (red pine), *Pinus strobus* (white pine), *Acer rubrum* (red maple), *Betula nigra* (river birch), *Q. rubra-Q. velutina* complex, *Quercus alba* (white oak), *Quercus macrocarpa* (bur oak), *Fraxinus pennsylvanica* (green ash), *Populus grandidentata* (big-tooth aspen), *Populus tremuloides* (quaking aspen), *Prunus serotina* (black cherry), and rare species} as independent variables in simple logistic regression analysis to relate presence or absence of whip-poor-wills to floristic composition. For this purpose, we examined the significance level of each species variable separately entering into a simple logistic regression model because a full model would have included too many independent variables (13 species variables) relative to the sample size of sites (60 sites).

The importance of soil structure in affecting habitat use by Eastern Whip-poor-wills was assessed by conducting a simple logistic regression analysis, where whip-poor-will presence-absence represented the dependent variable and soil class (with six values reflecting relative sand content) represented the single independent variable.

RESULTS

Eastern Whip-poor-wills were present at 30 sites and absent from 30 sites. Habitat variables were sampled at 612 points within the 60 study sites. We retained seven factors from factor analysis based on the scree plot and interpreted those factors based on factor loadings (Table 2). Each of the

Table 2. Factor loadings of the raw habitat variables on the seven retained factors. Bold font designates high loadings that were used to interpret factors, indicated with their names.

Variable	Herb cover	Forest openness	Forest stature	Logs	Understory density	Bare ground	Small shrubs
Canopy height	0.1180	0.0965	**0.7359**	0.2772	–0.1565	–0.2133	0.0705
Overstory tree density	–0.0893	**–0.7856**	–0.2541	0.0881	–0.0079	0.0071	0.0593
Understory tree density	–0.0011	–0.0308	–0.1349	–0.0082	**0.5387**	0.1934	–0.1711
Shrubs <1 m	–0.0440	0.0067	0.0266	0.0856	–0.0550	–0.1430	**0.5170**
Shrubs ≥1 m	–0.0558	0.0545	0.0943	0.2053	**0.4072**	0.0744	0.2591
Herbaceous cover	**0.9233**	0.1184	0.1492	–0.0439	–0.0323	–0.1342	–0.0424
Leaf litter cover	**–0.9309**	–0.1198	–0.0904	0.0824	0.0446	–0.3074	0.0775
Bare ground	0.0433	–0.0122	–0.1732	–0.0411	0.2202	**0.6385**	–0.1593
Logs 5–10 cm	–0.009	–0.1491	0.1142	**0.5050**	0.0073	0.0345	0.1417
Logs 10.1–20 cm	–0.0346	0.0282	0.1133	**0.3846**	0.0895	–0.1046	0.1825
Logs >20	–0.0452	0.0015	0.1472	**0.3562**	0.0475	0.006	–0.0656
Tree distance	0.1301	**0.8106**	0.2146	–0.1152	0.0280	0.0018	0.1557
Tree diameter	0.0239	0.5453	**0.7139**	0.1151	–0.1462	–0.2168	0.1620
Forest type	–0.0881	–0.1517	–0.3361	–0.0780	–0.2131	–0.0554	0.0084

Table 3. Multiple logistic regression analysis (full model) relating presence of Eastern Whip-poor-wills to habitat factors.

Factor	Parameter estimate	Wald Chi-Square	*P*
Herb cover	–2.427	4.5	0.0340
Forest openness	1.584	1.7	0.1900
Forest stature	–4.298	7.7	0.0055
Logs	–0.421	0.1	0.8000
Understory density	–2.825	4.3	0.0380
Bare ground	1.804	1.1	0.3000
Small shrubs	1.737	1.0	0.3300

seven factors was correlated strongly with at least one of the original habitat variables, and factors were interpreted (in descending order of eigenvalues) as representing herb cover, forest openness, forest stature, logs, understory density, bare ground, and small shrubs. The first two factors explained 56% of total variance in the raw variables. Multiple logistic regression analysis showed that the presence of whip-poor-wills in a forest tract was related negatively to composite variables representing herbaceous ground cover, forest stature, and understory density (Table 3).

We recorded 27 species of trees among the 2448 individuals that we sampled in the study area. Members of the *Q. rubra-Q. velutina* complex constituted 40.2% of all trees sampled and were present in 95% of the study sites. The second most common species was *Pinus banksiana*, which constituted 21.5% of trees sampled. We encountered 15 tree species infrequently, including *Pinus sylvestris* (Scotch pine), *Larix laricina* (tamarack), *Corylus americana* (American hazelnut, typically a shrub, one individual of which met our definition of a tree), *Celtis occidentalis* (hackberry), *Carya ovata* (shagbark hickory), *Tilia americana* (basswood), *Ulmus americana* (American elm), *Carya cordiformis* (bitternut hickory), *Acer negundo* (boxelder), *Juniperus virginiana* (eastern red cedar), *Quercus ellipsoidalis* (northern pin oak), *Betula papyrifera* (paper birch), *Acer saccharinum* (silver maple), *Quercus bicolor* (swamp white oak), and *Robinia pseudoacacia* (black locust). Those 15 species constituted the rare-species variable. Logistic regression analysis showed that the presence of whip-poor-wills was related positively to *P. banksiana* and negatively to *F. pennsylvanica*, *A. rubrum*, and *Q. alba* (Table 4).

The most common soil type in the study sites was Plainfield sand, which was present at 23 study sites. The Plainfield type consists of deep, excessively-drained, rapidly-permeable soils formed in sandy outwash deposits (Jakel 1980). The most common soil class was sand, which was present at 27 study sites, followed by loamy sand at 15, loamy fine sand at 10, and complex at six; fine sand and muck were present at only one site each. Logistic regression analysis showed a positive relationship between presence of whip-poor-wills and sand content ($\chi^2 = 6.2$, $P = 0.013$).

Table 4. Simple logistic regression analysis relating presence of Eastern Whip-poor-wills to tree species variables.

Tree species	Relationship	Wald Chi-Square	*P*
Acer rubrum	—	11.9	0.0006
Betula nigra	0	3.6	0.0595
Q. rubra-Q. velutina complex	0	2.2	0.1400
Fraxinus pennsylvanica	—	6.3	0.0120
Pinus banksiana	+	9.2	0.0025
Pinus resinosa	0	3.2	0.0740
Pinus strobus	0	0.2	0.6500
Populus grandidentata	0	1.2	0.2800
Populus tremuloides	0	0.2	0.6300
Prunus serotina	0	0.5	0.4800
Quercus alba	—	4.6	0.0320
Quercus macrocarpa	0	1.4	0.2400
Rare species	0	2.9	0.0870

Discussion

Although Eastern Whip-poor-wills have declined or even disappeared from many areas, they are still locally common in areas less affected by urbanization and large-scale agricultural activities within their breeding range and were frequently encountered in our study area. The presence of whip-poor-wills in our study was related negatively to three components of forest structure: herb cover, forest stature (height and diameter of trees), and understory density. Cink (2002) suggested that in some regions, maturing forest tracts was a cause of whip-poor-will decline. In our study, presence of whip-poor-wills was related negatively to forest stature, consistent with Cink's (2002) suggestion. Other authors also have suggested that whip-poor-wills prefer regenerating areas (young second-growth forest), particularly those with an open understory (Bent 1940, Ehrlich et al. 1998, Wilson 1985, Garlapow 2007, Wilson and Watts 2008). Our study supports that premise quantitatively by showing a negative relationship between presence of whip-poor-wills and herb cover and understory density. Thus, Eastern Whip-poor-wills in central Wisconsin may prefer younger forest tracts with a more open understory.

With respect to floristic composition, whip-poor-will presence was related positively to *P. banksiana*, which is a pioneer species on sandy soils in central Wisconsin. In our study area, there were many commercial pine plantations, which included monospecific stands of *P. banksiana*, *Pinus resinosa*, *Pinus sylvestris*, and *Pinus strobus*. Mills (1987) found nesting Eastern Whip-poor-wills in similar pine plantations in Ontario. Low plant diversity and limited structural complexity characterized such plantations in our study; no whip-poor-wills were found in those plantations, and we excluded them as study sites. Therefore, although whip-poor-wills were associated with natural forest tracts with *P. banksiana*, commercially-planted stands of this species apparently provided poor nesting habitat.

Presence of Eastern Whip-poor-wills

was related negatively to *Q. alba*. This oak is typically a climax species that is both slow-growing and shade-tolerant and is present in forest tracts of later successional stages (Boerner and Cho 1987, Abrams and Downs 1990), which are apparently undesirable to whip-poor-wills. Whip-poor-will presence also was related negatively to two other species, *A. rubrum* and *F. pennsylvanica*. Although *A. rubrum* is a tree of wide environmental tolerance and intermediate shade tolerance (Erdman et al. 1985), in our study area it was found most commonly in mesic forests. *Fraxinus pennsylvanica*, also a tree of mesic habitats, was frequent in forest tracts along waterways with moist soils.

With respect to soils, Eastern Whip-poor-will presence was related positively to forest tracts with increasing soil sand content. Sandy soils have low water-retaining capacity, high summer surface temperatures, and poor nutrient content, producing a harsh environment for vegetation (Curtis 1959). Indeed, some study sites were nearly desert-like, especially in Buckhorn State Park, where sand blow-outs were common but nonetheless often utilized by whip-poor-wills for foraging.

Thus, Eastern Whip-poor-wills have an affinity for forest tracts in early-stage succession (Wilson and Watts 2008) and in our study utilized regenerating forest when the canopy reached a mean height of 9.1 m. Poor soils offer challenging conditions for plant growth. Plant communities and forest structure characteristic of those soils develop, and whip-poor-wills consequently associate with such habitats. Sandy soils support limited herbaceous ground and shrub cover. Thus, whip-poor-wills in central Wisconsin are associated with pioneer tree species that are tolerant of xeric, low-nutrient soils and have a negative relationship with trees that grow in more mesic soils. We suggest, however, that forest age and structure, coupled with well-drained soils, rather than tree species composition are the main underlying factors that influence whip-poor-will habitat associations. In different geographic areas, Eastern Whip-poor-will presence may be related to other pioneer species that are characteristic of those areas and that form forest tracts with similar structure (c.f. Wilson and Watts 2008).

In conclusion, favorable sites for conservation efforts in Wisconsin and throughout the upper Midwestern United States appear to be natural forest regrowth where trees recently have been burned or harvested on upland sites with sandy soils, particularly in areas where *P. banksiana* is present. Adjacent forest tracts need not be extensive; indeed, we found evidence of nesting within tracts of only 1 ha, and forest edges apparently promote whip-poor-will abundance (Wilson and Watts 2008). Thus, forest management that creates open regenerating areas for foraging that are adjacent to more intact forested tracts appropriate for nesting may promote the local and regional persistence of nesting Eastern Whip-poor-wills in central Wisconsin (c.f. Wilson and Watts 2008).

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Great Crested Flycatcher pictured by Dave Lund

An Apparent Dunlin × White-rumped Sandpiper Hybrid at Chequamegon Bay, Wisconsin

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ABSTRACT

I report the observation of an apparent Dunlin (Calidris alpina) × *White-rumped Sandpiper* (C. fuscicollis) *hybrid in Ashland and Bayfield Counties, 23–24 May 2012. I present photos taken by Ryan Brady and me and compare the features of this bird to the parent species. This bird was intermediate between the two presumed parent species in a number of characteristics: overall body size, bill size and shape, coloration, breast streaking, and wing length. I also summarize the previous occurrences of apparent Dunlin × White-rumped Sandpiper hybrids and recognize the importance of photographs and online collaboration to the identification of this individual.*

At about 4:30 pm on 23 May 2012, I stopped at Maslowski Beach on the shore of Lake Superior in Ashland, Wisconsin, Ashland County. Despite its popularity as a swimming and dog-walking beach, Maslowski ("Sandbar" to the locals) can be a good spot to closely observe shorebirds in spring and fall. I found a Killdeer (*Charadrius vociferus*), a Least Sandpiper (*Calidris minutilla*), and a Ruddy Turnstone (*Arenaria interpres*). Then, a flock of 8 breeding-plumaged Dunlin (*Calidris alpina*) flew in, along with one smaller bird lacking a black belly. I had my camera and followed the flock, catching up with and photographing the smaller shorebird. The bird had fine streaking on the breast, a slightly downcurved dark bill, a pale supercilium, and a rufous tinge to the cap, auriculars, and scapulars (Figs. 1–4). I observed the bird on and off for about 15 minutes and, based on the fine streaking, passed it off as a rather brightly colored breeding-plumaged White-rumped Sandpiper (*Calidris fuscicollis*).

Later that night, I posted a few of my shorebird photos to the local Ashland Birders listserv. When Ryan Brady looked at the pictures of the bird, he noted a surprising amount of red on the scapulars, the presence of a few chevron-shaped streaks on the sides of the belly, wingtips that did not extend past the end of the tail, and a dark base to the lower mandible. Then he phoned me, arguing the bird

was not a White-rumped, but rather a Western Sandpiper (*Calidris mauri*). I checked some references, and was convinced Ryan may have been right, as these features did fit Western Sandpiper better than a typical White-rumped Sandpiper. I posted the photos to the Wisbirdn listserv and the Wisconsin Birding Facebook group reporting it as a Western Sandpiper. The next day, it was drizzling, but Ryan went out early and refound the bird on Chequamegon Bay about 1.5 miles away, near the mouth of Whittlesey Creek in Bayfield County. He took a number of photos of the bird, which was associating closely with Dunlin (Figs. 5–9). Although Least, White-rumped, and Semipalmated Sandpipers (*Calidris pusilla*) were also present, the bird clearly preferred the company of Dunlin over the smaller shorebirds. Ryan posted his pictures to the internet, and many Wisconsin birders congratulated us on the excellent find and pictures of a Western Sandpiper. The bird was last seen the morning of 24 May.

On the evening of the 24th, Cameron Cox, who has written several articles on the identification of small shorebirds (e.g., Cox 2008), looked at the pictures and questioned the identification of Western Sandpiper, initially arguing that it was a White-rumped Sandpiper based on the following features: larger size than Western Sandpiper, linear streaking on the chest, heavily streaked lower face, pale reddish scapulars and auriculars, a row of subterminal arrowhead-shaped marks on the rump, and nearly black outer rectrices. The discussion continued, noting that a pale base to the lower mandible is diagnostic when present for White-rumped, but not all White-rumped Sandpipers show this feature (this bird had a dark base). It was also noted that this bird had no semipalmation between the toes (Fig. 4), a feature associated with Western and Semipalmated Sandpipers.

However, the wing length did not appear long enough for White-rumped Sandpiper, a species that should show the primaries extending past the tail. Looking further at all the photos, Cameron pointed out that this bird's outer primaries were quite worn, and the molt appears to have been arrested. Cameron then suggested this bird was actually a Dunlin × White-rumped Sandpiper hybrid, and posited that the unusual molt timing could have come from the two different molt strategies of the parents. Wisconsin birding experts Tom Schultz and Steve Lubahn also noted irregularities of body size, streaking, bill size, and wingtip length and suggested that this could be a hybrid. Ryan posted this bird to the ID-Frontiers listserv and noted California birder and ornithologist Alvaro Jaramillo agreed this was a Dunlin × White-rumped Sandpiper hybrid.

Although one could be forgiven for initially thinking this was a White-rumped Sandpiper, Western Sandpiper, or Dunlin, the combination of features shown by this bird strongly suggest a Dunlin × White-rumped Sandpiper hybrid. Overall, the body size was clearly smaller than a Dunlin (Figs. 3, 5, 6, and 7), and slightly larger than nearby White-rumped Sandpipers (Fig. 6). The body shape appeared short and front-heavy, unlike the elongate appearance of typical White-rumped Sandpipers (Figs. 5 and 6). The bill shape was quite similar to a Dunlin (thick at the base and

obviously downcurved), but was shorter than typical for a Dunlin, and longer and more downcurved than White-rumped Sandpiper (Figs. 1, 5, and 6). The bill was all black, including the base of the lower mandible (Fig. 1). This bird showed the pale supercilium and streaked face of a White-rumped Sandpiper, and the reddish cap that can be shown by either parent, but showed red in the auriculars more typical of Dunlin (Figs. 2 and 5). The mantle and scapulars are intermediate, with less red than expected for a Dunlin, but more red than typically shown by White-rumped (Figs. 4, 5, and 7). The breast had quite a bit of fine streaking, but certain angles showed coarser, more indistinct streaking than is typical for White-rumped and at certain angles it showed a bib effect (Figs. 1–3). The legs were black, with no webbing between the toes (Fig. 4). The rump was not seen well in the field, but photos seem to suggest there is a trace of a dark line down the center, and extensive white on either side (Figs. 4 and 9), more so than expected on Dunlin. The wingtips appear to be nearly the same length as the tail, more similar to Dunlin and clearly shorter than shown by White-rumped Sandpiper (Figs. 1, 4, and 6). Although the front-heavy posture, downcurved bill, and reddish-tinged upperpart are suggestive of Western Sandpiper, this species is ruled out by larger body size and a lack of webbing between the toes.

Table 1 summarizes the features of this hybrid, compared to the presumed parents. I examined photographs from all other sightings purported to be this combination that I could locate (Table 2), and these photographs provide the basis for the hybrid features listed in Table 1. Although certain features vary among individuals, such as the extent or intensity of breast streaking or the extent of rufous coloration, the features I list for this hybrid combination seem to be fairly consistent. However, this is only a first attempt at synthesizing these field marks; because of variability involved in hybrids, more rigorous work is needed to reliably understand variation in features of this hybrid pairing.

Though rare, hybrid shorebirds are being discovered with increasing frequency (O'Brien et al. 2006), likely due to an increasing number of skilled observers, better information regarding identification, and improved optics and cameras. White-rumped Sandpipers have also hybridized with Pectoral (*Calidris melanotos*), and possibly with Least and Buff-breasted Sandpipers (*Tryngites subruficollis*), while Dunlin have hybridized with Sanderling (*C. alba*), Baird's (*C. bairdii*), Purple (*C. maritima*), Curlew (*C. ferruginea*) and possibly Pectoral Sandpipers (Pyle 2008). However, Dunlin × White-rumped Sandpiper appears to be one of the more common combinations attributed to apparent hybrids. Two birds in Ontario thought to be this hybrid combination were well documented (McLaughlin and Wormington 2000, Pawlicki 2009), but most sightings have not been published, other than online. I am aware of at least 17 sightings thought to be this combination, all from eastern North America and 15 of those since 2007 (Table 2). Curiously, South Beach in Chatham, Massachusetts has hosted apparent Dunlin × White-rumped Sandpipers 5 of the last 6 years!

It is unclear why this hybrid combi-

Figure 1. Apparent Dunlin × White-rumped Sandpiper hybrid, 23 May 2012, Maslowski Beach, Ashland, Wisconsin. Photo by N. Anich.

Figure 2. Apparent Dunlin × White-rumped Sandpiper hybrid, 23 May 2012, Maslowski Beach, Ashland, Wisconsin. Photo by N. Anich.

Figure 3. Apparent Dunlin × White-rumped Sandpiper hybrid (left), next to a Dunlin, 23 May 2012, Maslowski Beach, Ashland, Wisconsin. Photo by N. Anich.

Figure 4. Apparent Dunlin × White-rumped Sandpiper hybrid, 23 May 2012, Maslowski Beach, Ashland, Wisconsin. Photo by N. Anich.

Table 1. Features of Dunlin, White-rumped Sandpiper, and presumed Dunlin × White-rumped Sandpiper hybrids. Plumage features listed are for typical breeding-plumage adults in spring. Although the amount of streaking and reddish tones vary among individuals, the features listed in the hybrid column apply fairly well to all birds thought to be this hybrid combination that I am aware of (the spring birds photographed from Table 2). Fall birds have similar structure, but duller plumage.

	Dunlin	Hybrid	White-rumped Sandpiper
Length[a]	16–22 cm	Intermediate	15–17 cm
Weight[a]	48–64 g	Intermediate	25–51 g
Body shape (giss)	Plump, chunky, long-billed	Variable, like either parent, or a mix	Sleek, long-winged
Bill shape	Thick at base, obvious downward curve, noticeably longer than head	Shape like Dunlin, but shorter	Slightly thicker at base, subtle downward curve, about length of head
Base of lower mandible	Black	Black	Usually pale pink or brownish
Face coloration	Reddish cap, reddish auriculars, gray streaking elsewhere	Reddish cap, whitish supercilium, reddish auriculars	Pale supercilium, tan or slightly red cap and auriculars, fine streaking elsewhere
Mantle and scapulars	Quite reddish, often with black-centered feathers	Intermediate. More red than typical White-rumped but less than typical Dunlin	Mostly tan, some black-centered feathers, occasionally a slight reddish tinge to some scapulars
Breast	Indistinct streaking	Intermediate streaking. This feature seems to be quite variable	Very fine streaks
Belly	Black	White, streaking variable, usually more than on White-rumped	White, some fine streaking on flanks
Rump	Dark line down center, white on edges	Trace of a line or a stronger line down the center	Usually completely white
Wingtips	Approximately tail length	Approximately tail length	Extend past tail

[a] Dunlin and White-rumped measurements from O'Brien et al. 2006.

Table 2. Sightings of apparent Dunlin × White-rumped Sandpiper hybrids. All birds were photographed. See Literature Cited for links to many of the photos.

