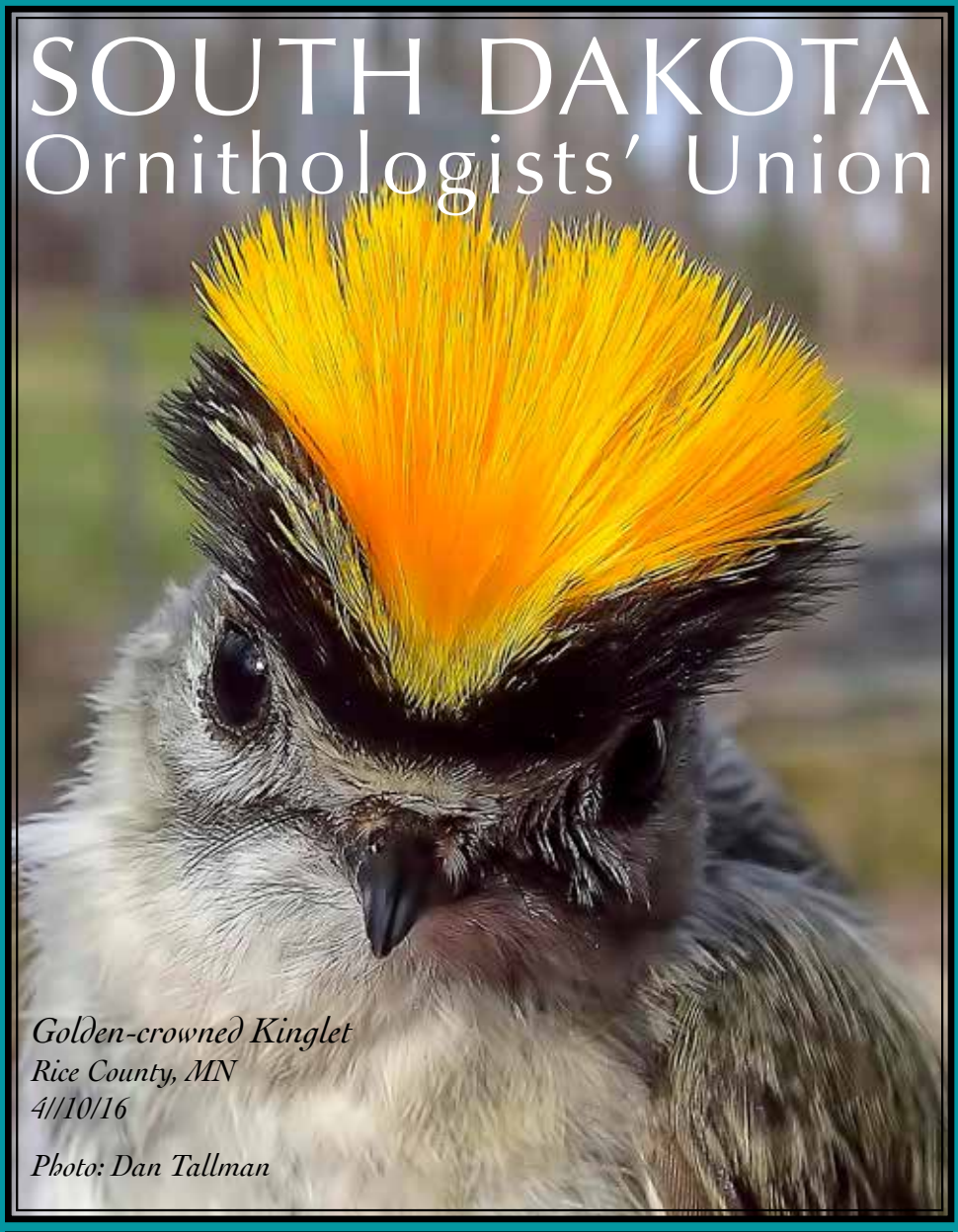
SOUTH DAKOTA Ornithologists' Union



Golden-crowned Kinglet
Rice County, MN
4//10/16

Photo: Dan Tallman

SOUTH DAKOTA BIRD NOTES

Vol. 68 December 2016 No. 4

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Vol. 68 DECEMBER 2016 NO. 4

SOUTH DAKOTA ORNITHOLOGISTS' UNION
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President's Page

Meeting Our Goals, Expanding Our Reach, and Increasing Our Numbers

First, I want to thank the SDOU membership for their support and confidence in electing me president at our Fall 2016 Meeting in Vermillion. I'll do my best to work with the membership and Board of Directors to keep the SDOU ship sailing. On behalf of myself and SDOU, I also want to thank Roger Dietrich for his leadership and hard work over this last year as SDOU President. Thank you, Roger!

The Fall SDOU meeting in Vermillion was a success largely as a result of Roger's and Dave Swanson's planning and organizational abilities and I want to thank them and all of the presenters who did a fine job of informing the SDOU membership of the varied, interesting, and important research being conducted on birds in South Dakota. Attendance numbers for our fall meetings generally are less than the spring meetings, and the Board will be discussing strategies to attract more people to the fall meetings. I think we all agree that providing a forum for the presentation of results of current research and other projects is an important function of SDOU; we don't want to lose that. But in the interest of providing a rewarding experience for our membership we ask for, and welcome your thoughts and input on ways you would like to see our meetings (both Fall and Spring) meet your expectations and desires. Please contact me or any of the Board members with your input!

Finally, I want to challenge ALL of us to think of ways that we can personally and individually make SDOU the organization that we want it to be. A quick glance around the room at our meetings tells us that we are an aging organization in terms of our membership; there are LOTS of gray heads (or bald ones) in the room. We must be better at recruiting new members and welcoming them into our flock. Opportunities abound to increase our visibility to folks of all ages in our communities. Several regions in the state now have local/regional birding clubs (Sioux Falls Bird Club, Brookings Bird Club, Northeast South Dakota Bird Club, Northern Hills Bird Club, etc); these organizations are a natural conduit for potential members, and there are current active SDOU members within all of these clubs. There are many ways to slowly build our membership and strengthen our organization and ensure its future. My challenge to all of us is to take someone birding; give a presentation on birds or birding to local civic, school, or youth groups. If we all take these opportunities to share our knowledge and passion for birds and birding in an open and inviting environment, I am confident our growth in numbers will be strong.

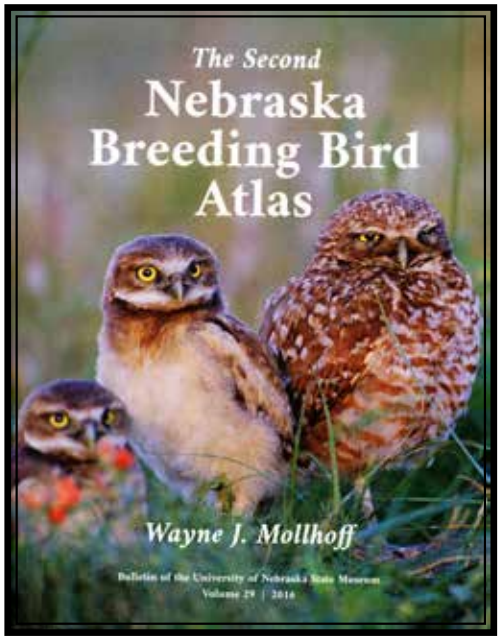
Happy Birding All!

R. Lee Jensen

Book Review

Dan Tallman

The Second Nebraska Breeding Bird Atlas. Wayne J. Mollhoff. Bulletin of the University of Nebraska State Museum. Volume 29. 2016. $30.00 softbound.



This book gives the results of Nebraska's second breeding bird survey. The first census was conducted in 1989. This book, a 30-year update, is essential reading for anyone remotely interested in Nebraska's breeding birds. The book consists of accounts, one page for each species, for each of the state's 225 breeding bird species.

A 29-page introduction describes the methods used for the two atlas projects. Nebraska's ecology and climate are also covered. A short discussion of changes of breeding bird distribution concludes this introduction. Finally, there is a page or two on how to interpret the species accounts.

Each account consists of a short description of the status of each species. These paragraphs include habitat and distributional notes. Comments are included on population trends, along with data from Breeding Bird Surveys. Two charts follow, one describing habitat use and the other, patch size.

Aside from the perennial problem of the variability of identification abilities by observers, two weaknesses stand out. First, patch size is the estimated size of the habitat in which birds were found breeding. Mollhoff admits that patch size is an odd concept. Reporters differ in their ability to estimate patch sizes. Often observers did not report patch sizes. The other "weakness" is that many more observers participated in the second survey. The result is that one does not know if population increases are the result of actual increases or an artifact of having more observers. To his credit, Mollhoff points out this problem where it occurs.

Each account concludes with two distribution maps, one for the first Atlas, the other for the current survey. These maps are invariably fascinating. They allow the reader quick access to distributions and to geographical trends. The blocks with breeding birds are indicated by a red dot. The result is a flat representation of occurrence, but not a display of relative abundance.

The book ends with 10 appendices. These statistically compare the two atlas surveys and present county-by-county analyses. Atlas blocks are described, species at risk are listed, and potential additional species are discussed. Finally Mollhoff presents acknowledgments, references, and a checklist of Nebraska's breeding birds.

DECLINES IN PRAIRIE BIRD POPULATIONS IN A RESTORED TALLGRASS PRAIRIE

Eva L. Soluk,[1] Meghann E. Jarchow,[1] and Jay D. Carlisle[2]

ABSTRACT—Tallgrass prairies and other grassland ecosystems have experienced extensive loss and fragmentation, which has resulted in the decline of many grassland bird species. We measured changes in bird density and breeding status in 2003 and 2013 at a restored tallgrass prairie at Spirit Mound Historical Prairie in southeastern South Dakota. We used line transects to quantify breeding bird densities and breeding bird atlas-style area searches to determine breeding status. Four grassland bird species of conservation concern declined in density between 2003 and 2013, and in the recent year, we could not confirm breeding for most grassland species of concern except for the Dickcissel (*Spiza Americana*). Most other species demonstrated a decline in densities between 2003 and 2013, but changes in the breeding status of the other bird species varied. Our results are consistent with North American trends of declines in abundances of grassland species of concern over the same time period. Restored tallgrass prairies, such as the one studied here, play an important role in grassland bird diversity preservation, and monitoring the bird communities at these sites is vital in developing a greater understanding of the health of prairie ecosystems.

INTRODUCTION

Historically, grasslands covered about 17% of the land area in North America, and Great Plains grasslands were and continue to be the largest among them (Reinking 2005). Nearly all tallgrass prairie in the Great Plains has been converted for agricultural use (Samson and Knopf 1994), and only about 1% of the tallgrass prairie that covered the Great Plains remains intact today (Samson and Knopf 1994, Baker et al. 2003). Rapid loss of native prairie has coincided with immense and rapid declines in populations of many prairie bird species (Reinking 2005). In fact, grassland birds are at the greatest risk because they are declining faster than other groups of avian species in temperate North America (Olechnowski et al. 2009). Though habitat loss is likely a major factor in these population declines, these declines also are partially due to increased fragmentation of grassland habitats, with small fragments having lower occurrences and densities of prairie bird species (Herkert et al. 2003).

With increasing concern for grassland bird populations, conservation groups and federal and state agencies have made coordinated efforts towards the conservation of land birds in the Americas (Bakker 2005). In 2005, South Dakota Game, Fish and Parks (SD GF&P) formed a state list of species of concern that have distributions or a high percentage of their population in South Dakota, are threatened species, or are species that are listed as a concern based on input from wildlife managers and experts in South Dakota (Bakker 2005).

Spirit Mound Historic Prairie (hereafter Spirit Mound) is a restored tallgrass prairie in southeastern South Dakota. Spirit Mound is managed by SD GF&P and serves as a useful site to study the effectiveness of prairie restoration in maintaining populations of grassland bird species of conservation concern. Given the substantial loss of native prairies in North America, restored grasslands are vital for the preservation of grassland bird biodiversity throughout the Great Plains. With so few prairie fragments remaining and many of those ecosystems being islands surrounded by agriculture and development on all sides, tallgrass prairie sites like Spirit Mound provide an important habitat for grassland birds. Because

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prairie restoration efforts have been ongoing for more than a decade (since 2001) at Spirit Mound, the site also provides a unique opportunity to evaluate changes after long-term restoration efforts. Vegetation type and density affect the bird community due to differing preferences among bird species, meaning that as vegetation structure changes with time so do the bird species (Blankespoor 1980). As tallgrass prairie restoration has progressed at Spirit Mound, vegetation structure and composition has changed (Millikin et al. 2016). The purpose of this study was to determine the changes in bird species density and observable breeding behavior between 2003 and 2013 at Spirit Mound.

STUDY AREA

Spirit Mound is a tallgrass prairie about 10 km north of Vermillion, South Dakota (43.21396° N, 96.56982° W) and is managed by SD GF&P. The site is approximately 130-ha and, prior to 2001, was used for agriculture, primarily row crop production (70% of the site) and grazing (15% of the site), from 1869 to 2000 (Millikin et al. 2016). The former row crop areas of the site are now reconstructed prairie, and the formerly grazed and other areas of the site have been restored using various methods (Millikin et al. 2016). Non-prairie features at Spirit Mound include a creek that flows through the southern half of the site, a 0.63-ha native woodlot in the southeastern corner, and a 1.2-km hiking trail that travels up to the summit of the mound. Spirit Mound is surrounded on all sides by roads, and neighboring lands are agricultural and residential (Figure 1-page 91).

METHODS

This study builds on research by Carlisle et al. (2004), who quantified bird density and breeding status in 2003. Here, we utilize similar methods to those of Carlisle et al. (2004) in order to compare changes between 2003 and 2013. We used transect surveys to quantify changes in bird density. In 2013, we conducted surveys on 24 May, 5 June, 26 June, 3 July, and 29 July along two line transects, each about 800 m long and about 500 m apart, on the north and south side of the mound (Figure 1). Location of the transects differed between 2003 and 2013 because a 10.3-ha section of the site was planted with corn (*Zea mays*) in 2013 due to ongoing restoration challenges in that area; part of that area was a cattle feedlot prior to restoration. Because of this ongoing effort there was slightly less total area sampled in 2013 than 2003: In 2003, 0.3 km^2 were surveyed and in 2013 0.24 km^2 were surveyed. We conducted transect surveys for 2 to 3 hours after sunrise, beginning around 6 or 7 AM CST, and recorded all sightings within 75 m of the transects by visual or auditory identification.

We used the free-wandering, atlas-style area search method to assess the breeding status of birds at Spirit Mound. This method involves inventorying all birds observed, by sight or sound, and began in early June and continued through late July. We spent a total of 20 hours on breeding status surveys. We evaluated the breeding behavior status of each bird that was observed as "possible", "probable", or "confirmed". A "possible" status was used when a species that is known to breed in the region was present but no breeding behavior, with the exception of a lone singing male, or nest was observed. We used a "probable" status when a species was assumed to be breeding, based on behavior, such as a male and female pair observed together. Finally, we used a "confirmed" status when an adult was observed with fledglings present, an adult was seen visiting a nest with eggs or nestlings, and when adults were seen carrying nesting materials, fecal sacs, or food to provision young.

RESULTS

In 2003, thirty-four species were observed during the transect surveys, and in 2013, twenty

species were observed, a 41% decline in species richness (Figure 2-page 91). Densities of eighteen species declined between 2003 and 2013, including all four grassland species of concern (Figure 2). The Grasshopper Sparrow (*Ammodramus savannarum*) had the steepest decline in density (a 98% decline) of the grassland species of concern, and had the overall greatest decline in density of any species. Of the four grassland species of concern, the Bobolink (*Dolichonyx oryzivorus*) had the least decline in density (a 14% decline) between study years. Nine species had increased densities between 2003 and 2013, including Barn Swallow (*Hirundo rustica*), American Robin (*Turdus migratorius*), American Goldfinch (*Spinus tristis*), Sedge Wren (*Cistothorus platensis*), Killdeer (*Charadrius vociferous*), House Sparrow (*Passer domesticus*), Eastern Kingbird (*Tyrannus tyrannus*), Orchard Oriole (*Icterus spurius*), and Cliff Swallow (*Petrochelidon pyrrhonota*).

In 2003, fifty-two species were observed during the breeding status surveys, and twenty-three of the same species were observed in 2013, indicating an overall decline of 56%. Three species, the Gray Catbird (*Dumetella carolinensis*), House Sparrow (*Passer domesticus*), and Killdeer (*Charadrius vociferous*) were observed in 2013 but not in 2003. Overall, five of the fourteen species that demonstrated confirmed breeding behavior in 2003 still demonstrated confirmed behavior in 2013 (Table 1-page 90). One grassland species of concern, the Dickcissel (*Spiza americana*) demonstrated confirmed breeding behavior in both 2003 and 2013 (Table 1). Breeding behaviors were confirmed in both 2003 and 2013 for the American Robin, Common Grackle (*Quiscalus quiscula*), Eastern Kingbird, and Red-winged Blackbird (*Agelaius phoeniceus*) (Table 1).