Spring sightings		
Date	Location	Source
18–20 May 1994	Hillman Marsh, Point Pelee, ON	McLaughlin and Wormington 2000
16 May 2005	Marco Island, FL	Wilson 2005
3 June 2007	Pikes Beach, Long Island, NY	Mitra 2007
5–10 May 2010	Watford Sewage Lagoons, Lambton, ON	Peter Burke, pers. comm.
23 May 2010	Wicomico County, MD	Lutmerding 2010
22 May 2011	Squaw Creek NWR, MO	Willis 2011
21 May 2012	Mispillion Harbor, DE	Delaware Shorebird Project 2012
23–24 May 2012	Chequamegon Bay, Ashland, WI	This article
Fall sightings		
Date	Location	Source
24–29 July 2007	South Beach, Chatham, MA	Offermann 2007, Iliff and Garvey 2009
7 June–4 July 2008*	South Beach, Chatham, MA	Nikula 2008
22 August 2008	South Beach, Chatham, MA	Bonomo 2008
17–23 August 2008	Rock Point Provincial Park, ON	Pawlicki 2009
29 June 2010	South Beach, Chatham, MA	Schain 2010
19 June 2011	South Beach, Chatham, MA	Trimble 2011
17 September 2011	Point Pelee, ON	Kevin McLaughlin, pers. comm.
28 July 2012	South Beach, Chatham, MA	Davies 2012

* 2 individuals present at once

nation appears so often relative to other possible combinations. Dunlin and White-rumped Sandpiper overlap breeding ranges in three areas: the northwestern side of Hudson Bay and north coast of Nunavut, the northwest coast of Northwest Territories, and the North Slope of Alaska (O'Brien et al. 2006). However, many shorebird pairs share even more overlap than this, so many other combinations should be possible. Perhaps other hybrid combinations are occurring but are more difficult to differentiate and thus aren't as likely to be detected (we almost didn't detect this one) or perhaps some birds thought to be this combination are actually some other combination. However, the previously stated field marks make Dunlin × White-rumped Sandpiper a logical conclusion. One suspected Dunlin × White-rumped Sandpiper hybrid caught in Delaware in spring 2012 had feathers pulled for DNA analysis (Delaware Shorebird Project 2012, K. Kalasz, pers. comm.). Perhaps the results of that analysis will confirm or refute these assumptions.

While the occurrence of this bird is of considerable ornithological interest, this sighting also resulted in several important lessons regarding the process of bird identification. It was only through the process of taking photos, showing them to others, and having an online discussion that, as a group, we were able to come to the proper identification (or what we assume is the proper identification). Although Ryan and I are both experienced birders, our initial misidentifications illustrate that all are susceptible to their own expectations and can be swayed by the opinions of other experienced birders. There was a 24-hour period where

Figure 5. Apparent Dunlin × White-rumped Sandpiper hybrid (middle center), with Dunlin and Semipalmated Sandpipers on 24 May 2012, Whittlesey Creek mouth, Bayfield County, Wisconsin. Photo by R. Brady.

Figure 6. Apparent Dunlin × White-rumped Sandpiper hybrid (front center), with White-rumped Sandpiper (front right and far back left), Dunlin (black bellies), and Semipalmated Sandpiper (front left) on 24 May 2012, Whittlesey Creek mouth, Bayfield County, Wisconsin. Photo by R. Brady.

Figure 7. Apparent Dunlin × White-rumped Sandpiper hybrid (back left) with Dunlin on 24 May 2012, Whittlesey Creek mouth, Bayfield County, Wisconsin. Photo by R. Brady.

Figure 8. Apparent Dunlin × White-rumped Sandpiper hybrid, 24 May 2012, Whittlesey Creek mouth, Bayfield County, Wisconsin. Photo by R. Brady.

Figure 9. Apparent Dunlin × White-rumped Sandpiper hybrid on 24 May 2012, Whittlesey Creek mouth, Bayfield County, Wisconsin. Photo by R. Brady.

nearly every Wisconsin birder who saw the pictures accepted this as a Western Sandpiper, or at least didn't raise concerns otherwise. It was only through Cameron Cox's questioning of the finer details that we realized this was a hybrid. This demonstrates the value of taking a camera into the field and using online forums to share photographs. As various online listservs and forums have demonstrated in recent years, much can be learned by viewing and discussing the identities of bird photographs.

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2012 Dickcissel Deluge

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The Wisconsin summer prairie always guarantees a rich symphony of avian song. (I should dread to be witness to the day when habitat loss and/or environmental degradation progress to the point where the symphony joins the Passenger Pigeon in the silent hereafter.) Exactly which species performers will be present in what numbers is always somewhat a matter of chance. Yet we bring to each spring and summer the expectation that certain species will be present. Some have become a matter of special concern in recent decades (Western Meadowlark, et al.). My expectations for recognition may be smaller in scope than those of the expert observer/listener since my recognition of individual songs lags behind theirs. (I don't keep a life list, but still have available from recall a pretty decent cumulative approximation of the birds that I've encountered, and in most cases where. Some might wager that I would do well to compile from memory a written list of those special encounters before the aging process parks severe memory loss in the campsite which once was a pretty functional hippocampus.) Still, I don't mind being delighted by this year's new discoveries.

A Sand County Sage much brighter than I might well have observed: How dull to know all about the prairie symphony before immersing oneself in its next crescendo in a cool June grassland. (Wait too long after daybreak and one might miss the gossamer veil of aqueous manna deposited by last evening's low temperature flirtation with relative humidity.)

Ah, but this was supposed to be about Dickcissels.

The most resonant individual performers in the summer symphony are most often males, appearing to be more interested in courting the company of an amorous female than being a well-coordinated symbiotic player in the vocal symphony of the larger community. (In matters of well-arranged cooperative musical efforts in the avian community, the single-mindedness of the species propogation imperative prevails). They simultaneously serve eviction notice to intraspecific competing males in a territory that may be quite static or quite elastic. Some interspecific territorial jousting may also be observed. Yet there is a collective body of song of many species discernible to us hominids, even if the only conductor be the learned and/or innate vocal ritual

Figures 1–3. Male Dickcissel photographed on 12 June 2012 at Horicon National Wildlife Refuge in Dodge County by Michael Huebschen.

Figure 4. Female Dickcissel found at Necedah National Wildlife Refuge, Juneau County, on 13 June 2012 by Michael Huebschen.

Figure 5. Male Dickcissel on 21 June 2012 at Necedah NWR, Juneau County, photographed by Michael Huebschen.

and tradition of each species which has survived the rigors of millions of years of selection. Sifting through the species chords and stanzas greatly enhances the occasional or more frequent visual communion for the hominid observer, even if the romanticized notion of a community symphony reduces to a somewhat anarchistic group of solo performances. The auditory aesthetic is for human beings, at least, well served; while the avian community gives no sign of volition or design that it be thusly planned or orchestrated, much less blended as ensemble melody. How fortunate we are to be able to distill the vocal order of the individual species from the disorder of the collective avian community in any one locale. The Prairie Symphony is hence, a romanticized luxury which some of us may synthesize over and above the reality of community "chaos."

To my surprise, my auditory and visual receptors were massaged with the balm of new vocal musicians in this past summer's grassland "ensemble." I had my initial introduction to the somewhat raspy, muted, intermittent chanting of the male Dickcissel in the prairies of Mingo National Wildlife Refuge in southeast Missouri in the summer of 1970. To my ear, the male song is typically a slightly slurrey "stutter" followed by the species name assigned by ornithologists of yore—dick-dick-dickcissel, with the former arising from the latter. There are other syllabic summations of their song in the literature. I was fortunate enough to stumble onto a ground nest with eggs (light blue) and later with hatchlings in 1971. Nests are built on or slightly above the ground. Their clutch size ranges from 3–6 eggs. Nests are parasitized by Brown-headed Cowbirds not uncommonly. Dickcissels prefer open grasslands with a good mix of forbs for nest sites. They occasionally nest successfully in hay fields of alfalfa or red clover IF the first cutting is timed late enough to avoid nest or fledgling destruction. They may produce a second nest in a summer season by moving to a new nesting locale. They typically feed predominantly on insects during the summer nesting season and mostly on seeds in their wintering areas. One could easily hypothesize a gradual transition in diet change in spring and autumn, but I cannot prove it to be the case.

In their nesting range, Dickcissels do fall prey to certain hawks and owls.

Dickcissels migrate mostly nocturnally and primarily over land. Some will navigate over the western Gulf of Mexico. Dickcissels winter in large flocks in Mexico, Central America, and northern South America where farmers may consider their predilection for grain crop seeds to constitute the tyrrany of invasive pests (particularly in Venezuala). We who are economically privileged enough to spend significant amounts of money on feeding black-oil sunflower seed and other grains to wild birds may not be aware of, or sensitive to, the plight of grain farmers to our south who may be less fortunate. Fortunately, the National Audubon Society, and perhaps others, have been active in developing and implementing non-lethal technologies to minimize crop depredations in those areas.

This year, my visits to Horicon NWR (Figures 1–3) in Dodge County, Necedah NWR (Figures 4 and 5) in Juneau County, and the Buena Vista

Marsh (Figures 6–8) in Portage County were well baptized with a generous visual and auditory kinship with *Spiza americana*. The brilliant yellow breast of the male punctuated by a black bib at the base of the throat whispered Meadowlark to my unaided eye during my first observation at some distance this past summer. The aid of a pair of 10 × 42s very quickly reversed that misstep. (In the popular literature of the past, they were often referred to as the "Little Meadowlark.") The first song from the same individual clicked in my tympanums as the definitive oratory of male Dickcissel. During June, I observed both males and females, although males were by far the most visible and vocal. Females and juveniles lack the black "bib" above the yellow breast. As luck would have it, my most fruitful recording of Dickcissel images on the pixelized canvas tucked in the side of my DSLR occurred in late afternoon in a locale on the Buena Vista Marsh where at least four Upland Sandpipers were also present. By day's end, my emotional cup was full with serotonin champagne!

Dickcissels were seen in every county in Wisconsin in the summer of 2012 (Bettie Harriman, pers. com.). What brought the multitude of Dickcissels is not clear to me. If they had an exceptional reproduction year in 2011 in Wisconsin or elsewhere in the midwest, I know of it not. Still, they were observed in abundance in 2012 from North Dakota eastward through Minnesota, Wisconsin, Michigan, eastern Ohio, and western Pennsylvania. Dickcissels were also seen in southern Manitoba, Ontario, and western New York (Dickcissel Irruption/Sandy Steinman/Natural History Wanderings/Sandy Steinman's Blog 19 July 2012). I am given to wonder if the Dickcissel "turistas" of the winter of 2012–2013 had an unusually successful stay in their wintering areas? Did they winter further north or linger further north before making the long flight to the wintering grounds, thus making the energy demands of migration back and forth less critical? For the moment, I am content to have it be a source of wonder.

As for my own history of encounters with Dickcissels, I must confess that I have no recollection of previous sightings of them in Wisconsin. I suspected having heard more than one at Trempeleau NWR in Trempeleau County, Wisconsin in 2010, but was unable to make a visual confirmation. The fact that they are most abundant in southern and western Wisconsin seems to offer little explanation as a function of probability that I had not seen one before in Wisconsin, as they are historically not that uncommon in eastern and central Wisconsin. You are at liberty to theorize, as I already have, that this particular explorer of the collective Wisconsin prairie has ahead of him much opportunity for discovery and learning. (Have you ever seen a description of ignorance phrased more diplomatically?) My recognition of prairie sparrows and their songs lags behind my familiarity with other groups of birds. In the past, much of my observational interest has been focused on the larger, brightly colored performers (Bobolink, Meadowlark, et.al.) in the Prairie Symphony. Fortunately, there aren't that many to learn, as opposed to the large species array, and in some cases, song similarity of the warblers.

If it be a unique gift for humans to

Figures 6. A male Dickcissel proclaiming his territory on 25 June 2012 in Buena Vista Marsh, Portage County. Photo by Michael Huebschen.

Figure 7. Dickcissel photographed by Michael Huebschen on its fence post in Buena Vista Marsh, Portage County, 25 June 2012.

Figure 8. The sound of Dickcissel males was heard in every county in Wisconsin during the summer of 2012—this one was at Buena Vista Marsh, Portage County, on 25 June 2012, and photographed by Michael Huebschen.

find order and, even greater than that, aesthetic jewels in the chaos of the universe, I'm particularly gratified that the forces of the universe timed an intersect between me and the golden-breasted, elegantly plumed, and vocally enthusiastic Dickcissel in the Wisconsin summer prairie of 2012. Long may it be repeated for our successors.

Michael J. Huebschen was nominated to be an apprentice to his father's outdoor interests (one of which was nature photography) in boyhood and adolescence. The strongest surge in interest in photographing birds may well have been spawned by the undergraduate curricula in Wildlife Ecology at UW-Stevens Point in the late 1960s. The photographic genesis had humble beginnings that started with a holiday gift box containing a used Yashica Penta J 35 mm. SLR (manual focus and external averaging light meter) in about 1965. An Accura 300 mm. telephoto and cheap 2X converter were added during the college years at Point. His first Nikkormat FTN was acquired in the early 70s and a Vivitar 800 mm. preset at about the same time. Discovering wild places through the years was the second catalyst. The Horicon Marsh became an acquaintence in childhood. As the college years progressed, good fortune took him to the Mead Wildlife Area (where he witnessed the largest stopover of Snow Geese in his lifetime in about 1968), the Greater Prairie-Chicken haunts of the Buena Vista Marsh and what is now the Paul Olson Area, and the Glacial Lake Wisconsin legacy at Necedah NWR, Meadow Valley SWA, and the Sandhill Wildlife Area). By 1970, he was thoroughly hooked on the proposition that he might eventually take some pretty decent wildlife photographs, with much of the "focus" being on birds. Some graduate course work at U. of Missouri took him to Mingo NWR and adjoining Duck Creek SWA in southeast Missouri where an avifauna containing some new species were real bonuses. Good fortune during his working years took him to Corkscrew Swamp Sanctuary and Ding Darling NWR in southwest Florida, both bird photographers' paradises. The same patience that accompanied his modest successes and many stumblings during the learning process, also tempered the slow upgrade in acquiring Nikon equipment. The biggest boost to bird photography came in the purchase of a used Nikon 600 mm. f4 lens in about 2009. He remained a 35 mm. film dinosaur until March 2010 when a fond farewell to film was celebrated with the emulsion capture of a Black-legged Kittiwake at Port Washington Harbor. He currently shoots just about 100% digital images. He scans the Wisbirdn postings regularly. Some of those have taken him to some great "shooting" opportunities. His backyard is not unknown to photo opportunities: the summer of 2012 brought the regular appearance of a pair and then a family of Cooper's Hawks in the neighborhood. Retirement at age 62 in 2010 was the most recent boost in pursuing the dream. His photographic interests also include a strong interest in landscapes, sunrise/sunset compositions, other wild fauna, flora, and natural "microscapes." His wife Cindy is endlessly fascinated by dragonflies. He would love to spend more time in the likes of Glacier, Grand Teton, Yellowstone, Grand Canyon, Canyonlands, Bryce, Arches, Monument Valley, and Olympic National Parks cultivating his craft.

Young Barred Owl photographed by Alyssa DeRubeis

The Summer of the Dickcissel: 2012

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ABSTRACT

The summer of 2012 will be remembered by birders in Wisconsin and the entire upper Midwest as the summer of the Dickcissel (Spiza americana). *This cardinal-like grassland bird that is named for its song is a common summer resident in prairies, hayfields, meadows, and weedy fields in the southern two-thirds of Wisconsin, occasionally reaching large open upland areas in northern Wisconsin. However, in 2012, an irruption resulted in documentation of the species in all 72 counties in Wisconsin, most of the Upper Peninsula of Michigan, and extreme northern Minnesota. Not only were Dickcissels much more abundant in the north than normal, but dense concentrations were observed in many areas and habitat use appeared to be more generalized than in normal years. We explore population trends of Dickcissel in the state as well as detail the 2012 irruption and draw comparisons with the previous irruptions in the state, all of which appear to be linked to drought in the Dickcissel's primary range.*

THE 2012 IRRUPTION

The Dickcissel (*Spiza americana*) is one of the latest migrants to arrive in Wisconsin each spring. When they arrived in late May 2012, abundance and distribution initially seemed to be normal compared to most years. However, birders in southern Wisconsin and biologists working on Wisconsin Department of Natural Resources (WDNR) grassland bird surveys began noticing a major influx of Dickcissels in early June.

A look at individual eBird reports (Table 1; eBird 2012) allows us to highlight a number of high counts of singing males as the irruption unfolded. High numbers were first reported in numerous southern Wisconsin locations in early June and only about a week later, high numbers

Table 1. Notable summer 2012 Dickcissel eBird reports (eBird 2012). Number of individuals is represented almost entirely by number of singing males. Observer effort varies with each sighting.

# Indivs	Location	County	Date	Observer
30	Goose Pond Sanctuary	Columbia	1 June	Keyel
37	Leola Marsh SWA	Adams	8 June	Prestby
16	Lake Wissota	Chippewa	11 June	Cameron
65	Forest Beach Migratory Preserve	Ozaukee	15 June	Mueller
24	St. Croix	St. Croix	16 June	Persico
40	North Andover BBS	Grant	17 June	Yoerger
29	Ashland/Benoit	Ashland/Bayfield	18 June	Brady
19	Hixon/Alma Center	Jackson	18 June	Prestby
19	Eagle River	Vilas	19 June	Baughman
9	Saxon	Iron	19 June	Anich
21	Exeland	Sawyer	20 June	Prestby
45	Crex Meadows	Burnett	22 June	Stutz
37	St. Croix	St. Croix	24 June	Betchkal
33	Newell & Ann Meyer Preserve	Waukesha	24 June	Howe
25	Cadott BBS	Eau Claire	24 June	Betchkal
19	Argonne	Forest	25 June	Prestby
19	Dunnville SWA	Dunn	26 June	Betchkal
30	Hull's Crossing	Sheboygan	27 June	Grgic
21	Starks	Oneida	28 June	Prestby
67	Buena Vista Grasslands	Portage	29 June	Pendergast
20	Forest Beach Migratory Preserve	Ozaukee	29 June	Mueller
104	Buena Vista Grasslands	Portage	4 July	Pendergast
40	Western Marathon	Marathon	4 July	Belter
35	Lost Creek Wetland	Portage	7 July	Pendergast

were noted in central and then western Wisconsin. Meanwhile, numbers were peaking in southern Wisconsin. A report of 65 from William Mueller at Forest Beach Migratory Preserve in Ozaukee County was an especially high count. Over the next week, the Dickcissel surge reached far northern Wisconsin when dense concentrations were encountered in Ashland, Bayfield, Burnett, Sawyer, and Vilas Counties. Anich searched in extremely forested Iron County on 19 June, and found 9 in open fields near Saxon—the first known records for the county. Prestby's 19 Dickcissels near Argonne in Forest County on 25 June finished a sweep for this species in the far northern counties in the state.

It was apparent that Dickcissels had penetrated the entire state, including northern heavily forested counties with few prior documented records. It seemed that in central and northern Wisconsin, all a birder had to do was find an open area such as pasture, hay, or alfalfa field, roll the car window down, and listen. Thankfully, the Dickcissel's loud distinct song (for which the bird is named) makes this rather easy. This was especially true in northern Wisconsin where open habitat is comparatively rare amidst a vast forest. This expansion into habitat normally not considered ideal matches that documented during the invasions of 1964 and 1988 (Emlen and Weins 1965, Janssen 1988).

The ease of finding this species in northern Wisconsin prompted the Wisconsin eBird team to challenge the birders in the state to find and

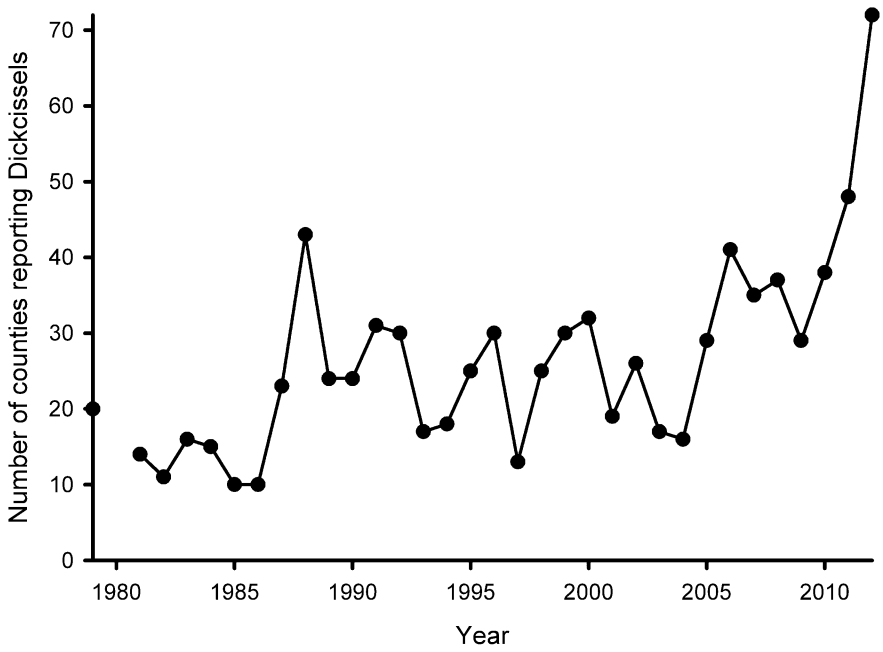

Figure 1. Number of Wisconsin counties reporting summer Dickcissels. Reports from 1979-2011 gleaned from the Summer Season Field Notes of the Passenger Pigeon (Vols. 42-74, issue varies). In 1980, the total number of counties was not given. Reports from 2007 to present include eBird reports, and therefore likely include greater coverage.

document the species via eBird in every Wisconsin county. By 27 June, only six counties had not recorded Dickcissel—Buffalo, Lincoln, Menominee, Pepin, Pierce, and Waupaca. Birders answered the call by quickly finding Dickcissels in large numbers in all of the above counties with one holdout: Menominee County. If any county were to be without Dickcissels this year, this would be the one, due to the fact that almost the entire county (nearly all of which is owned by the Menominee Indian Tribe) is forested. However, after looking at aerial photos for open areas, Nancy Richmond found the species on 6 July at the first place she checked along County Road M/BIA Route 900. As far as we can determine, this was also a first county record. Now all 72 counties in the state had documented this species this summer, a previously undocumented and possibly unprecedented event (Figs. 1 and 2; eBird 2012).

The Dickcissel irruption peaked in central and northern Wisconsin in early July, a couple weeks after it seemed to peak in southern Wisconsin. On 4 July, Rob Pendergast reported 104 at the Buena Vista Grasslands in Portage County, a new eBird record high count for the state. On the same day, Dan Belter counted 40 in western Marathon County—the highest count from the north-central part of the state. In southern Wisconsin, numbers subsided in the second

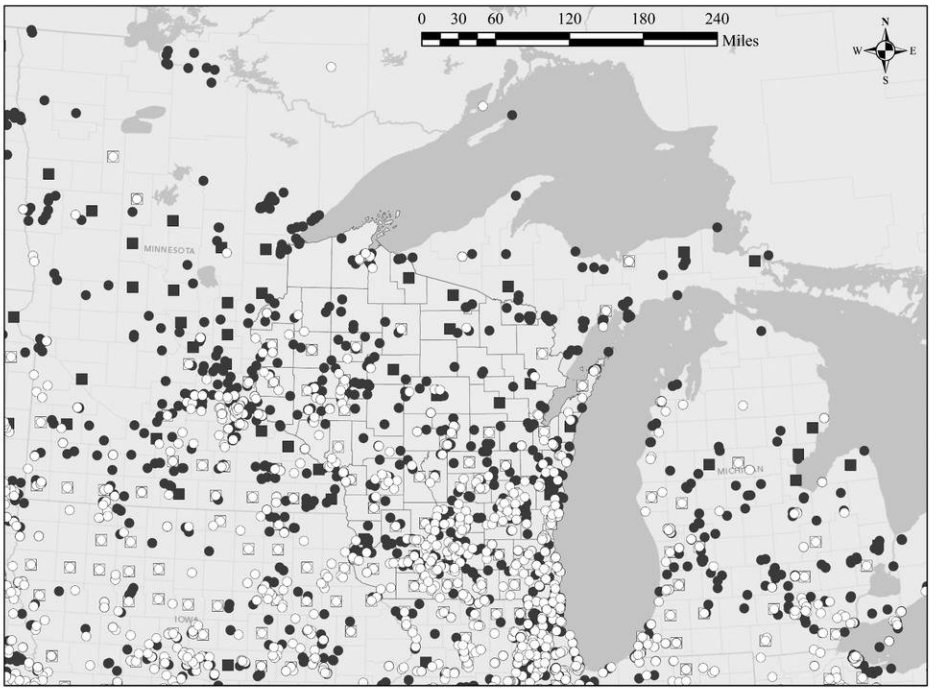

Figure 2. Dickcissel sightings reported to eBird across the Upper Great Lakes (eBird 2012). Circles represent checklists that were plotted at a specific location, while squares represent county-level submissions. White dots are sightings from May to August, 2008-2011. Dark gray dots are sightings from May to August, 2012. Note that the white dots and squares are the top layer, so all dark dots and squares represent locations where Dickcissels were not reported in the previous four years.

half of June after peaking in the first half of the month. On 29 June, Mueller reported 20 at the same Ozaukee County location where he had reported 65 on 15 June. This corresponds well with data from WDNR grassland bird surveys in southwest Wisconsin where Daniel Schneider detected Dickcissels on 79.3% of surveys 3–10 June and 88.2% of surveys 11–17 June but just 50.0% of surveys the following week of 18–24 June (WDNR unpub. data).

When comparing 2012 Dickcissel eBird reports to the previous four years of eBird sightings, it's easy to see the increase of reports, especially in the north (Fig. 2; eBird 2012). Comparing 2012 Dickcissel coverage in Figure 2 to the Wisconsin Breeding Bird Atlas (WBBA) map (Fig. 3), which is the perceived "normal range," also illustrates the species' expansion in especially the northern third of the state. This difference can also be explored with eBird frequency graphs. The peak frequency in 2012 reached nearly 22% of checklists compared to the previous four years that peaked at 5–10% (Fig. 4; eBird 2012). While this is quite a noteworthy jump in frequency, part of this increased frequency can be attributed to the re-

Table 2. Summer 2012 Dickcissel breeding evidence (eBird 2012). All eBird sightings that noted breeding evidence in the "comments" field of the checklist are represented. Number of individuals designates number of Dickcissel seen during the observation, not number of birds exhibiting breeding behavior.

# Indivs	Location	County	Date	Observer	Type
8	Lost Creek Wetland	Portage	16 July	Schaufenbuel	Food carrying
4	WI Hwy 105	Douglas	30 July	Svingen	Food carrying
5	Thunder Rd.	Manitowoc	2 Aug	Holschbach	Food carrying
17	Collins Marsh SWA	Manitowoc	12 Aug	Domagalski	Juveniles seen
9	Forest Beach Preserve	Ozaukee	12 Aug	Frank	Food carrying
15	Forest Beach Preserve	Ozaukee	13 Aug	Mooney et al.	Juveniles seen
31	Lost Creek Wetland	Portage	15 Aug	Pendergast	Juveniles seen
3	Forest Beach Preserve	Ozaukee	20 Aug	Mueller	Juveniles seen

markable effort of eBird observers that was not present in previous years.

Although there are a lot of data to work with, almost all reports are of singing males. Breeding success during these irruptions has not been studied thoroughly but is obviously important to the continental population of the species. Breeding evidence is not nearly as obvious as the song of a singing male, and so goes undetected very easily. The only breeding reports readily available to us from the 2012 irruption come from comments within eBird checklists. While this information is not complete because it is likely that more observers noted breeding evidence but did not mention it in the comments field of their checklist (eBird breeding codes are not yet available for public viewing—hopefully soon), we see that female food carrying or the presence of juveniles was noted in five counties representing a fairly even distribution of the state (Table 2). Although this is a limited amount of information, it is worth noting since this aspect of the irruption is as important as the number of singing males present and deserves more attention in future irruptions.

This irruption was not limited to Wisconsin. Nearby areas such as the Upper Peninsula of Michigan and northern Minnesota also experienced a similar irruption (Fig. 2). Dickcissels were reported as easy to find in the areas of Marquette, Michigan and the Sax-Zim Bog of northeast Minnesota, both of which are much more known for species such as Great Gray Owls (*Strix nebulosa*) and Boreal Chickadees (*Poecile hudsonicus*). Dickcissels were also reported in high numbers in the Dakotas, eastern Ohio, western Pennsylvania, and even Manitoba, Ontario, and western New York (Fig. 5; eBird 2012, Wood et al. 2012).

Historical Dickcissel Irruptions

Dickcissels are no stranger to drastic population fluctuations from year to year. In Wisconsin Birdlife (1991), Robbins states that "the population swings have been more pronounced for this species than for any other Wisconsin summer passerine." This is evidenced by the number of counties

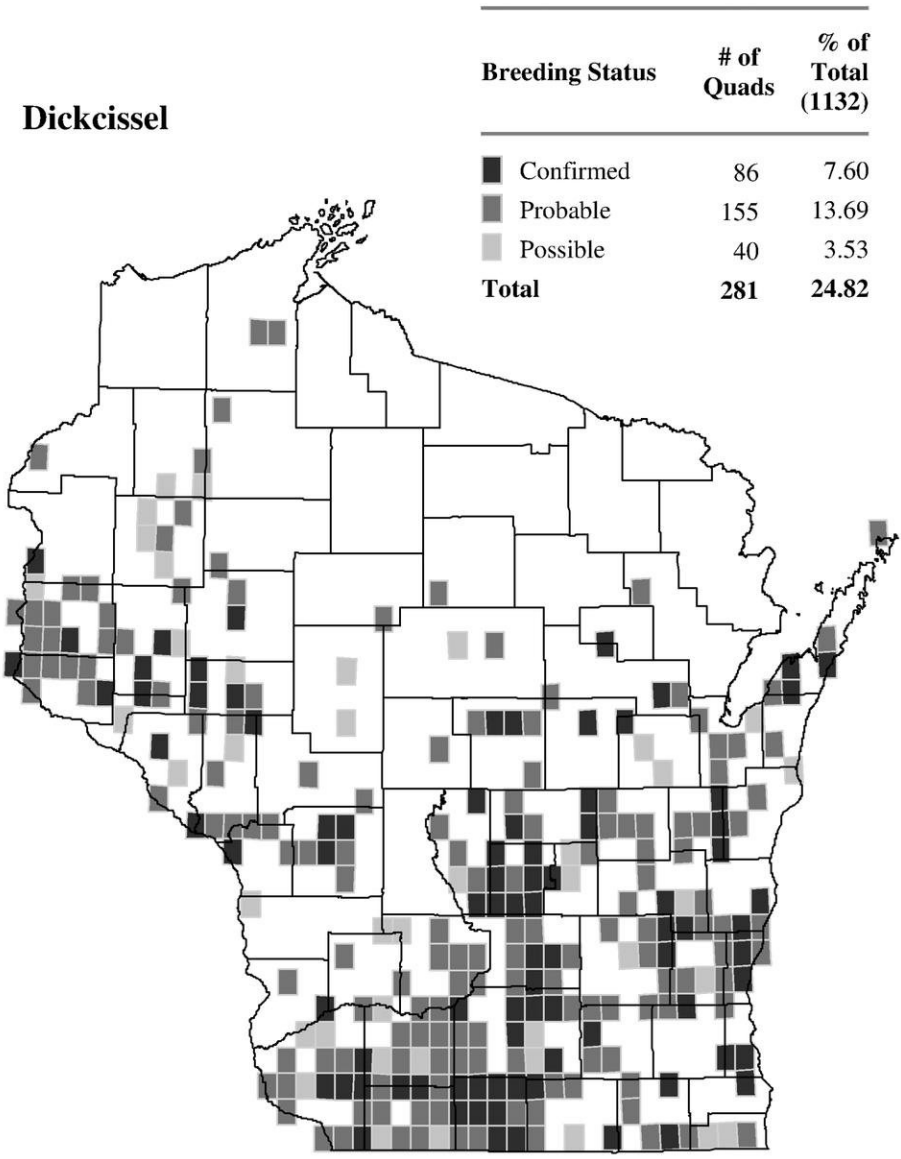

Figure 3. Wisconsin Breeding Bird Atlas Dickcissel range map (Cutright et al. 2006). Data collected 1995–2000.

reporting Dickcissels in the summer season in the Passenger Pigeon 1979–2006, which ranged from 10 to 43 (Fig. 1). Dickcissels irrupted in the state in 1922, 1928, 1934, 1940, and 1946, suggesting a possible 6-year cycle (Taber 1947), although that may have been an oversimplification as Taber also considered 1921, 1926, 1933, 1939 and 1941 to be years of high Dickcissel abundance, and in many years data were sparse. Dickcis-

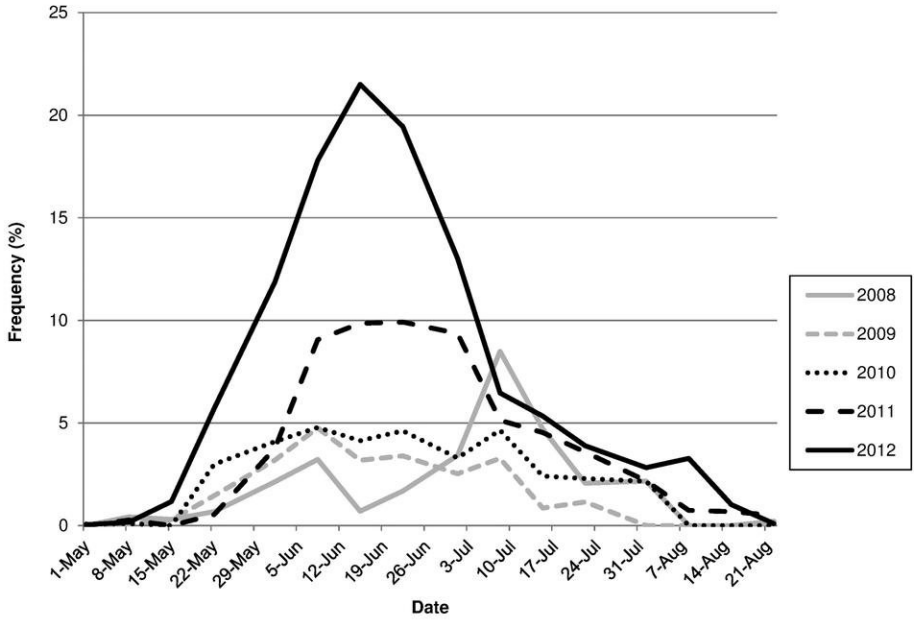

Figure 4. Dickcissel frequency in eBird checklists in Wisconsin May through August 2008-2012 (eBird 2012). Each line on the graph represents an individual year. Frequency is the percentage of checklists that report Dickcissels—calculated as number of checklists reporting Dickcissels ÷ total number of complete checklists.

sel irruptions occurred in Wisconsin in 1964 (Emlen and Weins 1965), 1967 (Fig. 6; Robbins 1991), and 1988 (Fig. 6; Janssen 1988, Soulen 1989) and Dickcissels were also noticeably abundant in 2000, 2006, and 2011 (Fig. 1, Fig. 6; Sauer et al. 2011, Soulen 2007, Hoffman 2012, eBird 2012).

The 1964 irruption caused a 30- to 50-fold increase in abundance in the species' core southern Wisconsin range and an expansion of habitat types used (Emlen and Weins 1965). During the 1964 irruption, Emlen and Weins (1965) observed Dickcissels using all nearby hayfields, oatfields, corn fields, pasturelands, and alfalfa fields in an area of Dane County where typically they occupied only one small group of alfalfa fields. Breeding Bird Survey (BBS) data suggest that 1967 was another significant irruption (Sauer et al. 2011). It is also noteworthy that the Wisconsin BBS graph shows much higher numbers of Dickcissels in 1966 and 1967 than any time up to 2012 (Fig. 6).

Janssen (1988) also described an explosion in the number of birds in Minnesota including seemingly unprecedented numbers in the central and northwest. The general sense was that "Dickcissels appeared to be using all available habitat in the state." The 1988 invasion was evident even in Ontario; prior to 1988, there were only 4 nesting records, but in 1988 at least 31 nests were reported in the province (Weir 1988). BBS data show a spike in 1988 for Wisconsin, but not a drastic spike (Fig. 6).

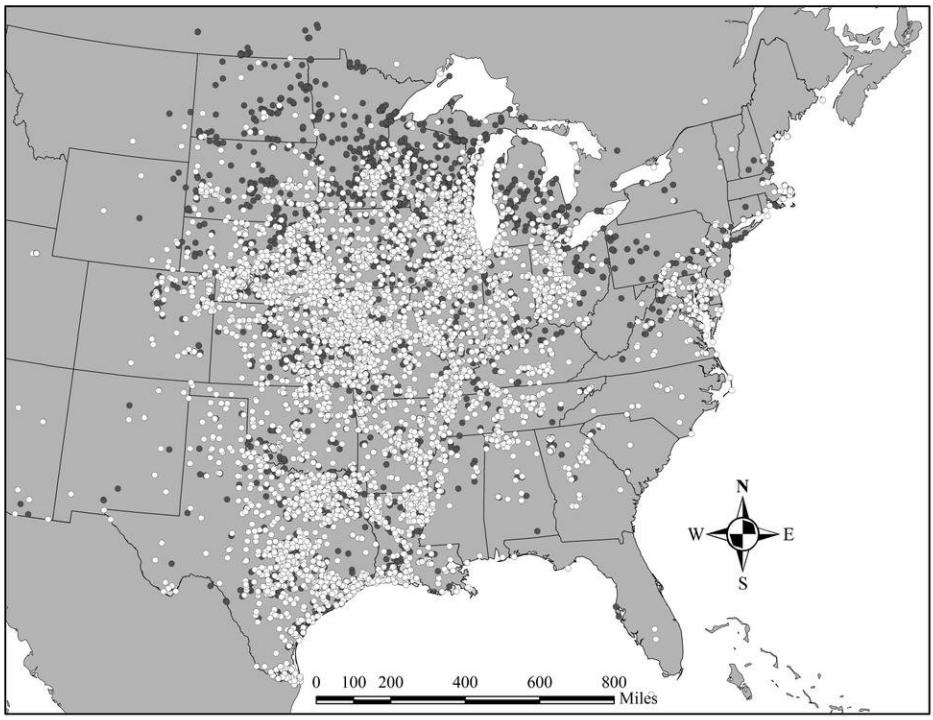

Figure 5. Dickcissel sightings reported to eBird (eBird 2012). White dots are sightings from May to August, 2008–2011. Dark gray dots are sightings from May to August, 2012. Note that the white dots are the top layer, so all dark dots represent locations where Dickcissels were not reported in the previous four years.

Dickcissel peaks in Wisconsin after the turn of the millennium have included 2000, 2006, and 2011 (Fig. 1 and Fig. 6; Sauer et al. 2011, eBird 2012). It seemed that 2005 was an above-average year, with Wisconsin Society for Ornithology (WSO) reports from 29 counties (Soulen 2006). In most cases, numbers were modest and they seemed to be sticking to their normal southern and western Wisconsin range with few exceptions (Soulen 2006). BBS data do not indicate a spike in 2005 (Fig. 6). However, 2006 was noted as a banner year in which there were WSO reports from 41 counties including several northern counties such as Douglas, Florence, and Forest (Soulen 2007). Large numbers of up to 100 were reported but because observations were submitted on a county level, it is difficult to quantify just how abundant they were on a local level. This correlates well with BBS data which show a substantial increase in Dickcissels in 2006 (Fig. 6).

In 2011, Dickcissels were reported in 48 counties (Fig. 1; Hoffman 2012, eBird 2012). Although this range is more expansive than the 2006 irruption, the numbers are somewhat amplified by the advent and increased popularity of eBird, which captures observations from many more observers and locations than previous forms of reporting did, especially away

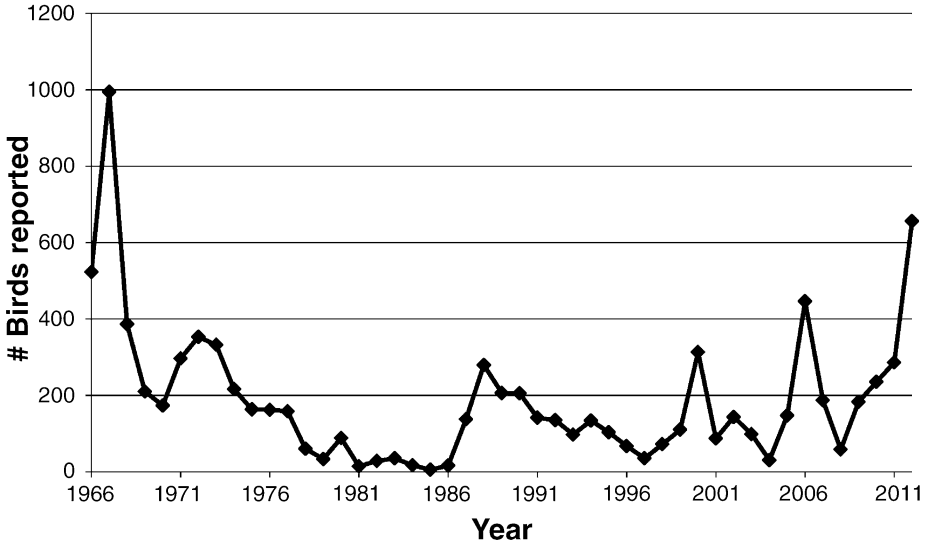

Figure 6. Dickcissel observations on Breeding Bird Surveys run in Wisconsin, 1966–2012. The number of routes surveyed differs by year, in general, increasing over time.

from main metropolitan areas with the greatest concentrations of birders. When reviewing multiple studies which had found range shifts in birds, Kujala et al. (2013) found a significant correlation between increased effort and possible range shifts. Therefore, eBird data can only be used to fairly compare 2011 to other years after the growth of eBird (post-2006), in which we see that peak frequency was 10% of checklists compared to 5–8% the previous three years (Fig. 4).

Historical Wisconsin Distribution

Although drastic abundance fluctuations and variation in observer coverage make Dickcissel range shifts through the years hard to delineate, it seems clear that during the last century, Dickcissels have gone from inhabiting only the southern grasslands (Fig. 7) to occupying suitable grasslands across the southern two-thirds of the state. Clearing of lands for agriculture has had a major effect on grassland bird distribution, and was the original cause for Dickcissels to inhabit areas of the state beyond the southern grasslands.