DISCUSSION

We found declines in densities of each of the four grassland species of concern. Furthermore, in 2013, we did not confirm evidence of breeding behavior for three of the four grassland species of concern that were confirmed as breeding in 2003. Dickcissels had a confirmed breeding status in both study years. Many of the generalists, exotics, and non-prairie species present at Spirit Mound are likely attracted to the habitat due to the close proximity of neighboring wooded areas (*sensu* Mundahl et al. 2010). For example, 39% of the species observed during breeding status surveys were found in the small woodlot on the site in 2013, even though the woodlot covers only 0.5% of the total land area of Spirit Mound (Table 1; Figure 1). Forty-eight percent of species were most frequently observed in the prairie, including three of the four grassland species of concern (Table 1). In addition, species that are regarded as facultative prairie species such as the Eastern Kingbird, though not exclusive to prairie habitat, and the American Goldfinch, a generalist, increased in density between study years (Figure 2).

Declines in the abundances of grassland species of concern is not limited to Spirit Mound. There have been continental declines of many grassland dependent bird species as grasslands have been lost (Olechnowski et al. 2009). Most of these species are migratory and occur at Spirit Mound only during the breeding season but their abundances may be affected by conditions in their stopover or over-wintering habitats. The populations of many grassland birds are also naturally highly variable from one year to the next (Igl and Johnson 1999). Furthermore, the area immediately surrounding Spirit Mound is largely used for annual row-crop agriculture, functionally making Spirit Mound an island in a sea of cropland. Small and isolated fragments of prairie tend to have lower densities of prairie bird species (Herkert et al. 2003). Urbanization around tallgrass prairie sites, although not a major concern at Spirit Mound, also has been linked to declines in abundance of prairie species, such as the Grasshopper Sparrow (McLaughlin et al. 2014).

In addition to the continental-level changes in grassland species of concern abundance, factors such as the location of the sampling transects, overall Spirit Mound use and management, observer bias, and weather variability could have impacted the results of our study. As stated in the methods section, the locations of the transects were moved from 2003 to 2013 due to the addition of a corn field on Spirit Mound in 2013. In 2013, a 190-m^2 section of the new transect area was being intensively managed to eliminate smooth brome (*Bromus inermis*) and restore native prairie plant species. The management included biweekly mowing throughout May, herbicide spraying in June, and a prescribed burn in July. These disturbances may have reduced bird abundances in this area, thereby functionally reducing the sampling area or affecting bird breeding behavior in 2013.

Overall, site use and management also could have negatively affected bird densities during the recent surveys. Spirit Mound is used for recreation and receives many visitors in a year, including visitors bringing dogs to explore the prairie off leash (E. Soluk, personal observation). Noxious weeds, especially Canada thistle (*Circium arvense*), are actively managed at the site using machinery. Visitors and active management for noxious weeds are beneficial in general, but may have negative impacts on some bird species, especially grassland species of concern. Weather conditions also may have had an effect on our findings because Spirit Mound Creek had water flowing in 2003, but in 2013 Spirit Mound experienced a drought and the creek was dry throughout the year. This likely impacted the use of the area for waterfowl and wetland-dependent species. Bird surveys were also done by different researchers in 2003 (J. Carlisle and H. Hoff) and 2013 (E. Soluk), which introduces the possibility of observer bias. Furthermore, the index we used to assess breeding status (possible, probable, and confirmed) may only provide a broader picture of the habitat suitability and breeding bird species present (Morgan et al. 2010) at Spirit Mound, since it can naturally exclude shy species or species that have high instances of parasitism on their nests (via Brown-headed Cowbirds) (Rivers et al. 2003).

Long-term observations and evaluation are needed to inform site-level management of bird species, especially for the management and protection of grassland species of concern. Studies such as these also help to contribute to our understanding of the wellbeing of prairie habitats and the bird species that they support on a larger continental-level. Although an overall decline in bird densities and breeding status was observed between 2003 and 2013 at Spirit Mound, the site remains as a valuable habitat for migratory and resident species. As a thriving restored tallgrass prairie habitat, it plays a valuable role in the preservation of grassland birds by providing a habitat where there otherwise would have been none.

ACKNOWLEDGMENTS

We thank E. Vander Stouwe for technical support, and South Dakota Game, Fish and Parks for allowing us to conduct research at Spirit Mound Historical Prairie. Valuable comments were made by Lawrence Igl and one anonymous reviewer. We also thank *South Dakota Bird Notes* Editor Chapman for making several improvements to earlier versions. This research was supported by the University of South Dakota's Center for Academic and Global Engagement and the U Discover Summer Scholar Program for undergraduate students.

LITERATURE CITED

Bakker, K.K. 2005. South Dakota all bird conservation plan. South Dakota Department of Game, Fish, and Parks. Wildlife Division Report (2005-2009).

Blankespoor, G.W. 1980. Prairie restoration: effects on nongame birds. The Journal of Wildlife Management 44:667–672.

Carlisle, J.D., H.S. Hoff, and P.M. Mabee 2004. Breeding bird inventory of Spirit Mound historic prairie in Clay County-an area being restored to tallgrass prairie. South Dakota Bird Notes 56:32-41.

Dechant, J. A., M. L. Sondreal, D. H. Johnson, L. D. Igl, C. M. Goldade, A. L. Zimmerman, and B. R. Euliss 2003. Effects of management practices on grassland birds: Bobolink. Northern Prairie Wildlife Research Center, Jamestown, North Dakota. Northern Prairie Wildlife Research Center Online.

Herkert, J.R., D.L. Reinking, D.A. Wiedenfeld, M. Winter, J.L. Zimmerman., W.E. Jensen, E.J. Finck, R.R. Koford, D.H. Wolfe, S.K. Sherrod, M.A. Jenkins, J. Faaborg, and S.K. Robinson 2003. Effects of prairie fragmentation on the nest success of breeding birds in the midcontinental United States. Conservation Biology 17:587-594.

Igl, L. D. and D. H. Johnson. 1999. Le Conte's Sparrows breeding in Conservation Reserve Program fields: precipitation and patterns of population change. Studies in Avian Biology 19:178–186.

Johnson, R.G., & S.A. Temple 1990. Nest predation and brood parasitism of tallgrass prairie birds. Journal of Wildlife Management 54:106-111.

McLaughlin, M.E., W.M. Janousek, J. P. McCarty, and L.L. Wolfenbarger, 2014. Effects of urbanization on site occupancy and density of grassland birds in tallgrass prairie fragments. Journal of Field Ornithology 85:258-273.

Millikin, A.R., M.E. Jarchow, K.L. Olmstead, R.E. Krentz, and M.D. Dixon. 2016. Site preparation drives long-term plant community dynamics in restored tallgrass prairie: a case study in southeastern South Dakota. Environmental Management.

Morgan, M.R., C. Norment, and M.C. Runge. 2010 Evaluation of a Reproductive Index for Estimating Productivity of Grassland Breeding Birds. The Auk 127:86-93.

Mundahl, N.N. Corey, and B. Borsari 2010. Bird communities of restored prairies and old-field habitats in agricultural and urban areas of Winona County, Minnesota. Proceedings of the North American Prairie Conference 22:80-88.

Olechnowski, B.F.M., D.M. Debinski, P. Drobney, K. Viste-Sparkman, and W.T. Reed 2009. Changes in vegetation structure through time in a restored tallgrass prairie ecosystem and implications for avian diversity and community composition. Ecological Restoration 27:449-457.

Powell, A.F. 2006. Effects of prescribed burns and bison (*Bos bison*) grazing on breeding bird abundances in tallgrass prairie. Auk 123:183-197.

Powell, A.F. and W.H. Busby 2013. Effects of grassland management on breeding birds at the western edge of the tallgrass prairie ecosystem in Kansas. Natural Areas Journal 33:130-138.

Reinking, D.L. 2005. Fire regimes and avian responses in the central tallgrass prairie. Studies in Avian Biology 30:116-126.

Rivers, J., D. Althoff, P. Gipson, and J. Pontius. 2003. Evaluation of a Reproductive Index to Estimate Dickcissel Reproductive Success. The Journal of Wildlife Management 67:136-143.

Samson, F. and F. Knopf 1994. Prairie conservation in North America. BioScience 44:418-421.

Shochat, E., D.H. Wolfe, M.A. Patten, D.L. Reinking, and S.K. Sherrod 2005. Tallgrass prairie management and bird nest success along roadsides. Biological Conservation 121:399-407.

Wright, C.K., and M.C. Wimberly 2013. Recent land use changes in the western corn belt threatens grasslands and wetlands. Proceedings of the National Academy of Science 110:4134-4139.

Table 1. Breeding birds of Spirit Mound that were seen in both 2003 and 2013 listed by breeding status and most frequent habitat association in 2013. Breeding Status: Confirmed - breeding behavior witnessed, Probable - breeding suspected but not confirmed, Possible - birds breed in region but not suspected or confirmed at Spirit Mound. Grassland species of concern (highlighted in gray) include the Bobolink, Dickcissel, Grasshopper Sparrow, and Western Meadowlark.