Climate change could be a cause for further distribution shifts. Northward range shifts have recently been recognized for a number of bird species, most likely due to climate change (Zuckerberg et al. 2009). While we typically think of climate change as a relatively recent phenomenon, in 1947, Taber was already recognizing that climate change was a likely factor in northward expansion of Dickcissel range. To describe this, he stated, "It is well known that Wisconsin is now experiencing a warm climatic phase to

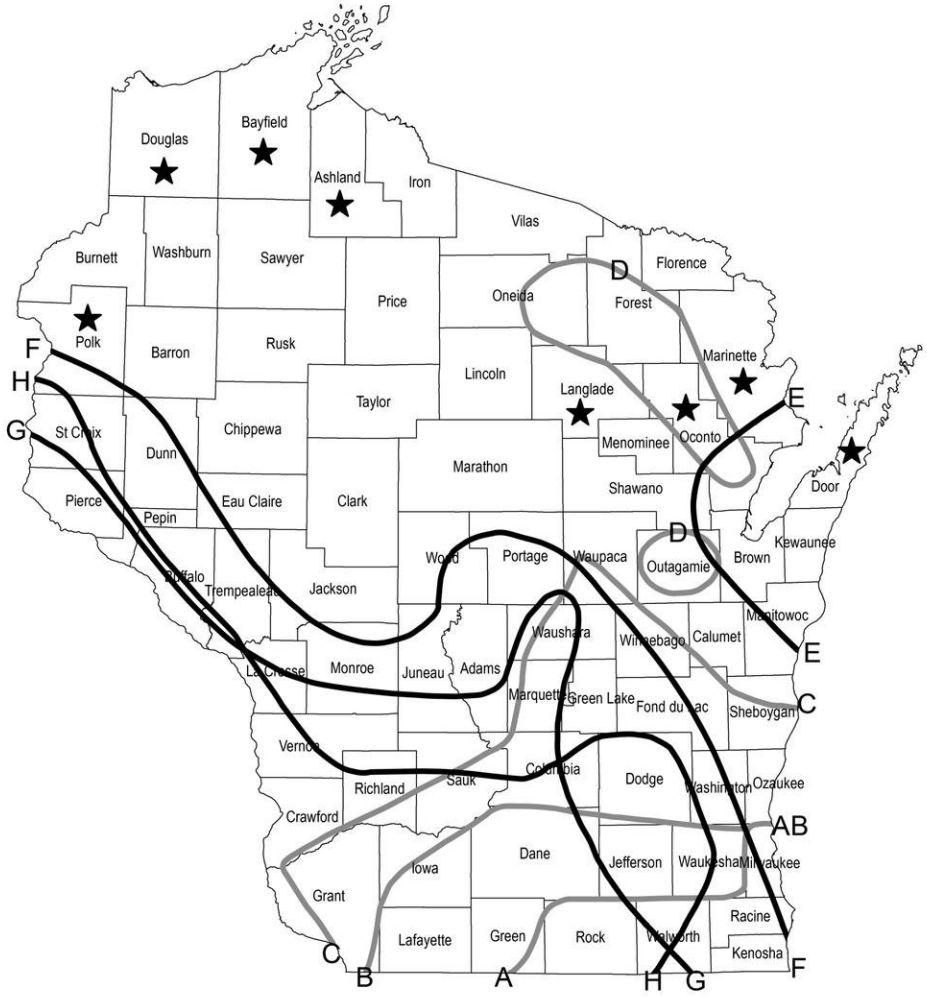

Figure 7. Historical limits of Dickcissel occurrence and abundance in Wisconsin, based on figure 2 and text in Taber (1947), figure 1 in Emlen and Weins (1965), figure 1 in Weins and Emlen (1966), and text in Soulen (1989). A) Present every year, 1921–1946. B) Present in all but low years, 1921–1946. C) Present only during high years, 1921–1946. D) Locally present during early 1930s. E) Western boundary of eastern occurrence, 1964 invasion. F) Northern boundary of occurrence, 1964 invasion. G) Northern boundary of abundance, 1964 invasion. H) Northern boundary of 1965 range, a more typical year. Gray lines denote boundaries from the 1920s–1940s, black lines denote boundaries during the 1960s. Stars denote northern counties mentioned as inhabited during the 1988 invasion.

which many southern birds have responded by extending the northern border of their breeding range ever farther north" (Taber 1947:39).

We have the benefit of several previous studies that attempted to delineate Dickcissel range in years of varying abundances. Taber (1947) surveyed 38 Wisconsin ornithologists, summarized population fluctuations between 1921 and 1946, and generated a range map for years with low,

medium, and high Dickcissel numbers. The northmost county that regularly had Dickcissels in years of high abundance is Waupaca (Fig. 7; Taber 1947). However, birds were recorded in outlying counties such as Door, Marinette, Forest, Oneida, and Sawyer during this period. Apparently during the drought years of the early 1930s, Dickcissels did occur regularly in Oconto, Forest, Oneida, and Outagamie Counties; however, they disappeared again in about 1940 (Fig. 7; Taber 1947).

Emlen and Wiens (1965) realized 1964 was a major Dickcissel invasion year, and conducted roadside counts, mainly in the southern half of the state, to document their numbers and distribution. The northern end of estimated Dickcissel range during the 1964 invasion was a line from St. Croix Falls to Eau Claire to Stevens Point to Door County (Fig. 7; Emlen and Weins 1965), though it appears there was minimal effort in the northern counties. Compared to the efforts of Taber, Weins, and Emlen, we have less compiled information about the 1988 invasion, but the Passenger Pigeon states that they were found in 43 of 72 counties (Fig. 1) and lists 8 northern counties, including over 50 birds in Ashland/Bayfield and Polk Counties (Fig. 7; Soulen 1989).

Two other sources offer important information on prior range. The WBBA, for which field work was conducted 1995–2000, shows a range covering roughly the southern two-thirds and some areas of the northwest part of the state (Fig. 3; Cutright et al. 2006). Robbins (1991) describes roughly the same range for BBS averages 1966–1980.

It is difficult to directly compare range or numbers from this year to prior invasion years. The advent of eBird, the Wisbirdn listserv, and Wisconsin Birding Facebook group make it much easier to aggregate data from many birders whose observations went unreported in the past. Figure 4 suggests that the presence of eBird data in reports since 2007 has greatly increased our coverage. Since there has clearly been an increased observer effort since the 1964 and 1988 irruptions, it is difficult to compare the 2012 Dickcissel distribution to past irruptions and avoid a bias due to increased effort (Kujala et al. 2013). However, a drastic spike for 2012 greater than any year after 1967 in the more long-term and standardized BBS data show that this is not merely due to increased observer effort and is likely one of the most significant Dickcissel irruptions we have seen (Fig. 6, Sauer et al. 2011). It appears that this season's documentation of Dickcissels in all 72 Wisconsin counties represents this species being much more widespread in central and northern Wisconsin than previously documented.

A followup study the year after the 1964 invasion may offer hints to how abundant Dickcissels will be in 2013. In the summer of 1965, Wiens and Emlen (1966) noted that the range of Dickcissels contracted back to the core range in southern Wisconsin, the density and abundance of birds decreased drastically, and Dickcissels returned to using traditionally favored habitat. Declines from 1964 to 1965 were estimated at 60 to 75% and many fewer birds were found in grazed pastures and cornfields compared to 1964 (Weins and Emlen 1966). Similar results are suggested after the 1988

invasion—the 1989 summer field notes only report Dickcissel in 24 counties (Soulen 1990). BBS data also show declines following irruptions in 1967, 1988, 2000, and 2006 (Fig. 6, Sauer et al. 2011).

Although this irruption greatly increased the number of Dickcissels that we saw, presumably this was mostly a shift in location rather than an overall change in continental population size. Currently, BBS data may be the best source for information on overall Dickcissel trends. The long-term (1966-2011) national trend shows a slight but statistically significant decline (–0.5, 95% CI = –1.1, 0.0) and the national trend for 2001–2011 is nearly flat (0.2, 95% CI = –0.8, 1.3); Sauer et al. 2011). Data for Wisconsin show a significant long-term (1966-2011) Dickcissel decline of –3.7 (95% CI = –4.9, –2.6) but Wisconsin data from 2001-2011 show a statistically significant increase of 7.4 (95% CI = 10.2, 21.2); Sauer et al. 2011). However, the sharp spikes shown in invasion years (Fig. 6) may be affecting these trends. The magnitude of these trends may even be impacted by counts from a single Breeding Bird Survey, such as the 154 Dickcissels reported on the 1967 Hazel Green BBS route (Sauer et al. 2011).

Triggers For Fluctuations

Although the Dickcissel is still poorly understood relative to other North American passerines, there are several hypotheses for why these irruptions occur. The prevailing argument is that Dickcissel irruptions correspond with drought years in the core of their breeding range (Temple 2002). The irruptions in the 1930s correspond with the dust bowl years and the irruptions of 1964, 1988, and 2006 were also years of severe drought in the Midwest (Taber 1947, Emlen and Weins 1965, Skaggs 1975, NOAA 2006). The pattern fits for 2012 as some have referred to it as a severe enough drought to rival the dust bowl (NOAA 2012). Drought likely explains the northward shift of Dickcissel in the state during the summer of 2012 as well. During June, most of southern Wisconsin was in extreme drought while most of central Wisconsin and all of northern Wisconsin were not (NOAA 2012). The early-June Dickcissel peak and following drastic drop off in southern Wisconsin and corresponding late-June and early-July Dickcissel peak in the northern half of the state could be explained by birds from southern Wisconsin and other drought-stricken areas seeking refuge from the drought.

Although abnormally dry conditions seem to certainly have an impact on Dickcissel irruptions, they may not be the only factor. The loss of Conservation Reserve Program (CRP) lands to agriculture is a detriment to several grassland bird species, including Dickcissel (Johnson and Igl 1995). Therefore, decreasing acreage of CRP in the heart of their range could be pushing this species further north and east in search of suitable habitat since CRP grasslands typically provide breeding habitat for this species (Johnson and Igl 1995). Timing of haying in the core of their range could also impact population fluctuations. Luscier and Thompson (2009) found that haying before mid-June had strong negative impact on nest-survival rates of Dickcissel in Arkansas and usually causes

the species to leave once their preferred habitat has been removed. Thus, grasslands that are hayed early are essentially ecological traps. Abnormally warm temperatures in spring result in faster hay growth, hence earlier haying, so spring temperature is likely an important driver of nest success. A prevailing hypothesis is that some Dickcissels that arrive in the upper Midwest in June and July are failed breeders from further south and west because of haying and other factors, but this has not been studied thoroughly.

Conclusion

Dickcissel appeared to be one of the most abundant species in open upland ecosystems of the state during the summer of 2012. Dickcissels were found across a wide area and in dense concentrations in many areas, especially in the northern third of the state where such numbers are rare. Based on historical information from years following past irruptions, it's unlikely we'll see as many Dickcissels in 2013 as we did in 2012, unless the extreme drought continues. It also appears that the distribution of drought may indicate where in the state Dickcissels are most abundant.

Drastic increases in observers contributing bird observations, especially in areas that were barely covered before, and ease of comparisons using simple tools such as frequency graphs displays some of eBird's greatest strengths. However, because of varying observer effort, potential observer bias, and lack of standardization, we must be careful about using only eBird data to interpret future populations and drastic events such as the 2012 irruption. Therefore, other sources of data such as the BBS need to be included in analysis and comparisons, and 2012 BBS data indicate that this was a large irruption. Now that eBird is prominent as a remarkably successful tool for aggregating observations from around the state, we will have excellent opportunity to compare future years to 2012. The upcoming breeding season will be especially enlightening as we will find out if Dickcissels contract to their normal range, abundance, and habitat as they did after previous major irruptions or if this expansion is continued.

As a concluding thought, we'd like to credit the Wisconsin birders who continue to submit their bird observations to eBird. While Taber, Weins, Emlen, Janssen, and many others did a laudable job describing past bird invasions, we know much more about the extent of the 2012 irruption than any previous irruptions in the state thanks to the data submitted by birders and citizen scientists. Needless to say, documenting the species in all 72 counties would have been difficult without observers from around the state entering their sightings. The future is bright for our capacity to describe and understand bird movements, and perhaps ultimately use these observations to advance conservation.

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Lessons From the Seasons: Summer 2012

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The number of alert messages on Wisbirdn for the summer of 2012 was seemingly a weekly occurrence. Instantaneous notification is great for birders inclined to pursue the chase. Furthermore, social networking provides information flow undreamt of decades ago. Two of the reasons for this quarterly investigation are to put these short-term phenomena into a long-term and regional perspective.

Several species have changed their range or population status to be either removed from or added to alert status. I have been contemplating these changes for some time. This lesson will explore an unrealistic, but also a thought-provoking question. What would be the alert messages if today's communication opportunities had been around in 1900?

ALERT: Cardinal Grosbeak shot near Milwaukee!

Several words in this statement are very important. First, the taxonomy of the time had today's Northern Cardinal listed as brother to Rose-breasted Grosbeak. Today it is merely a cousin. Secondly, the word shot is also important, because prior to the advent of hand-held optical devices, shooting a bird was the only reliable way to identify it. Finally, the words alert and Milwaukee indicate the status in 1900.

Northern Cardinal was extremely rare in Wisconsin in 1900 with the very small population limited to Milwaukee, Racine, and Grant Counties. Sam Robbins in his book, *Wisconsin Birdlife*, gives an outstanding account documenting the progression of this species northward. The 2012 seasonal report documents nesting in the four most northerly counties in the state. These data provide affirmation of the successful colonization of new territory for this species.

ALERT: Nesting Blue-winged Warblers near Delavan, Walworth County.

The first recorded nesting in the state was 11 July 1897. Kumlein and Hollister documented the event: "We found an entire family, parents and four or five young, and took one of the latter near Delavan. These had been undoubtedly reared here." Again, Robbins has detailed this advance of the Blue-winged and similar contraction of the Golden-winged Warblers in Wisconsin.

ALERT: Tufted Titmouse shot near Madison.

This dead bird was the first record for this species in the state. A few more birds were recorded until the 1920s when nesting was confirmed in the Mazomanie bottoms in western Dane County. The species has since gradually spread and is now a regular part of the avifauna as far north as Eau Claire and Chippewa Falls,

A number of other species have had their population either expand or contract, and in some cases contract and then rebound. These species would not fall into the alert category for rarity, but their status is much different today than 100 years ago.

Great Egrets were abundant to the late 1800s. Plume hunters responding to fashion- conscious urbanites decimated populations. The species is slowly recovering to its former numbers.

White Pelican took a similar trajectory as the Great Egret.

Many species responded to land-use changes. The land conversion as a result of settlement basically reached its apex in southern Wisconsin around 1900 and in northern Wisconsin around 1930. The land transformed from Native American management systems to the European management system, which provided habitat winners and losers. The reforestation of the north woods, contraction of agricultural land primarily due to farming poor or wet soils, and the conservation movement all have had an influence on today's bird populations. A few examples are:

Bewick's Wren—the poster child for the benefits of agricultural conversion. This species was not known from the state until 1922. The birds moved in from the south and west to take advantage of the newly created suitable habitat. The species, while never common, could be found with relative ease from the 1930s through the 1950s. The population then started to decline and by the 1970s it was extremely rare. In 2013, the species is considered at best accidental.

A similar pattern occurred with our meadowlark species, although both species were part of the avifauna when the settlers arrived. The Western Meadowlark was best adapted to take advantage of the agricultural expansion in the state. Western Meadowlarks can utilize the shorter grasses much better than Eastern Meadowlarks. The settlers brought with them skills to create and maintain dairy farms. This agriculture method included rotating crops of hay, small grains, and corn with an abundance of pasture land. The dramatic loss of pasture land has significantly affected the Western Meadowlark.

The dynamic between Red-bellied and Red-headed Woodpeckers was also affected by this agriculture method. In 1900, Red-bellied Woodpeckers were relatively uncommon, being nearly restricted to floodplain forests. Red-headed Woodpeckers were extremely common, being found in nearly every woodlot, as well as prairies and large cities. The change occurred when open forest became sapling and shrub infested after the onset of fire suppression in the 1920s. Red-headed Woodpeckers need open areas to sally for insects and Red-bellieds probe bark, thus the swap in abundance.

Common Raven displayed a significant response to the cutover era of logging in the state. Kumlein and Hollister reported that this species was a common breeder along the Lake

Michigan shore to Racine County. At the time of European settlement the species was not found in the oak savanna or prairie areas and was closely associated with areas of conifer growth. As the logging cutover proceeded this species became confined to the northern fourth of the state.

Reforestation after the cutover and planting of confers well outside their historic range have provided habitat for this species to move not only back into its original range, but expand into former prairie and savanna areas such as Marquette and Green Lake Counties. Birders should continue to monitor this species as there is seemingly great habitat in the Southern Kettle Moraine State Forest.

I'll close with a range expansion hinted at in the literature, but without much detail. Buffleheads have nested in central Wisconsin for the past few years. This seems to be well south of any previous nesting records. However, Kumlein and Hollister report a young bird unable to fly was shot by B. F. Goss on Pewaukee Lake. This datum gives a strong indication this species did occasionally nest in the state prior to erection of nest boxes.

This historical context may not mean much to a birder in pursuit of a life bird, especially some of the younger birders on limited incomes or with taxing transportation needs. The adrenalin rush combined with social aspects of seeing a rare bird with persons of a like interest makes historical anecdotes pale in comparison with the present pleasures. Some birders, however, want to have events placed into context. WSO is the place to go for this type of in- depth analysis.

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Hooded Merganser caught stretching by Myles Hurlburt

The Summer Season: 2012

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Summer weather was extremely hot and for the most part dry. June temperatures did not show much difference in average between north and south. Nearly statewide, the June temperatures were 3 to 4 degrees above the long-term average. An extensive rainy period in the far north brought flooding to many spots. Roads were impassable in several low lying areas. In contrast, the southern counties had nearly no precipitation. July precipitation patterns shifted slightly to the northeast, although in scattered southern location significant rains fell. Over most the state and especially in the central sands, severe drought conditions persisted. Temperatures were the real story with unprecedented heat. The north averaged 4 to 5 degrees above the long-term average, whereas the southern parts of the state recorded 6 to 8 degrees above normal. This was the hottest summer on record.

Observers recorded 272 species during the season, which is up from 264 reported in 2011. Also, both hybrids of the Blue-winged and Golden-winged Warblers were recorded. An outstanding banding record for the Lawrence's hybrid was achieved at Riveredge Nature Center. The account that follows gives information on nearly all the species recorded in the summer season. The only species not included are Rock Pigeon, European Starling, and House Sparrow. Continuing the tradition established in past years' summaries, some detail is given on nearly every species found in the state.

Rarities

Observers found rare species with much more regularity than they did in 2011. *"By The Wayside"* accounts document a few of these sightings, although many documentations these days are photographs only. Some of these photos appear later in this article. Most significant among the rare species was Wisconsin's fourth Fork-tailed Flycatcher. The other rarities are in many instances becoming much less rare, but they are exciting to view nonetheless. Highlights include two Western Grebe locations, a mid-summer American Golden-Plover, a new location for Loggerhead Shrike, both Glossy and White-faced Ibis in the same pool, more than 30 Black-necked Stilts, several Yellow-crowned Night-Herons, a male Rufous Hum-

mingbird, a summer Eurasian Wigeon, Little Gull, Summer Tanager pair, and another White-winged Dove coming to a feeder.

Although less rare, a number of additional species, some out of season, helped to make this a relatively interesting summer season: Snow Goose, a male Surf Scoter, Spruce Grouse, Horned Grebe, Snowy Egret, Yellow and King Rails, a new nesting location for Piping Plover, Buff-breasted Sandpiper, Red-necked Phalarope, Lesser Black-backed and Great Black-backed Gulls, a new location for Chuck-will's-widow, White-eyed Vireo, Northern Mockingbird, Brewster's and Lawrence's Warblers, very large numbers of Yellow-breasted Chats, Nelson's Sparrow, and White-winged Crossbill.

Other Features of the Season

While Wisconsinites were sweltering, Tundra species—Snow Goose and Snowy Owl—were waiting for the tundra to melt. Early June records for both species in different locations were greatly unexpected. Another Bufflehead nesting was recorded, but this time it was at the Mead Wildlife Area and not Horicon. Northern Bobwhite numbers were up significantly over the previous several summers, potentially indicating a rebound from consecutive heavy snow winters. Gray Partridge was not recorded, although summer is the poorest time of the year for observation. Osprey nesting occurred near the Illinois border.

Whether by flowage manipulation or simply due to droughty conditions, habitat for rails and shorebirds was ideal. Most birders are aware of the need for shorebirds to have shallow muddy areas in marshes, but rails also seem to prefer those types of conditions. Eurasian Collared-Dove continues to expand with sightings as far north as Barron County. Carolina Wren and Northern Mockingbird numbers show a consistent pattern of slow increase. Cerulean Warblers were found in the relatively unbirded Chippewa Moraine Ice Age Reserve. This publicly accessible land harbors several hundreds of acres of old and maturing oaks that Ceruleans seem to prefer. White-winged Crossbills made an appearance in northern counties in late July, which was the precursor to a mini-invasion in August.