Species[a]	Breeding status[b]		Habitat associations
	2003	2013	in 2013
Bobolink†	Confirmed	Probable	Mound-Grassland
Dickcissel†	Confirmed	Confirmed	Grassland
Grasshopper Sparrow†	Confirmed	Probable	Edge
Western Meadowlark†	Confirmed	Probable	Grassland
American Goldfinch	Probable	Probable	Grassland
American Robin	Confirmed	Confirmed	Woodlot
Baltimore Oriole	Confirmed	Probable	Woodlot
Barn Swallow	Confirmed	Probable	Grassland
Blue Grosbeak	Probable	Probable	Grassland
Brown-headed Cowbird	Confirmed	Probable	Grassland
Chipping Sparrow	Possible	Probable	Woodlot
Cliff Swallow	Migrant	Probable	Grassland
Common Grackle	Confirmed	Confirmed	Woodlot
Common Yellowthroat	Confirmed	Possible	Grassland
Eastern Kingbird	Confirmed	Confirmed	Woodlot
European Starling	Probable	Confirmed	Woodlot
Killdeer	Probable	Probable	Grassland
Mourning Dove	Probable	Probable	Edge
Northern Flicker	Probable	Probable	Woodlot
Red-headed Woodpecker	Probable	Confirmed	Woodlot
Orchard Oriole	Confirmed	Probable	Woodlot
Red-winged Blackbird	Confirmed	Confirmed	Grassland
Song Sparrow	Confirmed	Possible	Wetmeadow

[a] Grassland species of conservation concern are marked with the symbol †.
[b] Definitions of breeding status are as follows: *Confirmed* (breeding behavior witnessed by observer), *Probable* (breeding suspected but not confirmed by observations), and *Possible* (birds breed in the region but not suspected or confirmed at Spirit Mound Historical Prairie).

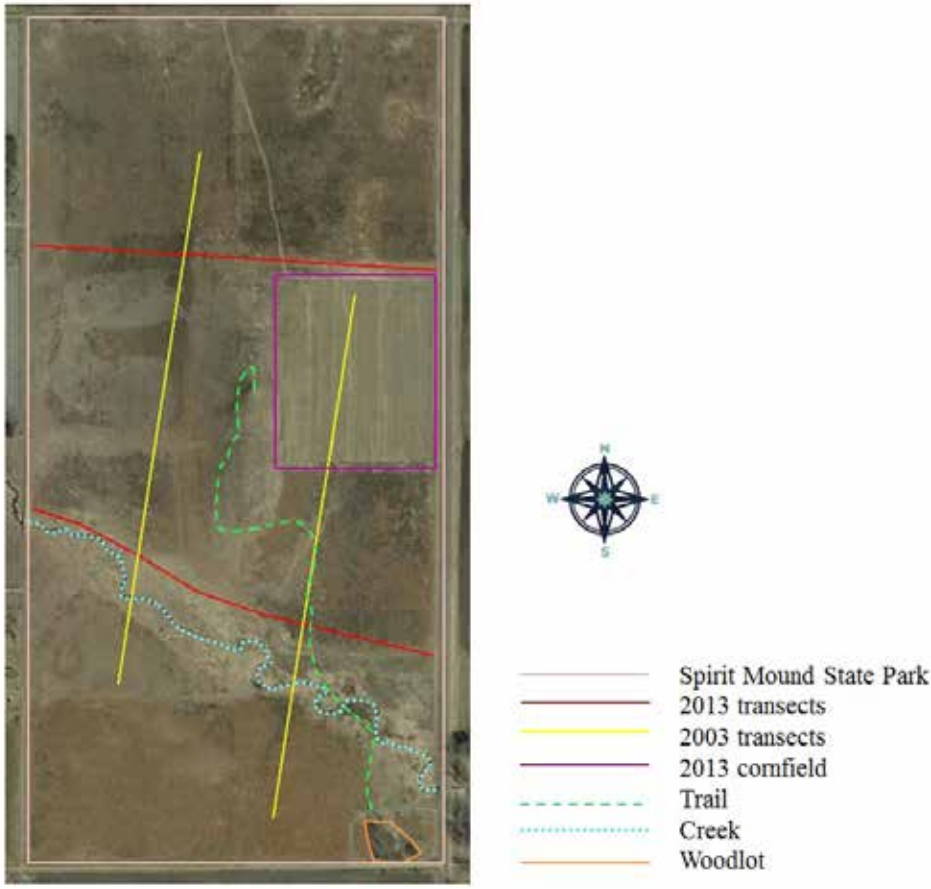

Figure 1. Spirit Mound Historic Prairie. Areas of interest, including 2003 and 2013 transects, labeled (Image date March 13, 2015).

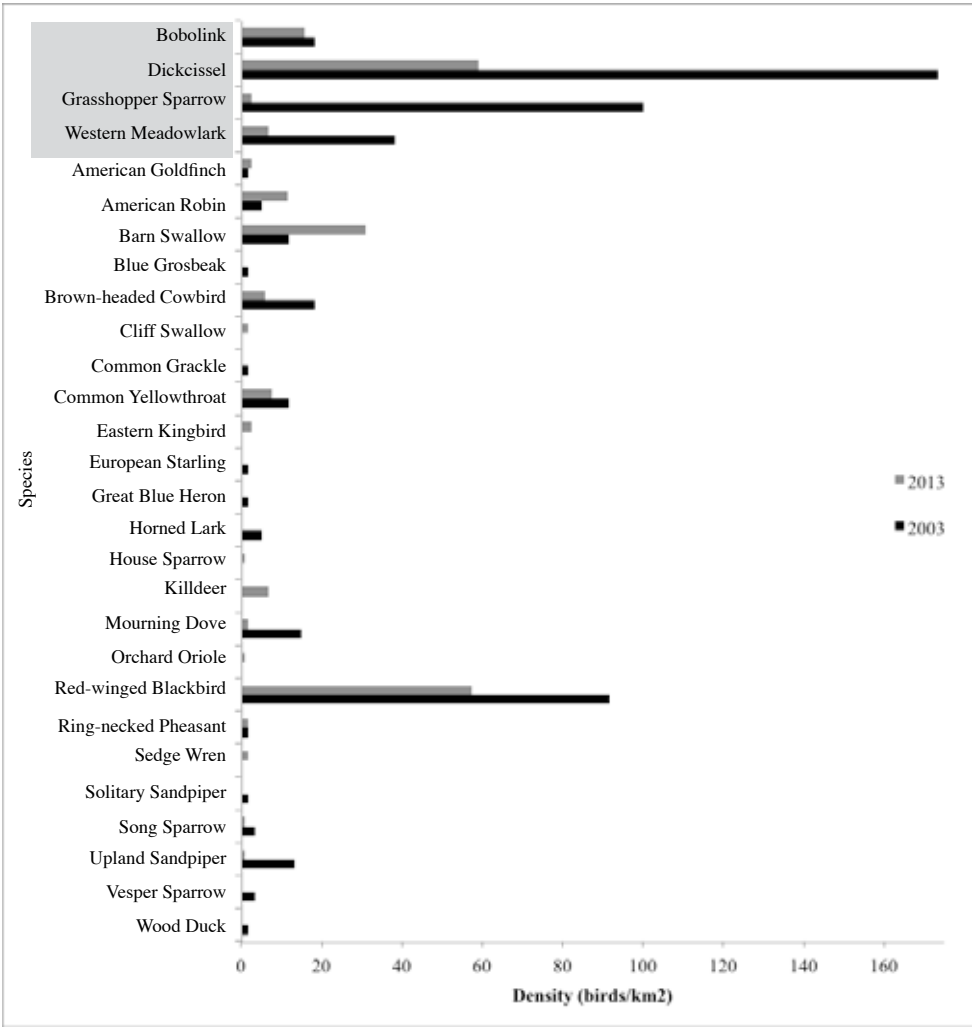

Figure 2. Density (average number of birds/km2) of birds at Spirit Mound. Grassland species of concern include the Bobolink, Dickcissel, Grasshopper Sparrow, and Western Meadowlark (highlighted in gray).

Appendix

Bird species recorded during transect surveys or breeding bird surveys in 2003 and 2013 at Spirit Mound Historical Prairie, South Dakota.

2003
American Crow
American Goldfinch
American Kestrel
American Robin
Baltimore Oriole
Bank Swallow
Barn Swallow
Blue Grosbeak
Blue Jay
Blue-winged Teal
Bobolink
Brown Thrasher
Brown-headed Cowbird
Chipping Sparrow
Clay-colored Sparrow
Cliff Swallow
Common Grackle
Common Yellowthroat
Dickcissel
Eastern Kingbird
Eastern Phoebe
European Starling
Field Sparrow
Grasshopper Sparrow
Gray Partridge
Great Blue Heron
Horned Lark
Lark Bunting
Lark Sparrow
Loggerhead Shrike
Mallard
Mourning Dove
Northern Flicker
Orchard Oriole
Red-headed Woodpecker
Red-tailed Hawk
Red-winged Blackbird
Ring-necked Pheasant
Rock Dove
Savannah Sparrow
Sedge Wren
Semipalmated Sandpiper
Solitary Sandpiper
Song Sparrow
Sora
Tree Swallow
Upland Sandpiper
Vesper Sparrow
Western Kingbird
Western Meadowlark
Wood Duck

2013
American Goldfinch
American Robin
Baltimore Oriole
Barn Swallow
Blue Grosbeak
Bobolink
Brown-headed Cowbird
Chipping Sparrow
Cliff Swallow
Common Grackle
Common Yellowthroat
Dickcissel
Eastern Kingbird
European Starling
Grasshopper Sparrow
Gray Catbird
House Sparrow
Killdeer
Mourning Dove
Northern Flicker
Orchard Oriole
Red-headed Woodpecker
Red-winged Blackbird
Ring-necked Pheasant
Sedge Wren
Song Sparrow
Upland Sandpiper
Western Meadowlark

Fledgling Tracts

Jason Thiele

A Beginner's Guide to Birderspeak: Part V

This article is part of a series to introduce new birders to the lingo used by the birding community. In this fifth and final installment, we are going to look at a few different terms that birders use to sound smart during moments when they're actually stumped. And we're also going to look at what I believe may be the most common word in the typical birder's vocabulary.

Empidonax (em-pihd'- n-aks)

We have now arrived at the scary world of Latin names. Thankfully for both amateur birders and professional ornithologists, the common names of birds are widely standardized by organizations such as the American Ornithologists' Union, so when someone tells me she saw a Black-throated Blue Warbler, I can be reasonably certain that she is not just giving me a description of the bird's colors but that she saw a species which I would much rather not need to remember as *Setophaga caerulescens*.

Nevertheless, there are still several groups of birds that are quite frequently referred to by their genus names. A birding mentor of mine once suggested that throwing around Latin names is just a good way to fit in with birders, but as a general rule, when you hear a birder using a genus name, it's a good indicator that he is stumped on a bird's identification. Sometimes closely-related species (e.g., those in the same genus) are extremely difficult to tell apart from one another. And one genus where this is particularly true is the group of small flycatchers in the genus *Empidonax*. Just looking at these birds, the differences in field marks are often very subtle. The Least Flycatcher (*Empidonax minimus*) is (not surprisingly) slightly smaller than most of the others and has a bolder eye ring than most; the Willow Flycatcher (*E. trailii*) has a very thin to nonexistent eye ring, as does the Alder Flycatcher (*E. alnorum*), which was once considered to be the same species as the Willow; the Acadian Flycatcher (*E. virescens*) and Cordilleran Flycatcher (*E. occidentalis*) are somewhat more greenish in color; the list goes on. When it really comes down to it, many of the birds in this genus cannot be safely identified by sight without a very good look and a lot of experience. It takes some ear birding (see the first article in this series) to really be confident in the ID, as these species do have fairly distinctive songs that separate them. But several times every fall I find myself particularly frustrated by the brief sighting of a small flycatcher that I know is an *Empidonax* but that seems unwilling to sing for me because it is apparently more interested in finding food to fuel up for its long journey south than it is in vocalizing. How rude.

Accipiter (ak-sip'-it-er)

During my career in the wildlife field, I have spent a fair amount of time of time around "hawkwatchers." At certain sites around the country, migrating raptors get concentrated in impressive numbers along natural "funnels" such as peninsulas or other narrow strips of land, and birders from the casual to the diehard will gather to watch them. Many "hawkwatch" sites have teams of observers that tally the various species of raptors as they fly by. The best hawkwatchers can identify raptors

at incredible distances, in horrible light, sometimes without optics, simply because they've learned the subtle differences in size, shape, wing-beats, and other characteristics among species.

But even the experts occasionally cannot identify a raptor to species. However, they can generally narrow a mystery raptor down to one of several groups with even a fleeting glimpse. And we mere mortals can do the same if we know what to look for. Many of the raptors in North America belong to one of two genera: *Accipiter* and *Buteo* (see below). And birders often use these scientific names to refer to them.

Accipters range in size from the smallish Sharp-shinned Hawk (*Accipiter striatus*) to the impressive Northern Goshawk (*A. gentilis*). While there are few absolutes in the bird world, accipiter hawks (accipiter is Latin for hawk) are often found in forested habitats, and they often prey on other birds. In order to catch another bird among trees and shrubs, the ability to accelerate quickly and to move through obstacles is crucial. And the accipiter shape is perfect for this. Accipiters have relatively short wings which can be flapped quickly for bursts of speed and which allow them to slip through narrow openings, as well as relatively long tails which help them to maneuver. With practice, the accipiter shape is almost instantly recognizable.

Buteo (boot'-ee-oh)
The other major group of hawks is the *Buteo* hawks. These hawks, like the accipiters, vary widely in size, from quite small species such as the Broad-winged Hawk (*Buteo platypterus*) to the almost "eagle-ish" Ferruginous Hawk (*B. regalis*), but species in this genus generally have relatively long and broad wings and relatively short tails—characteristics that are suitable for effortless soaring. It takes study and practice to become adept at separating the species by looking at various field marks, but it is generally fairly easy to pick out a *Buteo* hawk in flight once you see a few of them.

Peep
I've said it before, and I'll say it again: The shorebirds are quite possibly my favorite group of birds. There is much to like about shorebirds. Shorebirds come in a variety of sizes and shapes. Many are migrants, and some of them make the most impressive trips in the natural world. And in states such as South Dakota which is on the migration routes for many shorebirds, these birds can provide birding excitement for much of the year as they come and go from their breeding grounds.

Another appealing trait of shorebirds (at least for me) is the challenge they present in identification. Although there are some exceptions, shorebirds tend to be subtly colored and patterned to provide the camouflage that a ground-nesting bird needs to be relatively safe from predators. So plumage characteristics aren't always that helpful for identifying them, particularly when juveniles and molting individuals are thrown into the mix!

One group of shorebirds contains several species that are notoriously difficult to identify. These are the small sandpipers of the genus *Calidris*. Species commonly seen in South Dakota include the Least Sandpiper (*Calidris minutilla*), Semipal-

mated Sandpiper (*C. pusilla*), Baird's Sandpiper (*C. bairdii*), and White-rumped Sandpiper (*C. fuscicollis*). For whatever reason, rather than use the Latin name all the time (though some do), birders have given this group of shorebirds the nickname "peeps." And though it could take an entire article to elaborate on the tricks for telling these similar birds apart, know that it can be done once you learn to observe carefully traits such as size, leg color, wing length, patterning, posture, and habitat.

"Sp." *(sometimes pronounced "spuh")*
As I mentioned above, there are times when you simply cannot confidently identify a bird to species, but you may be very confident that it belongs to a particular group of birds, such as a genus or a family. Thankfully, birders have a way to reflect this reality with just two letters and a period: sp.

Scientists have traditionally used the abbreviation "sp." to note an unknown, undetermined, or unspecified species in a genus. So to go back to the flycatchers mentioned earlier in this article, if a scientific article mentioned "*Empidonax* sp." then the author would simply mean that the genus of the bird is known to be *Empidonax*, but the species is not given, either because it could not be identified or because identifying the species was irrelevant in the context of the sentence. If the writer wanted to refer to multiple species of *Empinodax* without emphasizing which ones, they could use "*Empidonax* spp."

Birders can and do use this same notation when recording checklists of their observations, but sometimes they will even take it further. To give an example, if you have been keeping up with this series, you know about the small brown birds affectionately known as "LBJs." Well, let's say that you've become a bit more proficient with telling groups of birds apart, and you know that the mystery brown bird you saw is one of the many species of sparrows, but you're not sure which one. While not exactly technical, you could record a "Sparrow sp." on your checklist if you so desired. Two birds that I sometimes have tremendous difficulty telling apart are the closely related Long-billed Dowitcher (*Limnodromus scolopaceus*) and Short-billed Dowitcher (*L. griseus*). I remember turning to a fellow birder one time after studying a small group of plump brown shorebirds probing the mud with a sewing-machine motion and saying, "Dowitcher spuh," as I simply couldn't tell which of the two I was looking at. And he knew exactly what I meant.

"Nice"
This is perhaps the most commonly used word among birders, and it probably has the least substance of any of them. It's comparable to the constant barrage of "like" or "ya know" or "um" that you might have to endure when listening to a poorly rehearsed presentation.

In fact, if you have not spent much time around birders, my recommendation would be just to ignore the word "nice" anytime a birder is speaking if you actually want to understand what is being said.