County Coverage

The "Contributors and Cited Observers" section greatly increased over the past with 498 observers and 7 organizations submitting reports. Observations were submitted for every county in the state. A great disparity in coverage does exist depending on three primary factors. First the counties of largest population have proportionally a larger number of birders. Dane County had 15,444 species record submissions, Dodge (the exception due to Horicon Marsh)—10,032, Manitowoc—7088, Ozaukee—7070, Iowa—6486, Milwaukee—6095, and Waukesha—5609. Some counties with low numbers of birders have a person or two that are very active record keepers, such as the Kavanaghs in Florence County—5569 submissions, Finally, hotpsots seem to be visited more regularly by birders with limited budgets; Dodge County is the prime example. The low side of

county numbers had single visits from birders. The least birded county in 2012 goes to Shawano with only 5 record submissions, Menominee County had 13 species record submissions, Buffalo had 48. and Pierce had 69; Kewaunee, Langlade, Pepin, and Washburn had low numbers of submissions. On the positive side, Clark and Iron Counties greatly increased their coverage over 2011 and a few counties with low population and a relatively small cadre of birders had great coverage. For example, Bayfield had 2085 submissions, Burnett—2107, Crawford—2311, and Vilas—1804.

OMISSIONS

Soon after the *Passenger Pigeon* summer issue was mailed last spring, I received a few very courteous emails informing me that the seasonal report was not quite accurate. I promise to make it right and do a better job in the future. Omitted from the 2011 seasonal report were the following sightings.

Red-throated Loon: Three birds seen at Wisconsin Point, Douglas County on 23 July by Steve Betchkal.

Eastern Whip-poor-will: Steve Betchkal counted 27 on his nocturnal survey route in Eau Claire County on 29 June 2011.

Black-necked Stilt: Tom Wood found up to 3 birds between 26 June and 10 July along the Old Marsh Road, Horicon Marsh NWR, Dodge County.

Little Gull: Tom Wood found the bird first on 4 July and this notation should replace the 7 July date by Tessen.

Neotropic Cormorant: Steve Thiessen contacted me and said "while the details were correct for the bird's documentation, it was first identified by Peter Fissel and brought to the attention of many other grateful birders."

Conclusion

The data we collected do have value and all birders submitting to ebird or through hard copies to WSO should know their efforts can be used to help bird conservation. The data come in different forms. The summer report sent out a call for BBS participants to put their BBS records into ebird. This past summer several birders did and the analysis of data became much more complete.

Until we have data, such as in many European countries, which show the population of a species in the country within small statistical errors, we cannot do acceptable bird conservation. Please consider participating in one of the numerous citizen science surveys. A complete list can be found on the WSO website. The paradigm still holds that for the most part people bird ten months of the year for fun and they bird in June and July for conservation. Everyone is encouraged to participate in single or group counts. Furthermore, if you are a landowner, it should be your moral obligation to know the breeding bird populations on your land.

Reports
(1 June–31 July 2012)

Snow Goose—The sighting of this species is always a special event in the summer season. Szymczak experienced an individual 5 June in Rusk County, and a truly phenomenal 45 birds flew over Epstein's house in Monroe County 10 June.

Canada Goose—Reported from 68 counties.

Mute Swan—Seen in 12 counties, which is significantly up in both geographical coverage and numbers. The largest population was 12 birds found at the Bong Recreation Area in Kenosha County (Willard and Kerowiczs).

Trumpeter Swan—Reported in 22 counties with highest numbers from Burnett 22 June (Stutz) with 45 birds. Hayes recorded 19 birds on 31 July in Juneau County.

Tundra Swan—Three birds were seen near the tip of the Door Peninsula 8 June (Noeldner). Another individual lingered at the head of Chequamegon Bay, Bayfield County, 10–22 June (N. Anich and Brady).

Wood Duck—Reported from 65 counties, which is up significantly over 2011. Horicon Marsh held large numbers this summer exemplified by 300 estimated during the annual Midwest Crane Count, and 385 counted 21 July (Schroeder and Grgic).

Gadwall—More widely scattered reports than the past few years. As usual, birds nested at Horicon Marsh in Dodge and Fond du Lac Counties. Also, noted from Door (Kocoureks), Manitowoc (Schroeder), Oneida (Toriello), Ozuakee (Frank), Rock (Cullum and Kittleson), and Winnebago (m. ob.) Counties.

Eurasian Wigeon—Oksiuta photographed a bird (Fig. 1) in partial eclipse plumage 27 July, Ashland County, for Wisconsin's first summer record.

American Wigeon—Observed in five counties: Bayfield (Ouren), Dodge and Fond du Lac (m. ob.), Manitowoc (Sontag), and Outagamie (Tricks).

American Black Duck—Observers reported this species from 12 counties. The largest flocks were 20 birds on 14 July, Ashland (Folkening) and 7 on 12 July, Vilas (David).

Mallard—Reported from 63 counties.

Blue-winged Teal—Reported from 28 counties. This number is much lower than 2011 and may reflect the droughty conditions over much of the state.

Northern Shoveler—A good summer with reports coming from 13 counties, which is the same as 2011. A concentration was found 14 June, at Horicon Marsh, Dodge County, where Bridge and Prestby found 50 birds.

Northern Pintail—Pintails were found in four counties with several at Horicon Marsh, Dodge and Fond du Lac Counties (m. ob.). Singles were also recorded in Marathon (Hoeft) and Winnebago (Bridge and Prestby) Counties.

Green-winged Teal—The number of reporting counties (11) and individuals was down significantly compared with 2011. The largest concentration was 40 birds seen 21 July, Dodge (Prestby) County.

Canvasback—These 5 counties provided the season's only observations: Dodge (m. ob.), Door (Noeldner), Fond du Lac (m. ob.), Marquette (Nolan), and Winnebago (Ziebell).

Redhead—At least 356 birds were recorded 14 June at Rush Lake, Winnebago County (Ziebell). Additional observations were reported from 14 counties.

Ring-necked Duck—At least 40 birds were recorded 8 June, Juneau County (Prestby). Additional observations were from 17 counties.

Greater Scaup—Observers found birds in four counties through 23 June: Door (m. ob.), Manitowoc (Sontag), Racine (Coulter), and Sheboygan (Sommer).

Lesser Scaup—Reported from an outstanding 12 counties in June with the last sighting 23 June Oneida (Kavanaghs).

Surf Scoter—Dischler found a gorgeous breeding plumage male 15 June, Door County.

Bufflehead—Belter had two juveniles 28 July at the Mead Wildlife Area, Marathon County. Sporadic use of Wood Duck nest boxes in recent years should encourage summer season observers to take close looks for Bufflehead at your local wildlife area.

Common Goldeneye—Six counties held birds this summer: Bayfield (Szymczak), Door (m. ob.), Fond du Lac (Issacson), Milwaukee (Flores Wiskowski), Price (Evanson), and Vilas (m. ob.).

Hooded Merganser—Reported from 33 counties.

Common Merganser—Reported from 13 counties. Peczynski found 20 birds 1 July on Butternut Lake in Forest County.

Red-breasted Merganser—Sightings came from 11 counties, a significant increase over the past several years.

Ruddy Duck— A normal season with observations in 12 counties including more than 200 seen in Dodge 2 June (Kavanaghs).

Northern Bobwhite—The 13 reporting counties were well above the six from 2011, which may indicate a slow recovery from the harsh winters a few years back. Birders still need to be cautious of Northern Bobwhite sightings, because they are preferred birds for release to train hunting dogs.

Gray Partridge—No summer season reports for this declining species.

Ring-necked Pheasant—Reported from 32 counties, which is close to average for recent summers. Pheasants seem to be recovering from harsh winters in a similar fashion as bobwhites.

Ruffed Grouse—Birds were reported in 29 counties compared to 26 counties in 2011. The 11-year cycle was bypassed with this being the twelfth year. We'll see how this species survives this next winter.

Spruce Grouse—Mid-summer sightings all came from Vilas County: 1 June (Prestby); 20 June (Freiberg); and 28 June (Pendergast).

Sharp-tailed Grouse—The submitted reports were comparable to last year with three locations holding birds: Crex Meadows 13 June (Pendergast) and Namekagon Barrens 18 June (Schmokers) both in Burnett County, and 22 June at Kimberly Clark Wildlife Area in Price County (Kavanaghs).

Greater Prairie-Chicken—Many observers reported birds from the traditional Central Wisconsin Grasslands: Leola Marsh in Adams County, Buena Vista Grasslands in Portage County, and Paul Olson Wildlife Areas in Portage and Wood Counties.

Wild Turkey—Reported from 62 counties.

Common Loon—Exceptional was southern sighting 22 June, Jefferson County (Etter Hale). None of the remaining 30 reporting counties were considered unusual.

Pied-billed Grebe—Reported from 38 counties.

Horned Grebe—A late migrant was seen 19–22 June in Ozaukee County (Frank and Wanger).

Red-necked Grebe—Ziebell counted 8 birds on 14 June in Winnebago County. Other reports came from these counties: Burnett (m. ob.), Marinette (Hurst), and Price (Krakowski).

Western Grebe—An exceptionally cooperative bird rested and munched small fish and invertebrates at Lake Maria in Green Lake County 21–29 July. Another Western was photographed at the Trempealeau National Wildlife Refuge in Trempealeau County, 5 June (West). See "*By the Wayside*" for more details on this bird.

Double-crested Cormorant—This species was seen in 41 counties. On his annual survey of Rush Lake in Winnebago County, Ziebell tallied 678 individuals 14 June.

American White Pelican—The number of reporting counties dropped to 27 this season with lower numbers counted. Exceptional was 470 birds at Rush Lake in Winnebago County 14 June (Ziebell).

American Bittern—Reported from 25 counties, which is an increase over the low numbers found in 2011.

Least Bittern—Noted in 17 counties this season. Ziebell had 64 birds 14 June at Rush Lake in Winnebago County.

Great Blue Heron—Reported from 67 counties.

Great Egret—Reported from 28 counties as last year. The highest number was an estimated 500 seen at Horicon Marsh in Fond du Lac County (Setzer, Roesselet, and S. Cutright).

Snowy Egret—Up to four birds were occasionally seen from 4–23 June at Horicon Marsh along Highway 49 in both Dodge and Fond du Lac Counties (first seen by Sommer and Tessen and last seen T. Wilson). Another Snowy was seen 14 July in Manitowoc (Sontag).

Cattle Egret—Found in four counties: Brown (Louthain), Dodge (Lamb), Outagamie, and Winnebago (m. ob.).

Green Heron—Reported from 66 counties, which is a tremendous jump over the 2011 sightings.

Black-crowned Night-Heron—At least 162 birds were noted at El Dorado Wildlife Area in Winnebago County on 29 July (Szymczak). Ziebell tallied 459 at Rush Lake 14 June also Winnebago County. Observers reported sightings from 18 counties in all.

Yellow-crowned Night-Heron—A higher than normal three counties harboring birds this season: 24 June–6 July Grand River Marsh, Green Lake (Fissel and Pendergast), 26 July Fond du Lac (Schiffman), and 27–31 July (Fig. 2) Dodge (m. ob.). See "*By the Wayside*" for a description of how to identify an immature bird.

Glossy Ibis—A bird was located 7 June on a pond adjacent to the Mascoutin Trail in Winnebago County (Schultz). This bird remained through 23 June giving many birders a great opportunity for observation (Fig. 3). See "*By the Wayside*" for a more detailed description of this bird.

White-faced Ibis—A single bird was seen along Highway 49 at Horicon Marsh in both Dodge and Fond du Lac counties from 1–13 June (m. ob.). Then on 14 June, two birds made

the debut at the same pond that held the Glossy Ibis. These two birds remained at Mascoutin through 23 June (Fig. 4).

Turkey Vulture—Reported from 67 counties.

Osprey—Good news from the expanding range front with a birds nesting in Rock (Van Altena) and Kenosha Counties (Willard). In sum, Ospreys were reported from 47 counties.

Bald Eagle—Reported from 59 counties.

Northern Harrier—Reported from 48 counties, which is up significantly from the 30 counties in 2011.

Sharp-shinned Hawk—A bird 12 June at Vernon Marsh Wildlife Area in Waukesha County (Coulter) was the most southerly report in the state. More traditional northern reports came from 23 counties.

Cooper's Hawk—Reported from 42 counties.

Northern Goshawk—Noted from 4 counties; found at traditional sites: Bear Bottoms in Florence County, Moose Lake in Iron County, and Stella Lake Road in Oneida county (all by the Kavanaghs) and another report from Powell Marsh in Vilas County (M. Anderson and Spahn).

Red-shouldered Hawk—Reports were nearly the same as 2011 with birder sightings from 27 counties. The most northern sighting was from the Rainbow Lake Wilderness Area in Bayfield County (Loss).

Broad-winged Hawk—Reported from 38 counties with several in southern Wisconsin.

Red-tailed Hawk—Reported from 55 counties, which is lower than average.

Yellow Rail—One bird reported from Crex Meadows in Burnett County 13–22 June (Pendergast and Stutz).

King Rail—A banner year for this species. After going unreported in 2011, at least 22 birders reported this species. The first report came from Dodge County 2 June (T. Wilson) and the last from 19 June again in Dodge (Veltman). All the reports were from Horicon Marsh (Figures 5 and 6). The most intriguing aspect to the submitted data is the dispersed nature of the sightings with documentation from four locations in the refuge.

Virginia Rail—Reported from 28 counties, which is the same as 2011.

Sora—Reported from 24 counties.

Common Gallinule—Gallinule numbers maintained the high numbers recorded in 2011. Birds were found in 11 counties. Eleven individuals were seen 30 July at Horicon Marsh in Dodge County (Norton).

American Coot—Numbers were up for this species. Reports came in from 26 counties highlighted by an estimated 476 birds 14 June at Rush Lake in Winnebago County (Ziebell).

Sandhill Crane—Reported from 67 counties.

Whooping Crane—Summer observations away from the release areas in Juneau and Green Lake Counties were confirmed in Adams, Dodge, Marathon, Marquette, Portage, and Wood Counties.

Black-bellied Plover—Two late departure dates noted: 18 June Columbia (Warnecke) and Manitowoc (Sontag) Counties. Dane and Marquette Counties also held birds in early June. The first fall migrant was found 30 July in Dodge County (N. Anich and Heikkinen).

American Golden-Plover—Coming, going, or staying are words that describe American Golden-Plover this season. A late spring migrant 4 June Marquette County (Nolan) is normal as are early fall migrants 21 July in Dodge County and Fond du Lac (m. ob.) County, and 28 July in Dane (White) County. A bird seen 30 June in Iowa County (Fissel and Schwarz) is hard to determine; therefore, I placed it in the staying category.

Semipalmated Plover—Lingering spring birds were noted in 13 counties with the latest being 16 June Sheboygan (Swelstad) and 22 June Racine (Wenzel). The fall migrants were seen in even greater numbers, first arriving 10 July Dodge (Tessen) and Waukesha (Gustafson) Counties.

Piping Plover—Sumner Matteson reports that within Lake Superior breeding habitat 5 pairs had at least 11 young alive at the end of the season with 7 known to have fledged in Au-

gust. Another nesting attempt occurred at the tip of the Door Peninsula. A pair was found by R. and C. Lukes on 3 June and confirmed on a nest 18 June (Maguire). Two young hatched and were last seen 5 July.

Killdeer—Reported from 63 counties.

Black-necked Stilt—An excellent summer! Seemingly perfect habitat at Horicon Marsh provided ample opportunity for birders in the state to tally this species. First seen on 5 June by several birders, the species was seen on both sides of Highway 49 in Dodge and Fond du Lac Counties with numbers peaking at 31 birds on 31 July (Geraghty). Another 2–4 birds spent the summer at the Mascoutin Trail Pond in Winnebago County.

American Avocet—Up to 11 birds wandered around Dane County 23–27 July (m. ob.).

Spotted Sandpiper—Reported from 48 counties.

Solitary Sandpiper—Reported from 36 counties.

Greater Yellowlegs—Thirty-three county reports were received indicating ideal shorebird habitat in many locations. The first fall migrant was seen 22 June Winnebago County (Riedinger).

Willet—The single report this season came from the Manitowoc County, 25 July (Sontag).

Lesser Yellowlegs—An excellent migration with reports coming from 33 counties. The highlight of the season for this species was an estimated 1200 birds seen 22 July at Horicon Marsh, Dodge County (Prestby).

Upland Sandpiper—Reported from 17 counties nearly statewide in distribution; however, the numbers keep trending down every year. This species is proposed for listing as state-threatened and birders could make a difference by monitoring this species.

Whimbrel—The only reports were 4 birds seen 4 June Marquette (Nolan) and 3 birds seen 15 June Manitowoc (Sontag) Counties.

Ruddy Turnstone—Seen in four counties in early June: Bayfield, Manitowoc, Sheboygan and Trempealeau. The last spring migrant was recorded 7 June in Bayfield (T. Wilson). An early fall migrant stopped 30 July at Harrington Beach State Park in Ozaukee (M. Baumann) County.

Sanderling—Spring migrants seen in Douglas, Racine, and Sheboygan Counties with the latest migrant 15 June Sheboygan (Lafkas). Early fall migrants were seen 19 July Iowa (A. Holschbach) and Ozaukee (Frank) Counties.

Semipalmated Sandpiper—This species experienced a dramatic late migration this year with 19 counties holding birds in early June. The latest spring departures were 19 June Kewaunee (Bridge) and 22 June Sheboygan (Grgic). Another indicator of the magnitude of the late migration was 55 birds seen 2 June at Audubon Goose Pond, Columbia (Kavanaghs) County. The earliest fall migrant was 6 July, Iowa County (Evanson), followed closely by a surprising 40 birds seen 7 July, Outagamie County (Malcolm and Ward).

Least Sandpiper—The last spring migrant was 14 June, Winnebago (Schultz) County. The earliest fall migrant was 23 June Winnebago (Mooney) County.

White-rumped Sandpiper—Reported from 19 counties in June with the latest departure 19 June, Kewaunee (Bridge) County. Five reports from July are a strong indicator that many birds did not make it to their breeding grounds. An outstanding 55 birds were counted 2 June, Dodge (Prestby) County. The latest departing bird was 20 June, Ashland (Oksiuta) County.

Baird's Sandpiper—The latest departing bird was 13 June Sheboygan County (Sommer). The first fall migrant was seen 22 July, Dane (Martin) and Kenosha (Willard) Counties.

Pectoral Sandpiper—A better summer than 2011 with movements reported from 22 counties. The latest spring report was 10 June, Bayfield (N. Anich). The first fall migrant was recorded 4 July in Winnebago (Kavanaghs) County.

Dunlin—Ten counties harbored birds in early June with the last migrant reported 8 June, Sheboygan (m. ob.) County. An early fall bird was spotted 22 July in Waukesha (Coulter) County.

Stilt Sandpiper—A spring migrant remained until 4 June, Columbia County (Pendergast). Eight counties reported fall birds. It

seems 28 July was a banner day at Horicon Marsh, Dodge County, with Tessen estimating 175 birds and Schilke and Prestby estimating 160 birds the same day.

Buff-breasted Sandpiper—Three birds seen 28 July at Horicon Marsh, Dodge County by at least one dozen birders.

Short-billed Dowitcher—A late spring migrant was seen 1 June, Columbia County (Senner). Fall birds were seen in 13 counties with 45 birds 28 July, Dodge (Pendergast) County comprising the high count.

Long-billed Dowitcher—An excellent July for this species which is more frequently found in late fall. Reports were submitted for four counties: Adams, Dodge, Fond du Lac, and Ozaukee with the first bird arriving at Horicon 14 July (m. ob.).

Wilson's Snipe—Reported from 26 counties.

American Woodcock—Reported from 25 counties, which is well above normal for the summer season, but the same as 2011.

Wilson's Phalarope—Reported from 8 counties with a bird on a private farm in Clark County (Belter) being a potential nester.

Red-necked Phalarope—This July was one of the best ever for this species with reports coming from four counties. Dane, Dodge, Fond du Lac, and Jefferson Counties held at least 6 individuals.

Bonaparte's Gull—Present throughout the season in Door, Manitowoc, and Sheboygan Counties. Short stays were reported from Ashland, Bayfield, Brown, Kewaunee, Manitowoc, Marinette, Oneida, Ozaukee, Sheboygan, and Vilas Counties.

Little Gull—Sheboygan County harbored this species (Figs. 7 and 8). Several sightings reported at the North Point location. The bird was first observed on 2 June (Kavanaghs) and remained through 13 June (Schwarz and Heikkinen). See "*By the Wayside*" for a description of one of these sightings.

Franklin's Gull—Birds reported 13 June Dane County (Heikkinen), 3 July Dodge County (m. ob.), and 11–21 July Manitowoc County (m. ob.).

Ring-billed Gull—Reported from 53 counties.

Herring Gull—Reported from 25 counties.

Lesser Black-backed Gull—An individual was seen by many birders between 10–27 June at North Point, Sheboygan County.

Great Black-backed Gull—Three reports: 5 birds 11 July at the Schlitz Audubon Center, Milwaukee County (Coulter), 2 in Racine County 2 June (Coulter), and a single on 11 June, Sheboygan County (Sommer and Bontly).

Caspian Tern—Present through most or all of the entire season in 18 counties with 82 individuals counted 5 July in Manitowoc (Sontag).

Black Tern—Reported from 29 counties with an estimated 364 individuals 14 June at Rush Lake in Winnebago County (Ziebell).

Common Tern—Numbers were up over 2011 with reports from 14 counties. The largest concentration was 50 birds 8 June at Sheboygan (Bridge), Sheboygan County.