Seasonal Reports

The 2016 Summer Season

01 June 2016 to 31 July 2016

Compiled By: Jeffrey S. Palmer
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The primary goal of the Summer Season compilation is to report Confirmed Breeding records observed during the season. There were 61 species reported as Confirmed Breeding this year. The secondary objectives of the Summer Season summary include sightings of rare (or at least infrequently reported) species, late spring and early fall migration dates, and species that are reported from unusual locations. There were 250 species, including 3 rarities, reported during the season. The ten-year (2006-2015) average is 260. A full listing of all reported sightings can be obtained from the online database. This report contains those sightings and species which seemed to be consistent with the objectives of the Summer Season as described above.

Snow Goose Only Report: 25 Jun Douglas KP
Canada Goose Confirmed Breeding: 01 Jun Pennington (PY) OCW; 16 Jul Lake (PY) JSP
Wood Duck Confirmed Breeding: Brown, Lake, and Pennington counties
American Wigeon Confirmed Breeding: 10 Jul Meade (PY) JLB
Mallard Confirmed Breeding: 06 Jun Pennington (PY) CLG; 11 Jun Brown (PY) GO; 13 Jun Pennington (PY) CLG; 06 Jul Pennington (PY) OCW; 13 Jul Pennington (PY) OCW; 25 Jul Pennington (PY) CLG
Blue-winged Teal Confirmed Breeding: 11 Jun McPherson (DD) GO; 10 Jul Meade (PY) JLB
Cinnamon Teal Only Report: 05 Jun Pennington JLB
Northern Pintail Confirmed Breeding: **05 Jul Perkins (PY) ND**
Bufflehead All Reports: 02 Jun Charles Mix RM; 11 Jun McPherson GO
Common Merganser Confirmed Breeding: 06 Jun Pennington (PY) CLG; 13 Jun Pennington (PY) CLG
Gray Partridge Confirmed Breeding: **30 Jul Pennington (PY) JLB** … also reported 05 Jun Custer MMM; 30 Jul Custer MMM
Greater Sage-Grouse Only Report: 26 Jun Harding ND
Sharp-tailed Grouse Confirmed Breeding: 30 Jul Pennington (PY) JLB
Greater Prairie-Chicken All Reports: 10 Jun Stanley CV; 11 Jun Sully KM; 18 Jun Jones KP
Northern Bobwhite All Reports: 14 Jun Charles Mix KP; 17 Jun Tripp RDO; 30 Jun Charles Mix RM; 30 Jun Gregory SS; 02 Jul Clay DS
Common Loon Only Report: 09 Jul Stanley RDO
Pied-billed Grebe Confirmed Breeding: 16 Jul Lake (ON) JSP
Red-necked Grebe All Reports: 02 Jun Day JSP; 11 Jun McPherson BP, GO
Clark's Grebe All Reports: 01 Jun Brown GO; 22 Jun Charles Mix RM
Least Bittern reported 02 Jul Clay DS
Osprey Confirmed Breeding: 04 Jun Pennington (ON) JLB; 05 Jun Pennington (ON) JLB; 11 Jun Pennington (NY) JLB; 07 Jul Pennington (NY) JLB; 16 Jul Pennington (NY) JLB
Bald Eagle Confirmed Breeding: **04 Jun Edmunds (NY) JDW**
Sharp-shinned Hawk Only Report: 08 Jul Lawrence BP, SS
Northern Goshawk Only Report: 26 Jun Custer RSL
Broad-winged Hawk Only Report: 02 Jul Lawrence SS
Swainson's Hawk Confirmed Breeding: 05 Jul Perkins (NY) ND
Ferruginous Hawk Confirmed Breeding: 11 Jun McPherson (ON) GO … also reported 26 Jun Harding ND
Golden Eagle Confirmed Breeding: 05 Jun Custer (ON) MMM … also reported 02 Jul Custer SS; 16 Jul Meade RDO; 30 Jul Pennington JLB
Virginia Rail All Reports: 01 Jun Brown GO; 16 Jun Charles Mix RM; 18 Jun Jones KP; 09 Jul Kingsbury JSP
American Coot Confirmed Breeding: 16 Jul Lake (PY) JSP
Sandhill Crane Only Report: 02 Jun Charles Mix RM
American Golden-Plover Only Report: 24 Jul Aurora DS
Semipalmated Plover Early: 16 Jul Lake JSP; 18 Jul Brown BP; 28 Jul Clark SS; 29 Jul Charles Mix KP

Piping Plover Confirmed Breeding: 03 Jul Stanley (PY) RDO
Killdeer Confirmed Breeding: 06 Jun Pennington (PY) CLG; 11 Jun Brown (PY) GO; 14 Jul Brown (PY) GO
Solitary Sandpiper Early: 25 Jun Meade RSL; 09 Jul Kingsbury JSP; 10 Jul Hyde BP
Greater Yellowlegs Late: 02 Jun Charles Mix RM … Early: 22 Jun Charles Mix RM; 26 Jun Bon Homme RND; 10 Jul Edmunds BP; 30 Jul Tripp RDO
Willet Confirmed Breeding: 11 Jun McPherson (NE) GO
Lesser Yellowlegs Late: 07 Jun Brown BP; 06 Jun Spink BP; 02 Jun Charles Mix RM … Early: 22 Jun Charles Mix RM; 08 Jul Roberts CV; 09 Jul Lake JSP; 30 Jul Tripp RDO
Upland Sandpiper Confirmed Breeding: 11 Jun McPherson (DD) GO; 12 Jun Sully (NE) KM; 15 Jun Custer (NE) MMM; 11 Jul Butte (PY) ND
Long-billed Curlew Confirmed Breeding: 16 Jun Custer (PY) MMM … also reported 03 Jun Custer MMM; 13 Jun Stanley RDO
Stilt Sandpiper Late: 07 Jun Brown BP; 05 Jun Deuel RDO; 01 Jun Marshall GO … Early: 09 Jul Kingsbury JSP; 14 Jul Brown GO; 16 Jul Lake JSP; 17 Jul Charles Mix RM; 30 Jul Tripp RDO
Sanderling Only Report: 02 Jun Hamlin JSP
Dunlin All Reports: 01 Jun Brown and Marshall GO; 05 Jun Deuel RDO; 09 Jun Deuel DS; 26 Jul Charles Mix KP
Baird's Sandpiper Late: 09 Jun Deuel DS; 07 Jun Brown BP; 02 Jun Stanley RDO; 02 Jun Hamlin JSP; 02 Jun Charles Mix RM … Early: 08 Jul Roberts CV; 09 Jul Kingsbury JSP; 10 Jul Sully BP; 30 Jul Tripp RDO
Least Sandpiper Early: 08 Jul Roberts CV; 09 Jul Kingsbury JSP; 10 Jul Sully BP; 30 Jul Tripp RDO
White-rumped Sandpiper Late: 10 Jun Deuel RDO; 07 Jun Brown BP; 01 Jun Marshall GO … Early: 26 Jul Charles Mix KP
Buff-breasted Sandpiper Only Report: 30 Jul Kingsbury JSP
Pectoral Sandpiper Late: 10 Jun Deuel RDO; 07 Jun Brown BP … Early: 09 Jul Kingsbury JSP; 10 Jul Hyde BP; 11 Jul Charles Mix RM; 30 Jul Tripp RDO
Semipalmated Sandpiper Late: 10 Jun Deuel RDO; 07 Jun Brown BP; 01 Jun Marshall GO … Early: 08 Jul Roberts CV; 09 Jul Kingsbury JSP; 10 Jul Sully BP
Long-billed Dowitcher Early: 08 Jul Roberts CV; 15 Jul Charles Mix RM; 18 Jul Brown BP
Wilson's Snipe All Reports: 02 Jun Marshall JSP; 07 Jun Marshall GO; 17 Jun Tripp RDO; 31 Jul Douglas KP
American Woodcock Only Report: 02 Jun Hutchinson KP
Red-necked Phalarope All Reports: 01 Jun Marshall GO; 05 Jun Deuel RDO; 07 Jun Brown BP; 09 Jun Deuel DS
Herring Gull Only Report: 10 Jul Stanley BP, SS
Lesser Black-backed Gull All Reports: 03 Jul Stanley RDO, SS; 09 Jul Stanley RDO; 10 Jul Stanley BP, SS; 14 Jul Stanley RDO
Common Tern Only Report: 05 Jun Sully SS
Mourning Dove Confirmed Breeding: 11 Jun Brown (FY) GO
Black-billed Cuckoo All Reports: 18 Jun Perkins ND; 29 Jun Charles Mix KP; 30 Jun Charles Mix RM; 14 Jul Gregory KP; 30 Jul Kingsbury JSP; 31 Jul Charles Mix KP
Barn Owl All Reports: 18 Jun Jones KP; 26 Jun Bon Homme RND; 08 Jul Charles Mix KP
Eastern Screech-Owl Only Report: 30 Jul Lincoln MKZ
Burrowing Owl Confirmed Breeding: 26 Jun Harding (NY) ND; 02 Jul Pennington (ON) JLB; 12 Jul Custer (FL) MMM
Long-eared Owl Only Report: 15 Jun Spink BP
Short-eared Owl Only Report: 04 Jun Custer MMM
Northern Saw-whet Owl Confirmed Breeding: 18 Jun Harding (NE) ND; 10 Jul Harding (NE) ND
Common Poorwill All Reports: 15 Jun Meade ND; 24 Jun Pennington RSL; 09 Jul Pennington BP, RSL, SS
Rufous Hummingbird Early: 21 Jul Meade SS; 23 Jul Custer RDO; 26 Jul Pennington ND
Calliope Hummingbird All Reports: 23 Jul Custer RDO; 24 Jul Meade SS
Red-bellied Woodpecker Confirmed Breeding: 02 Jun Roberts (ON) JSP
Downy Woodpecker Confirmed Breeding: 19 Jun Brown (FY) GO
American Three-toed Woodpecker All Reports: 18 Jun Lawrence EK; 26 Jun Custer RSL; 08 Jul Lawrence BP, SS
Black-backed Woodpecker Only Report: 30 Jul Lawrence RSL
Northern Flicker Confirmed Breeding: 30 Jun Custer (FL) MMM; 14 Jul Lawrence (NY) ND
Pileated Woodpecker All Reports: 02 Jun Roberts JSP; 07 Jun Marshall GO; 16 Jun Roberts CV
American Kestrel Confirmed Breeding: **05 Jul Perkins (FY) ND**