Forster's Tern—Present through the season in 17 counties. High count was 440 individuals 14 June at Rush Lake, Winnebago County (Ziebell).

Eurasian Collared-Dove—Numbers keep going up with reports emanating from 16 counties. The most northern was a bird seen 15 June in Cumberland, Barron County (Riechoff).

White-winged Dove—Wisconsin's twelfth record made an appearance sporadically 4–17 June at a feeder in northern Door County (Delwiche).

Mourning Dove—Reported from all 72 counties.

Yellow-billed Cuckoo—Reported from 40 counties.

Black-billed Cuckoo—Reported from 48 counties.

Eastern Screech-Owl—Reports improved over the past few years with seven counties harboring birds. The farthest north was Langlade (Palmer).

Great Horned Owl—Reported from 26 counties.

Snowy Owl—Birds seen 6 June in Taylor (Risch) and 7 June in Marathon (Koch) Counties were presumably waiting for the tundra to thaw.

Barred Owl—Reported from 42 counties, which is nearly the same as 2011.

Long-eared Owl—Two reports: 13 June Burnett (Pendergast) and 3 birds 25 June Ashland (N. Anich and Brady) Counties.

Short-eared Owl—The only reports this season were 7–15 June at the Buena Vista Grasslands in Portage County (McGinley and Prestby), and 2 birds at Powell Marsh, Vilas County 12 June (David).

Northern Saw-whet Owl—June observations came from Door (R. and C. Lukes), Forest (Stutz), Jackson (Otto), Oneida (Stutz), and Vilas (Weberpal) Counties.

Common Nighthawk—This year's 27 reporting counties are above average and is most likely due to increased effort documenting nocturnal birds. Fourteen individuals reported 2 July in Grant Park, Milwaukee County (Flores) was the high count.

Chuck-will's-widow—For the eighth consecutive year a Chuck-will's-widow has spent part of the summer near the correctional facility in Jackson County. Reports spanned the period from 1 June (Stratton) until 27 July (Cameron). More surprising was another bird in the state. A Chuck was seen and heard by many observers along the Jefferson and Walworth countyline. Kavanaghs, Weber, and Etter Hale had the bird 2 June on the Jefferson side and Szymczak recorded it on the Walworth side 11 July.

Eastern Whip-poor-will—Reported from 33 counties with high numbers being 34 birds 1 June along the Pigeon Creek survey route in Jackson County (Otto).

Chimney Swift—Reported from 63 counties.

Ruby-throated Hummingbird—Reported from 68 counties.

Rufous Hummingbird—A male made a brief, but wonderful stop 13 July at a feeder in Ashland County (Syverud). See "*By the Wayside*" for the details of this sighting.

Belted Kingfisher—Reported from 62 counties.

Red-headed Woodpecker—Reported from 47 counties. These numbers are up significantly over the past few summers. Birders should keep an eye on this trend.

Red-bellied Woodpecker—Reported from 58 counties.

Yellow-bellied Sapsucker—Reported from 44 counties.

Downy Woodpecker—Reported from 67 counties.

Hairy Woodpecker—Reported from 66 counties.

Black-backed Woodpecker—Birds were only seen in Forest County. Two birds were at the Brule River Campground 23 June (Duchek) and a single was seen along Forest Road 2182, 17 June–28 July (Stutz and Pendergast).

Northern Flicker—Reported from 69 counties.

Pileated Woodpecker—Reported from 58 counties.

American Kestrel—Reported from 59 counties.

Merlin—Numbers were up significantly over the past several years with 19 counties harboring birds this summer. The most southern were birds in Dodge (Ward and Malcolm) and Wood (Prestby) Counties.

Peregrine Falcon—Reported from the same 15 counties as last year.

Olive-sided Flycatcher—Spring migrants were reported 5 June Dodge (Frank) and a fall bird was seen 26 July Fond du Lac (Schiffman) Counties. Mid to late June breeding season records came from more traditional northern counties: Ashland, Bayfield, Douglas, Florence, Forest, Oneida, Sawyer, and Vilas.

Eastern Wood-Pewee—Reported from 67 counties. Twenty birds were reported 11 June from Justin Trails in Monroe County (Evanson) and 26 birds were found on a BIGBY (Big Green Birding Year) in the Dunnville Wildlife Area, Dunn County, 26 June (Betchkal).

Yellow-bellied Flycatcher—The only late spring migrant was seen 2 June at Wyalusing State Park, Grant County (Ellis). Fourteen northern counties had probable breeding activity.

Acadian Flycatcher—Reported in 17 southern counties. Schilke tallied 23 males 6 June at the Rush Creek State Natural Area in Crawford County.

Alder Flycatcher—As usual, most of the 51 reporting counties were central and north, although many reports came from counties bordering Illinois.

Willow Flycatcher—Reported from 48 counties with no reports from the far north. As usual the best places to observe were in the south; intriguing though were reports 13 June in Burnett County (Pendergast) and 6 birds on 1 June in three different locations in Marinette County (J. Campbell and Straub).

Least Flycatcher—Reported from 55 counties.

Eastern Phoebe—Reported from 67 counties.

Great Crested Flycatcher—Reported from 64 counties, which is a six-county decrease over 2011.

Eastern Kingbird—Reported from 68 counties.

Fork-tailed Flycatcher—A bird photographed (Figs. 9 and 10) 17 June in Kewaunee County provided Wisconsin with its fourth record (Swagel).

Loggerhead Shrike—The long-term occupation of territory in St. Croix County continued with observation of 3 birds 28 July (Persico). A new location was found 1 July (Gold) at the Trempealeau Mountain Golf Club, Trempealeau County (Fig. 11). Up to 4 birds were seen by many through 9 July (Stratton).

White-eyed Vireo—The only report was 1–2 birds at the Albany Wildlife Area in Green County from 2 June (Wood) through 21 July (Evanson).

Bell's Vireo—Fewer numbers than in past summers with reports from: Dunnville Wildlife Area in Dunn County (m. ob.), four locations in Iowa County (m. ob.), the Holland Sand Prairie State Natural Area in LaCrosse County (m. ob.), and a newly opened location at the Badger Army Ammunition Plant in Sauk County (Schilke).

Yellow-throated Vireo—Among the 58 reporting counties, the most northern ones were Bayfield, Douglas, and Florence. The counties without reports had the fewest observers.

Blue-headed Vireo—The 28 reporting counties were mostly northern with southern limits outlined by Waukesha, Milwaukee, and Clark Counties.

Warbling Vireo—Reported from 59 counties, which is same as 2011 with missing counties still the ones with the least amount of coverage.

Philadelphia Vireo—R. and C. Lukes had a late migrant 5 June in Door County.

Red-eyed Vireo—Reported from every county except Shawano, Pierce, and Buffalo.

Gray Jay—Reported from these four counties: Ashland (m. ob.), Douglas (Svingen), Forest (m. ob.), and Oneida (Gustafson).

Blue Jay—Reported from every county except Buffalo and Shawano.

American Crow—Reported from all 72 counties.

Common Raven—Reported in 33 counties and as far south as Adams (Nemec and Prestby), and Monroe (Epstein).

Horned Lark—Reported from 42 counties, reports which are up from 2011.

Purple Martin—Reports were up significantly from 2011 with 47 counties claiming birds. The best single location observation was 40 birds tallied on a boat survey around the Lake Geneva shore, Walworth County on 22 June (Bontly), although a few BBS routes had higher numbers.

Tree Swallow—Reported from 68 counties; Shawano, Menominee, Pepin, and Buffalo were the only non-reporting counties.

Northern Rough-winged Swallow—Reported from 55 counties.

Bank Swallow—Reported from 55 counties.

Cliff Swallow—Reported from 60 counties.

Barn Swallow—Reported from 71 counties.

Black-capped Chickadee—Reported from 71 counties.

Boreal Chickadee—Seen at three different locations in Forest County 15 Jun–18 July (Gustafson, Prestby, and Stutz) and 23 June Oneida County (Duchek).

Tufted Titmouse—Reported from 29 counties that continue to document the expansion of this species with the farthest north to Chippewa/EauClaire (m. ob.).

Red-breasted Nuthatch—Reported from 47 counties.

White-breasted Nuthatch—Reported from 65 counties.

Brown Creeper—Reported from 18 counties with 6 birds sighted at the new Frog Bay Tribal National Park in Bayfield County (Brady).

House Wren—Reported from 68 counties.

Winter Wren—Twenty-one counties held birds this summer.

Sedge Wren—Richmond found 37 at the Ackley Wildlife Area in Langlade County on 19 June and Pendergast tallied 34 at Crex Meadows in Burnett County 13 June. Reports were submitted for 46 counties in all.

Marsh Wren—Ziebell found 1706 at Rush Lake in Winnebago County 14 June. Reports were submitted for 46 counties in all, which is ten more than last year.

Carolina Wren—Reported from 13 counties (Fig. 12) with Marinette (J. Campbell) being the farthest north.

Blue-gray Gnatcatcher—Gordon had an individual 31 July in Sawyer County and Betchkal had 2 birds at Hunt Hill Audubon Camp, Washburn County 17 June. These two sightings represent the farthest north submitted this year. In addition, reports came from 44 more counties.

Golden-crowned Kinglet—Noted in 12 counties within normal range. A significant find was up to 6 birds at the Scuppernong hiking trail, Waukesha County. These birds spent the summer with records from 2 June through 31 July (Szymczak).

Ruby-crowned Kinglet—Reported from five locations in three counties: two spots in Forest 1–28 July (Freiberg and Pendergast), two spots in Vilas 4–30 June, (Freiberg and David) and one location in Oneida 2 June (Toriello).

Eastern Bluebird—This year's total is 69 counties reporting. The only locations supposedly without bluebirds are the counties with few reports. Kent Hall reporting the results of the 850 member Bluebird Restoration Association of Wisconsin shows a vastly improved season over 2011. The organization reported 35,592 Eastern Bluebirds fledged from 9,334 nest boxes that were monitored. The fledged bird number is 12,000 higher than 2011.

Veery—Reported from 51 counties.

Swainson's Thrush—Two birds at Caroline Lake State Natural Area in Ashland County (Kavanaghs) were most likely breeders. An individual seen 9 July Eau Claire (B. Schaefer) County may have been a wanderer, whereas the 31 July Waukesha (Szymczak) County report falls within the range for fall migrants.

Hermit Thrush—Reported from 31 counties south to Adams (m. ob.).

Wood Thrush—Reported from 56 counties.

American Robin—Reported from all 72 counties.

Gray Catbird—Reported from 67 counties.

Northern Mockingbird—Found at six locations in five counties: Dodge (Kerowiczs), Door (Doeppers), two spots in Florence (Kavanaghs), Iowa (Neuvatal), and Manitowoc (Knickelbine and Bridge).

Brown Thrasher—Reported from 61 counties.

Cedar Waxwing—Reported from 68 counties.

Ovenbird—Reported from 61 counties.

Louisiana Waterthrush—Reports came from seven counties: Burnett (Maercklein), Dane (m. ob.), Grant (m. ob.), Iowa (m. ob.), Jackson (Epstein), Sauk (m. ob.), and Vernon (Duerksen and Epstein).

Northern Waterthrush—The fifteen counties with reports this season are above average.

Golden-winged Warbler—Of the 22 reporting counties, Monroe (Paulios) was the farthest south.

Brewster's Warbler—Two reports: 8–22 June at Woodland Dunes, Manitowoc (m. ob.) and a 28 June bird in Waukesha (Szymczak). This last sighting is significant, because a few decades ago, both Blue-winged and Golden-winged Warblers and their crosses were abundant in the Southern Unit of the Kettle Moraine State Forest. This sighting indicates Golden-winged genes are still in the population.

Lawrence's Warbler—A male Lawrence's was captured and banded at the Riveredge Nature Center Banding station on 1 July. Sommer and S. Cutright report banding this bird and supplied supporting photographs to WSO. The bird was seen by several in attendance for the bird banding demonstration.

Blue-winged Warbler—Of the 35 reporting counties, Burnett (Schmokers and E. Peterson) and Manitowoc (m. ob.) were the most northern.

Black-and-white Warbler—Reported from 34 counties overall.

Prothonotary Warbler—Observed in 12 counties north to Pepin (Bergeson).

Tennessee Warbler—The first fall migrant was in Rock County 4 July (Cullum). Normal early fall migrants appeared in late July in the following counties: Ashland, Bayfield, Eau Claire, and St. Croix. Most intriguing was an individual seen 16 June at Freedom Park, Pierce County (Donath).

Nashville Warbler—Reported from 28 counties, which is moderately down from 2011.

Connecticut Warbler—A very poor season with only two reporting counties: 6–9 June Douglas (m. ob.) and 9–13 June Florence (Kavanaghs).

Mourning Warbler—Reported from 33 counties overall.

Kentucky Warbler—Higher than normal numbers were received for the summer season: Many observers reported 1–2 birds at Wyalusing State Park in Grant County. In addition, these counties held birds in June: Grant—another location at Millville (Schilke), Iowa (A. Holschbach), and Walworth along the John Muir trails (m. ob.).

Common Yellowthroat—Reported from 67 counties.

Hooded Warbler—Reported from 15 counties with the Kettle Moraine State Forest [four units] providing nearly all the sightings. Out of range were birds sighted at Devils Lake, Sauk County, Riverbend Nature Center, Racine County, and the Cook Arboretum in Rock County.

American Redstart—Reported from 64 counties.

Kirtland's Warbler—For the 2012 breeding season, 20 males and 10 females were at the Adams County location. A census of singing males was conducted statewide 6–20 June where the official count was Adams (19), Marinette (3), and Douglas (1). Additional birds recorded outside the official census were Adams (1), Marinette (1), Bayfield (1), Douglas (2), and Vilas (1). An estimated 8 to 13 young were produced from the nests in Adams County (fide J. Trick).

Cape May Warbler—The only observations were from Douglas (Brady), Florence (Kavanaghs), Oneida (m. ob.), and Vilas County (Prestby and Sinkula).

Figure 1. Eurasian Wigeon found on 27 June 2012 at Prentice Park, Ashland County, by Tim Oksiuta.

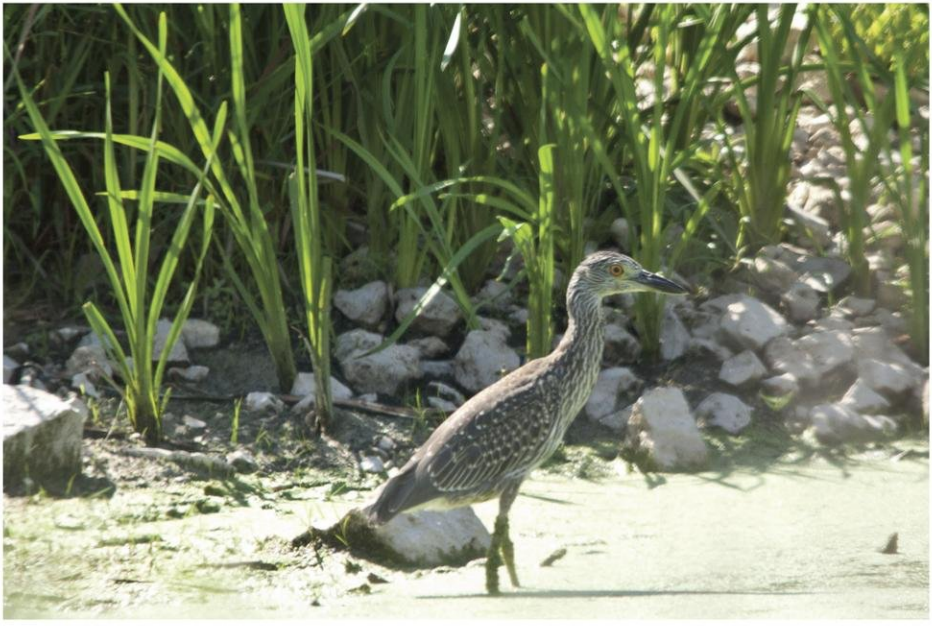

Figure 2. Yellow-crowned Night-Heron photographed by Nancy Nabak along Ledge Road in Horicon NWR, Dodge County on 26 July 2012.

Figure 3. Glossy Ibis at Mascoutin Valley State Trail in Winnebago County on 10 June 2012 was photographed by Cynthia Bridge.

Figure 4. White-faced Ibis on 14 June 2012 at Mascoutin Valley State Trail in Winnebago County by Cynthia Bridge.

Cerulean Warbler—Reports came from 13 counties, including a new location in Chippewa Ice Age Reserve in Chippewa County (Hoffman). The most reliable location for the species is Wyalusing State Park as exemplified by 16 singing males tallied 2–23 June (Ellis and Bridge).

Northern Parula—Reported from 18 counties with most being the more obviously northern. Significant numbers were tallied from these southern counties: Grant, Ozaukee, Walworth, and Waukesha.

Magnolia Warbler—This season's records came from 15 counties with 14 coming from traditional nesting counties. A late spring migrant lingered to 3 June Washington (Schramm).

Blackburnian Warbler—Reported in 15 counties with a significant drop in numbers compared to the previous few years.

Yellow Warbler—Reported from 66 counties.

Chestnut-sided Warbler—Reported from 49 counties.

Blackpoll Warbler—The last migrant was reported 2 June Racine County (Willard).

Black-throated Blue Warbler—Reported from these 6 counties: Ashland (Kavanaghs), Bayfield (Brady), Door (Mueller and Noeldner), Florence (J. DeBoer), Forest (m. ob.), and Vilas (Grgic and David).

Palm Warbler—Reported from Bayfield (Paulios), Door (m. ob.), Douglas (m. ob.), Forest (Stutz), Iron (m. ob.), Marathon (Belter), Oneida (m. ob.), and 16 birds 31 July Vilas (Z. Wilson and David) Counties.

Pine Warbler—Present through the season in 38 counties.

Yellow-rumped Warbler—Reported from 25 central and northern counties with the farthest south 29 June in Kenosha County (Witynski).

Yellow-throated Warbler—Found 8 June at the UW Arboretum in Dane County (Evanson) and subsequently seen by dozens more observers through 10 June. More expected were the 2 birds seen at Wyalusing State Park, Grant County 2–30 June (Ellis and Stratton). See "*By the Wayside*" for a description of the arboretum sighting.

Prairie Warbler—A cooperative male found in the same location for the third consecutive year, 1–24 June Waukesha County (Weber and Szmczak).

Black-throated Green Warbler—Most reports came from 24 central and northern counties. A presumably late spring migrant was at the Schlitz Audubon Center, Milwaukee County 13–17 June (Straub and Bontly).

Canada Warbler—Noted in 17 counties, which is the same as 2011.

Wilson's Warbler—Two late migrants reported: 6 June Milwaukee (Huf), and 13 June Crex Meadows, Burnett (Pendergast) Counties.

Yellow-breasted Chat—A phenomenal increase with reports submitted from 15 counties. The most northern report was Vernon County (Jackson and Hayes).

Eastern Towhee—Reported from 58 counties. Stutz counted 50 birds 22 June on the Crex Meadows Wildlife Area, Burnett County.

Chipping Sparrow—Reported from 70 counties with no reports coming from Buffalo and Shawano Counties.

Clay-colored Sparrow—Reported from 54 counties. Stutz found 60 birds on 22 June in the Crex Meadows Wildlife Area in Burnett County. Schilke found 24 birds at Badger Army Ammunition Plant, Sauk County, a site recently made accessible to the public, on 12 July.

Field Sparrow—Among the 51 counties from which these were reported, the highest number of individuals was 35 on 17 June at Lulu Lake in Walworth County (Howe).

Vesper Sparrow—Reported from 47 counties.

Lark Sparrow—Compilers formerly listed every sighting due to its rarity. In 2012, Lark Sparrows were reported from 21 counties.

Savannah Sparrow—Reported from 66 counties.

Grasshopper Sparrow—Among the 40 reporting counties, the highest number of indi-

viduals was 20 from the Buena Vista Grasslands in Portage County 6 June (Paulios) and the same number 1 June at the Dunnville Wildlife Area in Dunn County (Hogseth).

Henslow's Sparrow—Noted in 33 mostly southern counties. The numbers of individuals reported are substantially above 2011. This editor postulated that the low numbers in 2011 were a direct result of turning CRP fields into corn fields. With the 2012 data showing a strong rebound, that hypothesis needs to be reëxamined.

Le Conte's Sparrow—Reported from: Ashland (N. Anich), Burnett (m. ob.), Douglas (Svingen), Iron (M. Brandt and N. Anich), Jackson (S. Meyer), Rusk (Conrad and Prestby), and Vilas (Sinkula) Counties.

Nelson's Sparrow—Found in the wiregrass meadows at Crex in Burnett County 17–22 June (B. Schmoker and Stutz).

Song Sparrow—Reported from 71 counties.

Lincoln's Sparrow—Reported from these 9 northern counties: Ashland, Douglas, Forest, Iron, Marathon, Oneida, Price, Sawyer, and Vilas Counties.

Swamp Sparrow—Reported from 63 counties.

White-throated Sparrow—Reported from 23 counties, including 2 birds 22 June at Cliffside Park, Racine County (Wenzel, Fare, and Pugh).

Dark-eyed Junco—Noted in these northern counties: Bayfield, Burnett, Door, Florence, Forest, Iron, Marinette, and Vilas.

Scarlet Tanager—Reported from 59 counties.

Summer Tanager—Two exciting summer records: the species was found at two different locations in Trempealeau County 4 June–8 July (Severson and L. Johnson).