Merlin All Reports: 02 Jul Custer SS; 08 Jul Meade BP, SS; 09 Jul Custer BP, RSL, SS
Prairie Falcon Confirmed Breeding: 18 Jun Harding (ON) ND … also reported 02 Jul Harding ND; 09 Jul Custer BP, RSL, SS; 31 Jul Butte BP
Olive-sided Flycatcher Only Report: 02 Jun Roberts JSP
Alder Flycatcher Late: 02 Jun Roberts JSP; 01 Jun Charles Mix KP
Say's Phoebe Confirmed Breeding: 16 Jun Custer (NE) MMM; 11 Jul Harding (ON) ND; **14 Jul Brown (FL) GO**
Western Kingbird Confirmed Breeding: 01 Jun Charles Mix (NB) RM; 01 Jul Brown (FY) GO; 15 Jul Pennington (FY) JLB
Eastern Kingbird Confirmed Breeding: 10 Jun Charles Mix (CF) RM; 13 Jun Pennington (CN) CLG
Loggerhead Shrike Confirmed Breeding: 30 Jul Meade (CF) JLB
Gray Jay All Reports: 07 Jun Custer KP; 03 Jul Custer SS; 08 Jul Lawrence SS
Clark's Nutcracker Only Report: 23 Jul Custer RDO
Black-billed Magpie All Reports: 05 Jun Custer KP; 08 Jun Custer KP; 09 Jul Pennington BP; 28 Jul Meade RM; 31 Jul Lawrence RDO
American Crow Confirmed Breeding: 14 Jul Pennington (FL) CLG
Tree Swallow Confirmed Breeding: 05 Jun Pennington (ON) JLB; 26 Jun Custer (FL) MMM; 29 Jun Custer (ON) MMM; 04 Jul Pennington (ON) CLG; 15 Jul Brown (FL) GO
Bank Swallow Confirmed Breeding: 26 Jun Harding (ON) ND; 15 Jul Brown (FL) GO
Cliff Swallow Confirmed Breeding: 13 Jun Pennington (NB) CLG; 05 Jul Perkins (ON) ND; 15 Jul Brown (FL) GO
Barn Swallow Confirmed Breeding: 06 Jun Pennington (ON) CLG; 11 Jul Harding (NY) ND; 15 Jul Brown (FL) GO; 18 Jul Pennington (ON) CLG; 25 Jul Pennington (ON) CLG
Pygmy Nuthatch All Reports: 08 Jun Custer KP; 14 Jul Meade ND
American Dipper All Reports: 02 Jul Lawrence SS; 08 Jul Lawrence BP, SS
Eastern Bluebird Confirmed Breeding: 01 Jun Charles Mix (NE) RM; 16 Jun Charles Mix (NY) RM; **05 Jul Perkins (CF) ND**
Swainson's Thrush Late: 02 Jun Roberts JSP … Confirmed Breeding: 19 Jul Pennington (FY) DB
Wood Thrush All Reports: 11 Jun Lincoln MKZ; **20 Jun Roberts CV;** 02 Jul Union JSP
American Robin Confirmed Breeding: 01 Jun Pennington (ON) OCW; 06 Jun Pennington (CF) CLG; 09 Jun Meade (CF) JLB; 11 Jun Brown (FY) GO; 02 Jul Pennington (CF) JLB; 17 Jul Charles Mix (NY) RM
Brown Thrasher Confirmed Breeding: 05 Jul Perkins (CF) ND
Northern Mockingbird Only Report: 28 Jul Jackson RND
European Starling Confirmed Breeding: 18 Jun Perkins (CF) ND
Sprague's Pipit Only Report: 18 Jun Perkins ND
Blue-winged Warbler Only Report: 11 Jun Lincoln MKZ
Black-and-white Warbler All Reports: 16 Jun Roberts CV; 19 Jun Roberts CV; **04 Jul Stanley DB; 28 Jul Brookings SS**
Virginia's Warbler All Reports: 26 Jun Custer RSL; 03 Jul Custer SS; 09 Jul Custer BP, RSL, SS
American Redstart Confirmed Breeding: 02 Jun Roberts (NB) JSP
Yellow-rumped Warbler Late: **16 Jun Roberts CV; 10 Jun Charles Mix RM**
Scarlet Tanager All Reports: 02 Jun Roberts JSP; 11 Jun Lincoln MKZ; 16 Jun Roberts CV; 06 Jul Yankton RND; 16 Jul Minnehaha MKZ; 29 Jul Yankton RND
Chipping Sparrow Confirmed Breeding: 03 Jun Charles Mix (NB) RM
Lark Sparrow Confirmed Breeding: 26 Jun Harding (CF) ND
Lark Bunting Confirmed Breeding: 05 Jul Perkins (CF) ND
Grasshopper Sparrow Confirmed Breeding: **10 Jun Charles Mix (CF) RM;** 30 Jul Pennington (CF) JLB
Song Sparrow Confirmed Breeding: 04 Jun Pennington (CF) JLB; 24 Jul Meade (CF) ND
Harris's Sparrow Late: **02 Jun Turner KP**
Chestnut-collared Longspur Confirmed Breeding: 18 Jun Perkins (CF) ND
Blue Grosbeak Confirmed Breeding: 24 Jun Custer (NE) MMM; 24 Jul Custer (NY) MMM
Lazuli Bunting All Reports: 05 Jun Harding ND; 02 Jul Meade SS; 03 Jul Custer SS
Dickcissel Confirmed Breeding: 02 Jul Union (CF) JSP
Bobolink Confirmed Breeding: 07 Jul Faulk (FL) MMM
Red-winged Blackbird Confirmed Breeding: 06 Jul Pennington (FY) OCW; 09 Jul Pennington (FY) JLB
Western Meadowlark Confirmed Breeding: Butte, **Charles Mix,** Custer, Harding, Pennington, and Perkins counties
Brewer's Blackbird Confirmed Breeding: 05 Jun Harding (CF) ND; 18 Jun Perkins (CF) ND

Common Grackle Confirmed Breeding: 11 Jun Brown (FY) GO; 14 Jul Meade (CF) ND; 19 Jul Gregory (CN) RM
Great-tailed Grackle All Reports: 08 Jul Charles Mix RM; 28 Jul Brown BP
Orchard Oriole Confirmed Breeding: 03 Jul Custer (NY) MMM; **05 Jul Perkins (NY) ND**
Baltimore Oriole Confirmed Breeding: **05 Jul Perkins (FL) ND**
Lesser Goldfinch Only Report: 09 Jul Fall River BP, RSL, SS
American Goldfinch Confirmed Breeding: 26 Jun Harding (CN) ND; 25 Jul Pennington (CF) CLG
Evening Grosbeak Only Report: 24 Jun Pennington RSL
House Sparrow Confirmed Breeding: 05 Jun Pennington (ON) JLB

Reports Requiring Acceptance By The Rare Bird Records Committee
Horned Grebe 26 Jul Charles Mix KP
American Golden-Plover 07 Jun Brown BP
Buff-breasted Sandpiper 07 Jun Brown BP
Gull-billed Tern 03 Jun Deuel DC
Black-chinned Hummingbird 22 – 31 Jul Meade TJ, RDO, DS, JSP, RM
Pacific Wren 02 Jul Lawrence SS; 08 Jul Lawrence BP, SS; 24 Jul Lawrence DS, JSP; 30 Jul Lawrence RSL
American Dipper 11 Jun Pennington (ON) JLB
Swainson's Thrush 24 Jun Gregory RM
Sage Thrasher 01 Jun Charles Mix KP, RM
Chestnut-sided Warbler 22 Jun Roberts CV
Wilson's Warbler 03 Jul Custer SS

Contributing Observers

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MMM	Michael M. Melius
KM	Kenny Miller
GO	Gary Olson
RDO	Ricky D. Olson
JSP	Jeffrey S. Palmer
BP	Barry Parkin
KP	Kelly M. Preheim
GJS	Gary & Jan Small
SS	Scott Stolz
CLG	Canyon Lake Group Survey
OCW	Outdoor Campus West Survey
DS	David Swanson
CV	Cheryl Vellenga
JDW	J. David Williams
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YARDSTUFF

MICK ZERR

Citizen Science in the Yard, Part II

As time progresses, newer and more diverse advanced Citizen Science programs are appearing and older programs are being improved. Birders often have a "pet" aspect of birding they are more interested in. If one of those aspects is suddenly addressed in a Citizen Science program, it allows these birders to become more involved, and expand their knowledge in that area of their interest.