Northern Cardinal—Reported from 64 counties, including nesting records from Douglas, Bayfield, Ashland, and Iron Counties.

Rose-breasted Grosbeak—Reported from 66 counties.

Indigo Bunting—Reported from 71 counties.

Dickcissel—Other than the presence of rare birds wandering into the state, the biggest story of the 2012 season was the appearance of this species in every county. As far as the records go, this is an unprecedented event.

Bobolink—Reported from 63 counties.

Red-winged Blackbird—Reported from all 72 counties.

Eastern Meadowlark—This year the number of counties in which birders found this species was 63.

Western Meadowlark—Observers found this species in 21 counties this year, which is up significantly from the past several seasons. The best locations in the state for this species are the Buena Vista Grasslands in Portage County where Prestby recorded 24 birds and Leola Marsh Grassland in Adams County where Prestby recorded 20 birds.

Yellow-headed Blackbird—Noted in 20 counties. The highest number of individuals reported was 970 at Rush Lake Winnebago County 14 June (Ziebell).

Brewer's Blackbird—Noted in 32 counties. The highest number of individuals reported was 70 at Buena Vista Grasslands in Portage County 7 June (Prestby) and 65 at Leola Marsh in Adams County on 8 June (Prestby).

Common Grackle—Reported from 67 counties.

Brown-headed Cowbird—Reported from 68 counties.

Orchard Oriole—Noted in 38 counties this season up slightly over 2011. The northern limits were Burnett County in the west and Calumet County in the east.

Baltimore Oriole—Reported from 66 counties.

Purple Finch—Observed in 22 mostly northern counties with the most consistent numbers coming from far northeast Wisconsin.

House Finch—Reported from 56 counties.

Figure 5. King Rail at Horicon Marsh on 14 June 2012 by Adam Sinkula.

Figure 6. This photo by Nancy Nabak shows both a King Rail and a Virginia Rail on 14 June 2012 at Horicon Marsh.

Figure 7. Little Gull at the harbor in Sheboygan on 10 June 2012 was captured in flight by Cynthia Bridge.

Figure 8. Little Gull with Bonaparte's Gull and Caspian Tern in the Sheboygan harbor on 10 June 2012, photographed by Cynthia Bridge.

Red Crossbill—Reported from two locations: 1 June Bayfield County (Brady) and 17 July in Oneida County (Gustafson).

White-winged Crossbill—Four reporting counties: 4 June Sawyer (Szymczak), 22 June–10 July Bayfield (N. Anich and Brady), 18 July Forest (Gustafson), and 20 birds on 28 July Ashland (Brady). This last sighing may have been the harbinger of the big early fall movement into the state.

Pine Siskin—Reports from 16 counties, continuing the low summer season numbers for the past few years. Birds remained in several southeast counties throughout the reporting period.

American Goldfinch—Reported from 68 counties.

Evening Grosbeak—Reports from 6 counties: Door (Vincent), Douglas (Svingen), Florence and Forest (m. ob.), Iron (Kavanaghs), and Vilas (m. ob.).

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Figures 9. and 10. show the Fork-tailed Flycatcher seen in Kewaunee County on 17 June 2012 by Jeff Swagel.

Figure 11. Loggerhead Shrike photographed by Malcolm Gold at the Mountain Golf Club in Trempeauleau County on 1 July 2012.

Figure 12. Carolina Wren found in Green Lake County at the Green Lake Conference Center on 1 June 2012 by Tom Schultz.

Brian Russart, Robert Sams, Mike Sandstrom, Joe Sausen, Amanda Scalia, Beau Schaefer, Tom Schaefer, Joseph Schaufenbuel, Jackson Scheerer, Jeanne Scherer, Darrell Schiffman, Paul Schilke, Bob Schmidt, Kristin Schmitt, Bill Schmoker, Jim Schmoker, Daniel Schneider, Petty Schneidmichael, Jeff Schramm, Joan Schrinner, Carl Schroeder, Lori Schubring, Michael Schudrowitz, Myrna Schultz, Thomas Schultz, Carol Schuster, Jim Schwarz, Wayne Seeger, Josh Seibel, Jan Seiler, Annette Selk, Adam Sell, Paul Senner, Rebecca Setzer, Lana Severson, Hiram Shaw, David Shealer, Dessi Sieburth, Adam Sinkula, Aaron Skinner, Richard Smallwood, Jerry Smith, Christine Snitkin, Joan Sommer, Charles Sontag, Bill Sonzogni, Lloyd Southwick, Robert Spahn, Gary Spangler, Paul Sparks, Patricia Spaulding, Robin Squier, Rowan Stamm, Alex Stark, Brad Steger, Elvira Stenson, Jaime Stephens, Matt Stephenson, Pepi Stern, Shelley Stocker, Sarah Stokes, Elizabeth Stone, Douglas Stotz, Doug Stratton, Karen Straub, Jean Strelka, Aaron Stutz, Zachary Sutton, Peder Svingen, James Swanson, Jack Swelstad, Ann Swift, Thomas Syverud, Ben Szilagyi, Andrea

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First Year of Banding at a MAPS Station in Iron County, Wisconsin

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INTRODUCTION

In 2012 we began a MAPS (Monitoring Avian Productivity and Survivorship) station five miles south of Mercer in Iron County. The MAPS program is coordinated by the Institute for Bird Populations at Point Reyes Station, California (www.birdpop.org) and includes stations across North America. These are constant-effort banding stations designed to gather year to year changes in songbird abundance and productivity. To sample only locally breeding birds, mist nets are set after the spring migration slows down and before fall migration begins. Starting dates vary by latitude. The banding requires accurate aging and sexing of the songbirds captured which can be somewhat difficult. All birds seen on the study area during banding sessions are recorded along with their breeding status if determined.

STUDY AREA

Our MAPS station is on Zach Wilson's property and the adjacent Northern Highland-American Legion State Forest (NHSF) in forested habitat. There is a cranberry marsh on the north side and Highway 51 to the south. Mixed age northern hardwoods and conifers dominate. There is a small creek to the west which had two net lanes nearby. One net was in alder habitat. Another net was in young aspen with scattered conifers. One net was in mature tamarack and black spruce. The soil is sandy and dry, except for the alder and tamarack net lanes.

METHODS

We began capturing birds on 5 June 2012 and banded once in each 10-day sampling period, ending on 2 August 2012. We banded on seven days which were determined in the MAPS proto-

Figure 1. Sydney Kroening releasing a Broad-winged Hawk.

col based on our latitude. Ten net lanes were set somewhat in pairs, having one net in mature habitat and one in younger habitat for each pair. We used 12 meter long and three meter high four shelf warbler size mist nets. Each day the first net was opened by sunrise and usually we started taking nets down around noon. We were assisted by a number of visitors on several days.

The MAPS protocol requires measurements of wing length, weight, fat class, and feather molt estimates. Breeding status along with capture time and location/net lane (habitat) were also recorded. Birds were banded with U.S Geological Survey leg bands and released on sites as soon as banded. Recaptured birds were also measured, capture information recorded, and released on site (Fig. 1).

RESULTS

We captured and banded 126 individuals of 25 species (Table 1). We documented twenty species breeding on our MAPS site. Two others were species that breed in the general area and three species (one individual each) were likely migrants (Fig. 2). Nashville and Chestnut-sided Warblers (Fig. 3) and Veerys were the most commonly captured birds. They had the highest number of young along with Black-capped Chickadees and Alder Flycatchers in our sample.

Species were often captured in specific habitat types. We anticipated that the stream might attract birds and those two net lanes were more productive then other nets. Proximity to edge also improved the catch rate. The two nets in the mature forested wetlands were the least productive.

Figure 2. Canada Warbler female, a migrant.

Figure 3. Immature Chestnut-sided Warbler (late summer) with student Madison Kroening in the background.

Table 1. Bird species banded in 2012 at the NHSF MAPS station.

Species	Adult Male	Adult Female	Juveniles	Total
Alder Flycatcher	1	1	5	7
American Redstart	1		1	2
American Robin	1	1	1	3
Black-and-white Warbler	3	2	2	7
Black-capped Chickadee	1	2	7	9
Broad-winged Hawk		1		1
Canada Warbler*	1			1
Chestnut-sided Warbler	6	3	6	15
Common Yellowthroat	2		3	5
Gray Catbird			1	1
Hermit Thrush	1	2	2	5
Least Flycatcher			2	2
Lincoln's Sparrow			1	1
Magnolia Warbler*	1			1
Mourning Warbler			1	1
Myrtle Warbler		2	1	3
Nashville Warbler	7	5	9	21
Ovenbird	4	1	1	6
Pine Warbler			1	1
Purple Finch		1		1
Red-eyed Vireo		3		3
Rose-breasted Grosbeak	1	1		2
Swainson's Thrush*		1		1
Veery	7	2	7	16
White-throated Sparrow	5	3	4	12
Total	42	31	55	128

* Probably a migrant

Chestnut-sided Warblers were caught at eight of the 12 net lanes, Nashville Warblers in seven nets.

We also observed 18 additional species as we were banding (Table 2) and had at least one of these bounce out of a mist net. Several species were seen near the house and not in the woods near any of the mist net lanes. Banding lanes were set far enough from the house so as not to be influenced by "yard habitat" and feeders. Early in the season we were concentrating so much on the nets and banding that we did not put much effort into identifying "other species" and thus missed singing males of some species not on either of our lists.

The captures on the first two banding dates, 5 and 12 June, were all adults. A few hatching year birds were caught 21 June and 4 July. On 12 and 27 July juveniles of nine species dominated the captures. On 2 August the number of captures dropped off drastically with only four juveniles and three adults in the nets. Weather did not appear to be a factor that day. Birds seemed to have moved off the study area.

Recaptures are what make banding interesting and useful. We had 26 recaptures of 18 individuals originally banded in 2012. One Chestnut-sided Warbler was recaptured four times in two different nets set in a pair. We had no foreign (banded by another ban-

Table 2. Bird species observed but not banded during banding sessions on NHSF MAPS Station in 2012.

American Crow*
American Goldfinch*
American Woodcock*
Blue Jay*
Canada Goose (cranberry marsh)
Cedar Waxwing
Common Grackle
Common Loon (fly over)
Downy Woodpecker*
Eastern Phoebe*
Evening Grosbeak
Great Blue Heron (fly over)
Hairy Woodpecker*
Northern Flicker
Red-breasted Nuthatch*
Ruby-throated Hummingbird*
Ruffed Grouse*
Sandhill Crane*

*Locally breeding

der and/or at a different site) recaptures.

Discussion

It was a learning experience the first year. Two net lane sites were abandoned due to lack of captures. Two new sites were then set up according to MAPS protocol. Once productive net lines are established the first year, these same net lanes are to be used each subsequent year. We captured enough birds to keep us busy most mornings; however, there were more to be caught. Individual birds can be net shy or at least more able to avoid capture. Also, differences in capture probability between species exist. Species that spend most of their time higher in the canopy will obviously avoid capture in three meter high nets. And ten nets, each 12 meters long and three meters tall do not cover a very high percentage of the bird habitat on 20 acres!

We captured many of the local species we expected to find breeding in the habitats sampled. In future years we will need to improve our documentation of breeding species we do not capture. Aging and sexing some of the species we were not used to banding was difficult at times. Young of the year can even be difficult to identify to species sometimes. The MAPS banding mandated that we get it right for each bird and that encouraged us.

During the summer we saw some movement between habitats by individual species but our sample size is still small. It will be interesting to see if any trends occur in future years of our MAPS banding at this location. Next year we expect to see a number of our banded birds return. As our recapture sample size increases over a number of years we should see differences in adult versus juvenile return rates (survival). Annual differences in the number of species that breed locally may also occur. The goal is to operate the MAPS station for at least ten years, hopefully more.

Acknowledgments

We would like to thanks the Wisconsin Society of Ornithology for providing a grant to help pay for some of the new mist nets. It was important to have good equipment that we can dedicate to the MAPS project. Thanks to the Wisconsin Department of Natural Resources for allowing placement of several net lanes on the NHSF. We also thank Melody, Jalina, Keewin, and Lola Wilson for tolerating a sunrise wake-up each MAPS day of banding.

Bruce Bacon is a retired WDNR wildlife biologist living near Mercer. He started banding waterfowl with the DNR in 1976 and began banding songbirds and raptors with a personal banding permit in 1982. He continues to be involved in wildlife research and monitoring projects.

Zach Wilson is a naturalist and owner of Northwoods Learning Adventures, an education and wildlife tour business with an emphasis in exploring the region's natural, cultural, and historic resources. Zach lives and works in Mercer, Wisconsin, and has over 20 years experience in wildlife research and education. He has been a licensed bird bander since 2003 and has been involved in a variety of bird conservation programs.

Wisconsin Big Day Counts: 2012

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Traditionally done in mid-May, Big Days are Mother Nature's way of rewarding competitive birders for enduring Wisconsin's long and hard winters. Fortunately, Mother Nature has also rewarded us with a fantastic diversity of quality habitats that include places like Comstock Bog, Buena Vista Grasslands, Grand River Marsh, the Baraboo Hills, Horicon Marsh, and Lake Michigan to conduct our Big Days. Our location in the Upper Midwest provides us with opportunities to witness birds from the north, south, east, and western states, making Wisconsin one of the best places in all of North America to do a Big Day. So if you haven't yet done one, I ask "why not?"

If your concerns lie with high fuel costs associated with running a Big Day fret not, as we have expanded this annual summary to include Green Big Days. For those unfamiliar with Green Big Days, they are the same as normal Big Days but are done without the aid of gasoline; usually this means biking, walking, skiing, or canoeing. A Green Big Day sound like too much work to you? Well, consider doing a Big Day from the comfort of a chair, as we will now also be accepting Big Sits in the summary.

No matter what type of Big Day you attempt, I encourage you to grab your birding buddies, study the latest reports, get familiar with the historical hotspots, and try to best the infamous Hoffman-Shea 230-species day. Oh, it won't be easy. You'll need skill, cooperative weather, and even a fair amount of luck on your side but don't dare delay as it won't be long before Mother Nature will have us up to our necks in snow again.

The Summary

There were only three checklists submitted for inclusion in *The Passenger Pigeon* in 2012, one report from Ted Keyel, Tom Prestby, and Quentin Yoerger; one report from Jackie Edmunds, John Feith, Dan Graham, and Kyle Lindemer; and one Green Big Day report from Bob and Kay Kavanagh.

The crew of Edmunds, Feith, Graham, and Lindemer had the most species with 130. Likely due to the relatively low number of counts submitted, this was 50–70 species off the normal Big Day highs of the early 2000s.

The Big Day Counts

Jackie Edmunds, John Feith, Dan Graham, and Kyle Lindemer, *130 species,* 17 May, Dane County, 179 miles traveled by car.

Sticking to the confines of Dane County this group of birders was able to locate two Yellow-breasted Chats, ten species of waterfowl, twelve species of shorebirds, and seven flycatcher species.

Ted Keyel, Tom Prestby, and Quentin Yoerger, *129 species*, 19 May, Oneida County, 320 miles traveled by car.

Birding for an incredible 21 hours and 20 minutes, this energetic crew of birders squeezed all they could out of eastern and central Oneida County. Highlights of their Big Oneida Day include Spruce Grouse, Boreal Chickadee, Field Sparrow, Forster's Tern, and a Red-headed Woodpecker.

The Green Big Day Counts

Bob and **Kay Kavanagh**, *92 species*, 14 May, Florence County, 27 miles on bike, 1 mile by foot.

Veteran Green Big Day participants Bob and Kay pedaled through the town of Aurora and southeast Florence County on this inspiring Big Day. Birding by bike allowed them to tally impressive numbers of Nashville Warblers (25), Ovenbirds (32), Rose-breasted Grosbeaks (30), and Baltimore Orioles (26). Kudos to Bob for toughing out eight hours of biking and birding after taking a terrible spill on his bike when the brakes went out.

Rules

The Big Day Rules—

- The count must be taken within a 24-hour calendar day (midnight to midnight).
- All participants must be within direct conversational contact at all times during the birding and traveling periods. This excludes meal and rest stops if birding is not conducted during those times. This limits the number of parties involved to **one** and participants to that number safely and comfortably contained in one vehicle.
- The count must be taken within the state boundaries, but it may cover as many parts of Wisconsin as birders can reach in the time limit.
- Areas can be revisited during the day.
- The same areas may be covered on different Big Day counts.
- No fees are involved in conducting the counts.
- Counting individuals is optional.
- It is critical that all unusual species—whether they are early or late sightings or rare species—be completely documented. Reports of rarities are subject to review by the WSO Records Committee.

Additional Green Big Day and Big Sit Rules—

- Green Big Day (non-Big Sit) competitors must refrain from using any motorized vehicles from the time they start counting until they finish counting.
- Big Sits observations must be made from within a pre-determined 17-foot (diameter) circle.

- There's no limit to how many people can occupy one Big Sit circle.
- The same circle must be used for the entire Big Sit.
- If a bird is seen or heard from within the Big Sit circle but is too distant to identify, the circle can be left to get a closer look/listen for confirmation. However, any new bird seen or heard while confirming the original, can't be counted unless it's seen or heard from an "anchor" who stayed behind in your circle, or when you return to your spot.
- The participants can work in shifts. No one person needs to be there throughout the entire Big Sit.

Submitting Reports

To submit your report electronically, go to the new Big Day webpage on the WSO website and follow directions listed. Paper results should be sent directly to Bird Report Coordinator Joe Schaufenbuel at 5676 Regent Street, Stevens Point, WI 54481. While there is not an official Big Day form or checklist, we encourage you to use the *Checklist of the Birds of Wisconsin*, which can be found on the WSO website. Big Day reports for 2013 should be received by 15 January 2014 for inclusion in *The Passenger Pigeon*. Don't forget to include some fun details of your adventure like places you visited, weather details, species highlights, and if you did a Green Big Day or Big Sit.

To make it to the top of the WSO-Big Day list you'll need the *speed* and *decisiveness* of a Peregrine, *wit* of a Raven, *acute senses* of a Short-eared Owl, *endurance* of a Whimbrel, and probably most importantly, the *determination* and *tenacity* of a Cooper's Hawk. Good luck in 2013!

Daniel Schneider works as a Grassland Bird Specialist for the University of Wisconsin-Madison Department of Forest & Wildlife Ecology. He has previously worked with Great Green Macaws in northeastern Costa Rica, migratory songbirds in coastal Mississippi, and Spotted Owls in central California. From spring until fall he enjoys BIGBYing (= having a Big Green Birding Year) throughout south central Wisconsin and in winter he regularly escapes to the humid jungles of the tropics. He now lives in Fort Atkinson with his wife Lauren, and two dogs Hawk and Heidi.

Kirtland's Warbler in full song by Alyssa DeRubeis

50 Years Ago in *The Passenger Pigeon*

The cover photo is a beady-eyed, immature Hawk Owl, one of two fledged on the Roy Johnson farm near Cloverland in Douglas County in the spring of 1963. There was a large invasion of Hawk Owls during the fall and winter of 1962-63 from Maine to Minnesota. During this period, 109 observations came from Minnesota, and southern Ontario reported the largest invasion ever recorded. There were 35 Hawk Owl observations in the vicinity of Duluth in 19 days.

The nest was in a hollow of an old pine stump located close to the edge of a woodlot with the nest hole facing an open field. The opening was 20-22 feet from the ground, with a 5-inch opening, and the nest chamber was exposed through a vertical slit in the tree. Birds copulated on 30 March and a young one was seen near the entrance on 11 May. On 30 May an adult + the two young were observed slowly moving along a gravel road adjacent to the woodlot.

On 5 April, a second nest was found in another woodlot about 2 miles away; the nest was about 25 feet above ground in a black ash and contained 5 eggs when the observer climbed the tree on 11 May. Observations ended abruptly on 23 May when it was found that all 5 eggs had been destroyed. There was only one adult attending this nest, and when the young fledged at the first nest, only one adult remained there also.

The Field Notes includes a photo of a Boreal Owl trapped and banded at the Cedar Grove Ornithological Station on 3 November. The back cover contained a small ad for Wisconsin's Favorite Bird Haunts by Sam Robbins. It was advertised as a guide to 30 of Wisconsin's most favored locations for bird study, with individual maps, 77 pages, and costing $1.75.

Excerpt from Vol. 25(2), 1963 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.

Sandhill Crane as pictured by Dennis Connell

"By the Wayside"—Summer 2012

These reports of rare species include Western Grebe, Yellow-crowned Night-Heron, Glossy Ibis, Little Gull, Rufous Hummingbird, and Yellow-throated Warbler.

WESTERN GREBE
Aechmophorus occidentalis

5 June, Kiep's Island Dike, Trempealeau National Wildlife Refuge—I was birding the Kiep's Island dike and made a quick scan of the impoundment as I usually do. The TWO Western Grebes stood out like beacons of light, even though they were, at first, quite a distance from me. The long white necks reflected sunlight like a mirror in a dark room. One of the two stayed a few hundred yards away, but I was able to get close enough to the other to make out all the necessary field marks to separate Western and Clark's.

I observed a bird with a body roughly the same size, give or take, as the Redhead Ducks next to it. The back was dark grayish to not-quite-black in places and white underparts. The neck was long for the size of the bird and pure white except for a dark black line down the back that reached up and formed a black cap. The white extended up through the cheek, but the lores were black and the eye was also covered by the black cap. The bill was long and thin, sharply pointed, and bright yellow in appearance. All of the field marks appeared to be consistent with the identification of Western Grebe in adult plumage.