Some programs are sponsored by birding related organizations, such as the Cornell Lab of Ornithology or the Audubon Society, but others might be sponsored by more general Citizen Science organizations, such as *Zooniverse* (zooniverse.org), which presently has 48 citizen science projects underway; 26 of which are nature related. Some bird-specific programs include *Penguin Watch* and *Condor Watch* where you can observe the birds in their natural environment, reporting information valuable in research.

Other programs ask for citizens to take part in surveys, bird environmental programs, etc. Some examples of these are Audubon's *Project Bird Safe,* which is intended to reduce hazards to wild birds, and *Lights Out,* a program designed to educate the public on the dangers faced

by migrating birds from city lights. Across the country, many cities are taking part in this program (see map). This map on their website is interactive by city.

An additional Audubon program is *Hummingbird's at Home* (www.hummingbirdsathome.org/) where you report sightings, food preferences, etc. *A Swift Night Out (www.chimneyswifts.org)* is a continent-wide effort to raise information and awareness about, and encourage interest in, Chimney Swifts and Vaux's Swifts. Participants report numbers of swifts and their locations during certain times of the year. A newer Citizen Science (CS) program is Cornell's *Nest Watch, (http://nestwatch.org/)* a nationwide monitoring program designed to track status and trends in the reproductive biology of birds, including when nesting occurs, number of eggs laid, how many eggs hatch, and how many hatchlings survive. The database

is intended to be used to study the current condition of breeding bird populations and how they may be changing over time as a result of climate change, habitat degradation and loss, expansion of urban areas, and the introduction of non-native plants and animals.

Project Noah (projectnoah.org), one of many new CS programs, is a tool to explore and document wildlife and a platform to harness the power of citizen scientists everywhere. It follows many forms of wildlife, not just birds, and is worldwide.

In summary, successful citizen science programs relative to birding offer non-scientist birders the opportunity to take part in, contribute to, and enjoy the results of important research. Five factors (Fig. 1) of citizen science success (Cooper, et al) shows us a tool to help assess the success of any citizen science program.

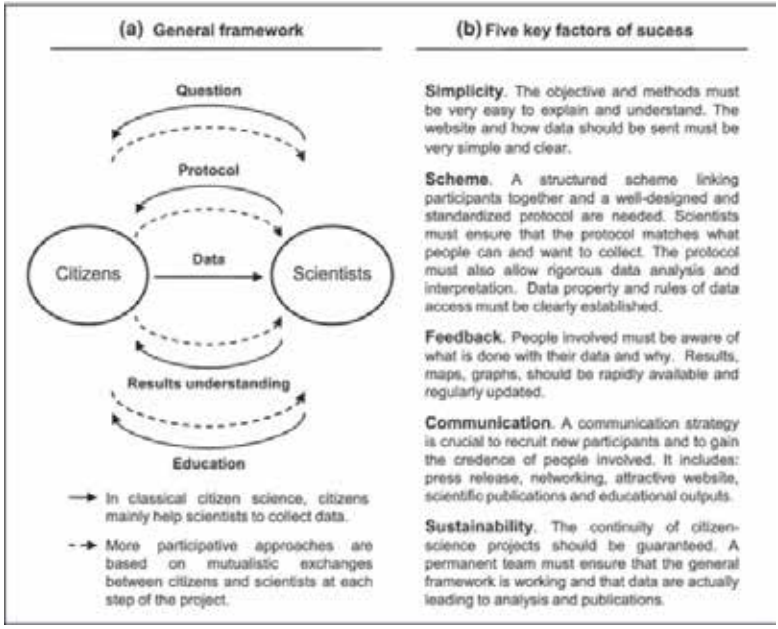

Figure 1. (Cooper, et al. 2007.)
Conceptual framework and key factors of success of a citizen science programme. (a) A general framework generates a reciprocal connection between scientists and citizens from the question being asked to the educational benefit. This framework can range from top-down projects (black arrows) to more bottom-up and participatory approaches (dashed arrows) depending on whether and how citizens are involved (adapted from Cooper et al., 2007). (b) To ensure that the framework is actually working and maintained requires several key factors that encourage success.

With these five points in mind, we can continue to select citizen science programs that will continue to be authentic, successful, and enjoyable. As more interactive programs are created, the massive amount of information contributed by citizen scientists likely will open new doors of understanding of the world of wild birds and birding.

LITERATURE CITED

Cooper, C.B., J. Dickinson, T. Phillips & R. Bonney. 2007. Citizen science as a tool for conservation in residential ecosystems. Ecology and Society, 12, 11. Available at: http://www.ecologyandsociety.org/vol12/iss2/art11.

100TH ANNIVERSARY OF THE MIGRATORY BIRD TREATY

Nancy Drilling, Rapid City

This year we celebrate the 100th anniversary of the Migratory Bird Treaty, formally known as the Convention Between the United States and Great Britain for the Protection of Migratory Birds. This treaty was a response to the unregulated harvest of migratory birds which was causing alarming population declines in the late 19th and early 20th centuries. The original treaty was signed on 16 August 1916 by the United States and the United Kingdom (signing on behalf of Canada) and was ratified on 6 December 1916. This was one of the first treaties to recognize the importance of international cooperation to conserve birds. The following from the treaty describes the purpose:

> "Whereas, many species of birds in the course of their annual migrations traverse certain parts of the Dominion of Canada and the United States; and
>
> Whereas, many of these species are of great value as a source of food or in destroying insects which are injurious to forests and forage plants on the public domain, as well as to agricultural crops, in both Canada and the United States, but are nevertheless in danger of extermination through lack of adequate protection during the nesting season or while on their way to and from their breeding grounds;
>
> His Majesty the King of the United Kingdom of Great Britain and Ireland and of the British dominions beyond the seas, Emperor of India, and the United States of America, being desirous of saving from indiscriminate slaughter and of insuring the preservation of such migratory birds as are either useful to man or are harmless, have resolved to adopt some uniform system of protection which shall effectively accomplish such objects..."

The treaty set the stage for the Migratory Bird Convention Act of 1917 in Canada and the Migratory Bird Treaty Act of 1918 in the U.S., which implement the treaty to protect native birds across North America. These laws make it illegal for anyone to take, possess, import, export, transport, sell, or purchase any migratory bird, or the parts, nests, or eggs of any such bird except under the terms of a valid permit issued by the federal government.

Today, the United States holds migratory bird treaties with Canada, Mexico, Russia and Japan. Despite differing environmental legislation and conservation initiatives of each country, these agreements promote international cooperation among governments and partner organizations so that bird conservation can occur along entire migratory routes.

National and international cooperation under the four treaties is essential for conserving and protecting the world's migratory birds. However, treaties and laws are not enough! Habitat destruction and degradation, pollution, and other factors not covered under these treaties are causing our bird populations to decline (Brown et al. 2001, Kushland et al. 2002, Rosenberg et al. 2016). It is up to each of us to be informed and take action to ensure the continued prosperity of our birds.

Literature Cited:

Brown, S., C. Hickey, B. Harrington, and R. Gill, eds. 2001. The U.S. Shorebird Conservation Plan, 2nd ed. Manomet Center for Conservation Sciences, Manomet, MA.

Kushlan, J.A., M, J. Steinkamp, K. C. Parsons, et al. 2002. Waterbird Conservation for the Americas: The North American Waterbird Conservation Plan, Version 1. Waterbird Conservation for the Americas. Washington, DC, U.S.A.

Rosenberg, K. V., J. A. Kennedy, R. Dettmers, R. P. Ford, D. Reynolds, et al. 2016. Partners in Flight Landbird Conservation Plan: 2016 Revision for Canada and Continental United States. Partners in Flight Science Committee.

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