The other bird stayed much too far away to be absolutely 100% certain of the identification, but since Wisconsin as of yet has no records of Clark's Grebe, the identity of the second bird also being a Western Grebe is far more likely. Clark's Grebe is the only other species that is similar enough to Western Grebe as to cause minor confusion. However, several things rule out Clark's. For one, Clark's Grebe in breeding plumage is often, and consistently, lighter-colored than Western overall. Western tends to be on the darker side. Also, Clark's would show white in the lores and up and over the bill, and the black cap would be far more restricted than on Western and the eye would be much more visible against a white cheek and supercilium. The bill color would also be more of a greenish-yellow and not the bright yellow that I noted above.—*Chris Wood, Richland Center, Wisconsin.*

Yellow-crowned Night-Heron
Nyctanassa violacea

24 July, Ledge Road, Horicon Marsh—The bird was immature, noticeably slender with bright orange eyes, long neck, and yellow-green legs and feet. Plumage color was brown overall with distinct white streaking on the front starting from the head and going down to the feet. The head was squarish, the forehead making a steep descent to the bill. The bill was dark and seemed thick and shears-like.

My first impression was Green Heron because of the back lighting and the slenderness of the bird. Delia and Nolan immediately saw it as different. As we looked further, we ruled out immature Green Heron due to its larger size and the coloration of the bird being wrong—there being no russet color on the front, and the beak being like heavy shears not like the sharp point of a Green Heron's beak. Bitterns were quickly ruled out—the bill shape again was distinctly different from the pointy spear-like beaks of bitterns, and again the coloration was all wrong, nor was the overall body shape chunky when the neck was down, and the neck was too short when stretched out. That left the night-herons. We found the body shape to be thinner than that of the chunkier Black-crowned Night-Heron. The bill of our bird was more blunt and dark than that of the Black-crowned. And the head shape was distinctly different. It seemed to be a smaller head, and the forehead just before the bill descended sharply down, giving the head a squared-off and smaller look than that of the round and more gradually descending forehead of the Black-crowned Night-Heron. The breast and belly streaking of our bird, finally, was distinct and more narrow.—*Chuck Heikkinen, Madison, Wisconsin*

Glossy Ibis
Plegadis falcinellus

12 June, Mascoutin Trail, Winnebago County—This ibis was feeding in cattail stubble and was intermittently in and out of view depending on where it was in the cattails. It was overall dark, large, and with a very long, thick, downturned bill. The back, mantle, and underparts were a dark chestnut color. The wings were a glossy green and showed some purple sheen near the back. The brightness and glossiness were noticeably duller than on the White-faced Ibis I had reported on 7 June 2012. The crown was gray. The facial skin in front of the eye was gray and it was bordered by thin white lines that extended from the throat to the back of the eye, but did not wrap around the back of the eye. The eye was dark brown and the bill was a dull tan. The legs were a dull gray. Species eliminated: White-faced Ibis would have thicker white bordering around the face and this bordering would wrap around the eye. The bill of White-faced Ibis would be gray, not tan, the iris would be red, and the legs would be bright red.—*Tom Wood, Menomonee Falls, Wisconsin.*

Little Gull
Hydrocoloeus minutus

7 June, North Point Park, Sheboygan—This gull was somewhat similar in plumage to the several nearby

Bonaparte's Gulls, but was only about 2/3 their size. It stood out due to its thick, black horizontal carpal bar which was evident on the folded wing. The primaries were also black. The crown and rear of the face were a mottled black, and the forehead and front of the face were white. This small gull had a white throat and underparts and a pale gray back and mantle. The bill was petite, thin, black, and short, and looked tiny in direct comparison to the Bonaparte's Gulls' bills. The legs were dull pink. The black eye had no visible orbital ring and it seemed large on the tiny head. In flight there was a dark black "M" on the upperwing, reminiscent of the pattern on an immature Black-legged Kittiwake. Bonaparte's Gull has a distinct white orbital ring and never has the very wide dark carpal bar seen on this bird. In addition this bird was seen in close comparison to Bonaparte's Gulls and it was obviously smaller, about 2/3 their size. The bill was also much tinier.—*Tom Wood, Menomonee Falls, Wisconsin.*

Rufous Hummingbird
Selasphorus rufus

13 July, A house 10 miles south of Ashland—A hummingbird slightly larger than the ruby-throated. A burnt orange/ brown plumage with a distinct white band on lower throat. The throat is orange-bronze, brilliant reddish orange in sunlight. Over-lapping feathers on throat visible in good sunlight.

Species eliminated: Ruby-throated has more green plumage, females thinner and males have red throat.

Behavior: The bird controlled the end of 6 feeders, flying up to chase off the ruby-throats, then it would land on a nearby shrub to stay close. We have 40 ruby-throats to compare the bird to. Sometimes would fly to the lower branches of a near-by tree.—*Thomas Syverud, Ashland, Wisconsin.*

Yellow-throated Warbler
Setophaga dominica

9 June, University of Wisconsin Arboretum, Madison—This larger than average warbler had a deep yellow throat area that was bordered by a black face mask and black side burns. It had a creamy eyebrow area and mostly circular white ear patch. These 2 features were separated by a thin black line. There was a slightly broken dark streak on each of its sides which accented its white belly. Two white wing bars were also observed. It had a grayish blue crown and upper back. It had a pointed beak, good size for a warbler. Its tail area also had a thin dark gray border.

Its relatively unstreaked chest and belly and white cheek patch eliminated Magnolia, Yellow-rumped, and Prairie [Warblers] and its 2 distinct wing bars eliminated Common Yellowthroat, Kentucky, Hooded, and Canada Warblers. The yellow barely extended past the neck area which eliminated Kirtland's, Parula, Nashville, Blue-winged or hybrid [Warblers]. Yellow-throated Vireo doesn't have a black face mask. The throat color wasn't right for Blackburnian Warbler. I was able to observe the bird singing and it did not sound like any of these other species.

It was calling every 30 seconds or so. I heard 7–9 descending trills with a bit

of an up trill at the end. I have several of its calls recorded on my hand held tape recorder. The bird spent most of its time in an oak tree on inner limbs of this tree. Unlike most warblers it was not flitting. Its movements were more deliberate. Every couple minutes or so, the bird would fly to another tree limb.—*Marty Evanson, Madison, Wisconsin*

Whooping Crane in flight by Dennis Connell

WSO Records Committee Report: Summer 2012

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The WSO Records Committee reviewed 38 records of 19 species for the Summer 2012 season, accepting 33 of them (87%). By far the season highlight was the state's fourth Fork-tailed Flycatcher, the first seen here since 2000. Unfortunately it was a one-day wonder seen only by the original observer. Also noteworthy was a Eurasian Wigeon photographed on 28 July, one of only three summer season records for this species and the only Wisconsin record between the dates of 26 June and 21 October. Two old records of one species from the Spring 2012 season were also reviewed and both accepted.

Accepted Records

Table 1 provides a list of records accepted by the WSO Records Committee during the Summer 2012 season. Information on each record, such as species, location, observer(s), and date(s), is accompanied by the tally of votes made by the five-person committee. Records with one or fewer dissenting votes are accepted into the state records.

Table 1. List of rare bird records accepted by the WSO Records Committee during the Summer 2012 season.

Record #	Species	Date	Observer	Location	County	Photo?	Other?	Tally
2012-012	Chuck-will's-widow	6/9	K. Etter Hale	Young Rd south of Palmyra	Walworth		Audio	5-0
2012-064	Black-necked Stilt	6/16	J. Mooney	Mascoutin Trail	Winnebago	Yes		5-0
2012-064	Black-necked Stilt	6/12 - 6/22	T. Wood	Mascoutin Trail	Winnebago			5-0
2012-066	Eurasian Wigeon	7/28	T. Oksiuta	Prentice Park	Ashland	Yes		4-1
2012-067	Fork-tailed Flycatcher	6/17	J. Swagel	Rio Creek	Kewaunee	Yes		5-0
2012-068	Glossy Ibis	6/7	T. Schultz	Mascoutin Trail	Winnebago	Yes		5-0
2012-068	Glossy Ibis	6/10	C. Bridge	Mascoutin Trail	Winnebago	Yes	Video	4-1
2012-068	Glossy Ibis	6/12 - 6/22	T. Wood	Mascoutin Trail	Winnebago			5-0
2012-069	King Rail	7/29	D. Norton	Horicon Auto Tour	Dodge	Yes		5-0
2012-070	King Rail	6/3	J. Mooney	Ledge Road, Horicon Marsh (HM)	Dodge			5-0
2012-070	King Rail	6/12	T. Wood	Ledge Road, HM	Dodge			5-0
2012-070	King Rail	6/14	N. Nabak	Ledge Road, HM	Dodge	Yes		5-0
2012-070	King Rail	6/14	A. Sinkula	Ledge Road, HM	Dodge	Yes		5-0
2012-070	King Rail	6/2	T. Wilson	Ledge Road, HM	Dodge		Audio	5-0
2012-072	Little Gull	6/7	T. Wood	North Point	Sheboygan			5-0
2012-072	Little Gull	6/10	C. Bridge	North Point	Sheboygan	Yes		5-0
2012-073	Loggerhead Shrike	7/28	L. Persico	Kerber WA	St. Croix			4-1
2012-074	Loggerhead Shrike	6/29 -7/1	M. Gold	Trempealeau Mt. Golf Course	Trempealeau	Yes		5-0
2012-075	Rufous Hummingbird	7/13 - 7/20	T. Syverud	~10 miles west of Ashland	Bayfield			4-1
2012-077	Western Grebe (*Aechmophorus* sp.)	7/22	T. Wood	Lake Maria	Green Lake			4-1
2012-077	Western Grebe	7/28	C. Heikkinen	Lake Maria	Green Lake	Yes		5-0
2012-077	Western Grebe	7/28	T. Prestby	Lake Maria	Green Lake			5-0
2012-078	Western Grebe	6/5	C. West	Trempealeau NWR	Trempealeau	Yes		5-0
2012-079	White-faced Ibis	6/7 - 6/12	T. Wood	Hwy 49, HM	Fond du Lac			5-0
2012-080	White-faced Ibis	6/14	G. Coghill	Mascoutin Trail	Winnebago	Yes		5-0
2012-080	White-faced Ibis	6/14	C. Bridge	Mascoutin Trail	Winnebago	Yes	Video	5-0
2012-080	White-faced Ibis	6/16	J. Mooney	Mascoutin Trail	Winnebago	Yes		5-0
2012-082	White-winged Dove	6/17	J. Delwiche	Washington Island	Door	Yes		5-0
2012-083	Yellow-crown. N-Heron	7/26	T. Wood	Ledge Road, HM	Dodge			5-0
2012-083	Yellow-crown. N-Heron	7/26	J. Coulter	Ledge Road, HM	Dodge	Yes		5-0
2012-083	Yellow-crown. N-Heron	7/28	J. Mooney	Ledge Road, HM	Dodge	Yes		5-0
2012-083	Yellow-crown. N-Heron	7/24	C. Heikkinen	Ledge Road, HM	Dodge	Yes		5-0
2012-084	Yellow-throated Warbler	6/9	M. Evanson	UW-Madison Arb.	Dane			5-0
Old Records								
2012-085	Worm-eating Warbler	5/4	W. Holton	Seminary Woods	Milwaukee			4-1
2012-086	Worm-eating Warbler	5/23	R. Pendergast	Devil's Lake SP	Sauk			5-0

Records Not Accepted

In the header for each record, voting tallies are shown in parentheses. Votes to accept are listed first. Two or more dissenting votes from the five-person committee results in a Record Not Accepted.

Black-billed Magpie—

#2012-063, Highway 8 near Rhinelander, Oneida County, 21 July 2012 (2–3).

This bird was seen with the naked eye while the observer was driving 40 mph on a highway. It was described to be of crow size and shape except the tail was longer. It also had a bright white breast and white on "portions of wings" with a long black tail. The bird flew at treetop height and was "pestered by 4-6 small birds." The observer felt the tail was too long for a leucistic crow and the flight different than a Pileated Woodpecker.

The WSO Records Committee regularly receives reports of rare birds seen with the naked eye while driving on highways and other roads. Naturally these are brief observations incidental and secondary to the task of driving (one hopes) and occur in an optics-free context that typically reduces the observer's ability to assess thoroughly the bird's plumage and other field marks. As such, they are very difficult for the committee to accept. For this bird, the location of the white in the wings was not described and the tail length was only described as being longer than a crow. No iridescent sheen was noted, bill size and shape not seen, and the bird's flight style not actually described. The time of year is also quite unusual for this species in Wisconsin. All of these factors left doubt in the minds of some committee members that other species, particularly leucistic Common Grackle or American Crow, were not effectively eliminated.

Bohemian Waxwing—

#2012-065, Town of Eau Galle, Dunn County, 6 June 2012 (late; 0-5).

A pair was seen and described only as having yellow-tipped tails and small red markings on the back of the wings. No other details were provided and the only species said to have been eliminated were Northern Cardinal and Tufted Titmouse because their coloring was wrong. However, the far more expected and common Cedar Waxwing was not mentioned at all and clearly fits the limited description quite well.

Lesser Goldfinch—

#2012-071, Brookfield, Waukesha County, 29 July 2012 (photos; 0-5).

Seen and photographed at a feeder, it was described as being a dull olive to lime color with black wings and tail feathers and a yellow-orange bill. The observer thought it was a warbler at first but then concluded it was this species. American Goldfinch was not mentioned at all in the report. However, the high-quality photos clearly demonstrate a typical female American Goldfinch. Lesser Goldfinch would show a dark bill and white at the base of the primaries, among a number of other features not described by the observer or seen in the photos.

Spotted Towhee—

#2012-076, Pheasant Branch Conservancy, Dane County, 26 June 2012 (late; 0-5).

This bird was seen at close range with no optics for 30 seconds. It was said to be the size of a towhee with black body, white breast, "orange-red color on the top of its breast," and a lot of white spots on its wings. The bird "flitted" around the tops of prairie plants, thought to be eating insects.

Unfortunately, this report lacks enough detail to accept such a significant record, as no Spotted Towhee has ever been found in the state outside of the months October through May. The size and shape are not adequately described, the flitting behavior is inconsistent with a towhee, the observer makes no comparison to the expected Eastern Towhee, and neither towhee species shows orange-red color on the upper breast. While a juvenile Eastern Towhee is a possibility (they have spots on their wings), the description does not allow for any species-level conclusion.

White-tailed Kite—

#2012-081, DeForest, Dane County, 5 June 2012 (0-5).

The observer described this bird as "white underneath with black tips on the wings, a straight white tail, short stocky shoulders, and a rounded white head with short bird of prey beak." It was said to fly gracefully high up using thermals, intermittently glide, and have a faster, more erratic flying pattern than a gull. "It was not the same shape as a gull but had similar markings."

While intriguing, this report does not eliminate the expected male Northern Harrier, which is a gull-like raptor with white underparts, black wingtips, and a long white tail, and short whitish head exactly as described. The observer's use of the words "hover," "erratic," and "graceful" are suggestive of a kite but certainly not conclusive. The upperparts of the bird were never seen to assess important plumage features such as black shoulders. Moreover, the observer did not mention the pattern of black on the wingtips, which differs between Northern Harrier and White-tailed Kite, or the black carpal patches (wrist spots) of the latter, despite that the bird was said to have flown right overhead. As such, the identification as described remains in doubt.

Yellow Warbler photographed by Bob Larson

About the Artists

Dennis Connell from Nekoosa, Wisconsin, is an avid nature photographer. For the past 13 years he's been photographing wildlife and nature. Dennis enjoys digitally capturing wildlife doing what it is they do in their daily lives: feeding, nesting, courting, caring for the young, hunting, or whatever it is they need to do to preserve their species. His goal is to produce sharp clear images of the subject for himself and others to enjoy. You can see more images at: www.freewebs.com/dcimages

Alyssa DeRubeis, a Minnesota native, is now living in Stevens Point, Wisconsin, while attending UW-SP, where she is a senior, double-majoring in Wildlife Ecology and Biology. She hopes to do avian-related technician work before pursuing a master's degree in Ornithology. Although she has been seriously interested in birding since high school, she didn't start taking photos until 2011. Since then, birding and nature photography have gone hand-in-hand. She feels so fortunate to have met so many kind and smart people in the Wisconsin birding community since she has been here.

Stephen Fisher is a serious amateur photographer, enjoying both landscape and wildlife photography. He is a retired high school English teacher who worked as an environmental/wildlife educator and Education Director for the Raptor Education Group, Inc. (REGI) for seven years following his retirement from teaching in Wausau. He now serves as a volunteer at REGI, rescuing and/or transporting sick and injured birds. He and his wife, Evelyn, have always enjoyed and respected the natural world, and he has a special appreciation for birds, particularly raptors. He also enjoys traveling, reading, hiking, snowshoeing, observing wildlife, spending time at his cabin in northern Vilas County, walking his dogs in the wonderful Wisconsin outdoors, and lifelong learning.

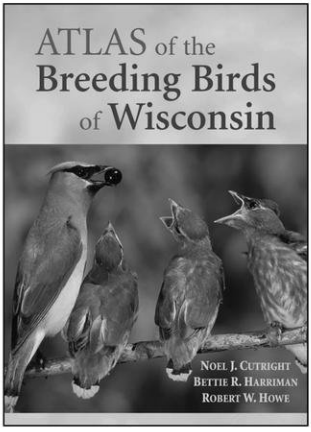
Myles Hurlburt is an amateur photographer who resides in Wausau, with his wife and four sons. He's always loved birding and got hooked on birding photography while vacationing in Butternut, Wisconsin when he heard this different sounding bird and had his camera—it was a Blackburnian Warbler. Ever since then he's been hooked on photographing birds, butterflies, and nature in general. When not focused on family and work in IT Management, much of his free time is spent outdoors photographing nature, especially birds.

Bob Larson, who lives in Kaukauna, is an advanced amateur photographer who concentrates his photography in the Fox Valley area. All nature centers and Haunts areas are fair game. Outagamie, Winnebago, Calumet, Brown, and Waushara Counties get the most attention. He switched to digital just before it became affordable and has been learning ever since.

Dave Lund is an amateur photographer who lives near Eau Claire. Following his retirement as a Mathematics Professor at UW-Eau Claire in 2000, he and his wife Judy now include birding and photography as part of all of their travels. Although many of his pictures are taken in Wisconsin, wintering in the southern US has provided many additional opportunities birding photography experiences. He has recently begun making presentations on birds and birding.

Eastern Wood-Pewee found by Dave Lund

Ruby-crowned Kinglet photographed by Steve Fisher



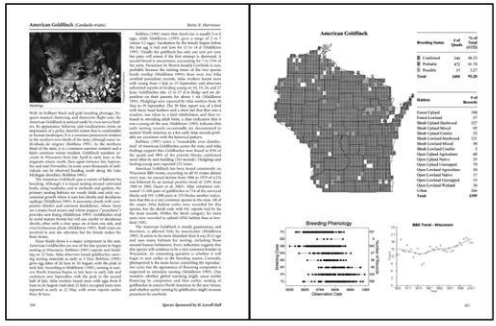
Atlas of the Breeding Birds of Wisconsin

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

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

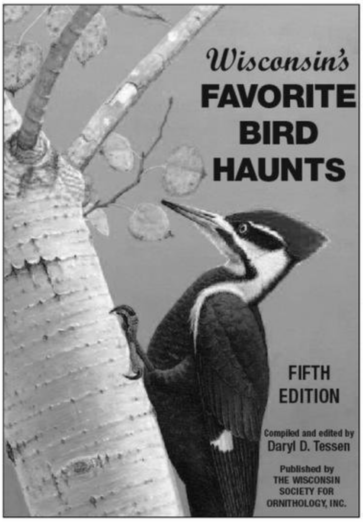
Hardcover, large format (9" x 11.25"), 624 pages. Copyright 2006. ISBN: 978-0-9774986-0-4.

Published by The Wisconsin Society for Ornithology, Inc., with proceeds used for projects supported by the organization.



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

Visit the WSO website, www.wsobirds.org, for an order form that includes price and ordering information, or contact the Bookstore Manager (see contact information on Inside Back Cover).



Wisconsin's Favorite Bird Haunts, Fifth Edition (2009)

This edition marks the fourth time this comprehensive bird-finding guide to Wisconsin has been compiled and edited by Daryl Tessen.

- New in this edition: An **annotated checklist** of 443 species and a **birding highlights** quick reference.
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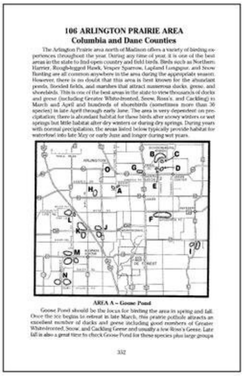

145 articles cover some 1,100 areas and include detailed maps.

Designed for durability and functionality, this book is printed on heavy coated paper and has a spiral binding so it lies flat when open. 6" by 9", 556 pages. ISBN: 978-0-9774986-3-5.

Published by The Wisconsin Society for Ornithology, Inc., with proceeds used for projects supported by the organization.

Visit the WSO website, www.wsobirds.org, for an order form that includes price and ordering information, or contact the Bookstore Manager (see contact information on Inside Back Cover).

THE WISCONSIN SOCIETY FOR ORNITHOLOGY

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

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