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The Passenger PIGEON

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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: Whimbrel (Numenius phaeopus) Alert in Milwaukee County in September, 2014—photo contributed by Jim Edlhuber.

Expanding the Honey Creek Vision

Because our membership is spread broadly throughout the state, I realize that some of our members have not had the pleasure to visit our Honey Creek Nature Preserve. And because we are continuously gaining new members to our organization, some of you may not even be aware that WSO owns a nature preserve. Thus, I am going to take this opportunity to discuss the rich history and ecological importance of our preserve and provide an update on some recent improvements at Honey Creek. But first, I would like to inform all of you of a very exciting opportunity that may be coming our way.

A landowner with property adjacent to our Honey Creek Nature Preserve has expressed interest in selling his 104-acre land parcel. Additionally, he is interested to sell it to an entity that will keep the land in a natural state. The property under consideration is of high quality, with hemlock and pine relicts, oak savanna, woodlands and wetlands, all of which support Louisiana Waterthrushes, Acadian Flycatchers and many other bird species of conservation concern. It includes an extensive portion of Honey Creek itself, and creates a contiguous block east to Highway PF. Unfortunately, this parcel also has the potential for three buildable lots with beautiful vista views, making it a target for development.

WSO has a keen interest in this property. This particular parcel would help to fulfill the original vision of the late Harold Kruse, an ambassador to the Honey Creek valley and larger Baraboo Range region. We have let the landowner know of our interest and are currently in an early discussion phase with him. We will keep you posted on this unique opportunity!

A Brief History of the Preserve

The protection of the Honey Creek valley is largely attributed to one individual: Harold G. Kruse. After discovering the valley in the 1940s, Harold vowed to preserve the incredible natural beauty of this unique place. He acted as an ambassador to the Honey Creek valley and larger Baraboo Range region by negotiating with landowners and arranging the initial WSO land acquisitions. He was also instrumental in the construction of the Cox Nature Center. Harold passed away at the age of 86 in 2011, but his legacy lives on through the birdsong of Honey Creek valley. The Honey Creek Nature Preserve was designated a State Natural Area in 1971 and renamed the Harold and Carla Kruse Honey Creek Nature Preserve in 2010 in honor of the conservation pioneers.

The Preserve had its inception on a WSO field trip in June 1956. WSO members established a nature sanctuary here in 1958, and purchased the first 30-acre parcel in 1960. This was quickly followed by the acquisition of a 65-acre parcel containing bog and marsh, and a 40-acre parcel containing upland hardwood forest and a sandstone cliff. The Nature Conservancy also began buying land sur-

rounding WSO parcels around this time. In 1964, WSO received a donation to purchase 85 acres of upland hardwood forest and a hemlock cliff along the northern boundary of the property. WSO acquired several additional parcels of land from 1964-1974, bringing the total WSO land holdings to 267 acres.

Why Visit Honey Creek?

The Honey Creek valley is an area rich in scenic beauty, birds, wildflowers, and opportunities for hiking and nature study. Of the 25 plant communities in the Baraboo Range, over one-third occur within the Honey Creek State Natural Area—stream and open water, cattail marsh and sedge meadow, alder bog and shrub carr, tamarack and hardwood swamp, lowland and upland hardwoods, hemlock cliffs and white pine relicts, open cliff and high, dry goat prairies. More than 500 native plant species occur, including 20 species of ferns, several orchids, the state-threatened bog bluegrass and the rare Sullivant's coolwort. Spring ephemerals abound in late April and early May, including buttercups, bloodroot, trout lily, Dutchman's-breeches, toothwort and anemones. Summer wildflowers include gentians, lobelias, asters, Turk's-cap lily and Joe-Pye weed. The site also contains the state's largest blue-beech tree and large-toothed aspen tree.

The wide variety of habitats attracts many bird species. While hiking the trail, one may see or hear Wood Duck, Green Heron and Belted Kingfisher along the stream; Sandhill Crane, Wilson's Snipe and American Woodcock in the bogs and marshes; Gray Catbird, Rose-breasted Grosbeak and Blue-winged Warbler along the forest edge; and Hermit Thrush, Veery, Scarlet Tanager and Pileated Woodpecker in the forest interior. More than 180 bird species have been recorded at the Honey Creek State Natural Area, including seven species of vireos and 31 species of warblers. Unusual nesting species include Turkey Vulture, Acadian Flycatcher, Louisiana Waterthrush and Cerulean Warbler.

Why Conserve Honey Creek?

The Honey Creek Nature Preserve is located within the Baraboo Range, which covers 144,000 acres in Sauk and Columbia counties. More than 55,000 acres of forest exist within the Baraboo Range, which constitutes one the largest blocks of upland forest remaining in the upper Midwest. Because of its size, the Baraboo Range represents one of the best opportunities in Wisconsin and in the whole upper Midwest to manage for southern forest interior birds. Species such as Acadian Flycatcher, Cerulean Warbler, Hooded Warbler and Worm-eating Warbler require extensive tracts of forest for nesting habitat. Because of their area sensitivity, the Baraboo Range is one of the few places where these species regularly occur in the state. The Baraboo Range contains more rare species and diverse concentrations than any other similar sized forested area in southern Wisconsin and is considered critical for bird conservation.

The Baraboo Range has long been recognized as ecologically unique and valuable. There are numerous preserves, State Natural Areas, and two state parks. The

southern range of the Baraboo Hills was designated a **National Natural Landmark** by the National Park Service in 1980. The Nature Conservancy has named the Baraboo Hills a **Last Great Place**, one of only 200 such sites worldwide. Some 30,000 acres in the Baraboo Hills have been targeted for conservation through the **Forest Legacy Program**. Various organizations, including The Nature Conservancy, the Wisconsin Society for Ornithology, the University of Wisconsin, the Baraboo Range Preservation Association and the Wisconsin Department of Natural Resources have formed a strong conservation partnership and protected thousands of acres through acquisitions, easements, and voluntary agreements. WSO is honored to be part of this land legacy.

New Developments at Honey Creek

There have been many new improvements to the preserve over the last several years. Past president Carl Schwartz spearheaded a wooden boardwalk project in 2011. The boardwalk protects the marshy area at the entrance of the preserve and provides easier access for visitors. In 2013, we updated the interior signage at the Cox Nature Center with the help of Signature Signs of Madison. Prior to the 2014 Birdathon and Bandathon event, we performed a much needed cleaning of the nature center and installed the new signs. This spring we also added two beautiful interpretive signs at the trailhead as part of a collaborative effort between WSO and The Nature Conservancy. Levi Wood, our Honey Creek Chair, was instrumental in this project. We have been hiring professionals to help us control garlic mustard and other invasive plants throughout the preserve for the last several years. Finally, we have hosted 1-2 work parties a year to clean the nature center and do basic maintenance on the trails. I would like to thank our dedicated volunteers that have helped with this effort.

How Can You Help?
DONATE TO HONEY CREEK

WSO hosts an annual Birdathon-Bandathon fundraising event for the Honey Creek Nature Preserve. Proceeds help fund invasive species control, fence repair, as well as maintenance and property taxes on the site's Cox Nature Center. The event typically takes place on a weekend in mid-May, during the peak of spring migration. A bird banding demonstration occurs at the Cox Nature Center on Saturday and Sunday, weather permitting. Banding begins shortly after sunrise and continues until approximately 11 a.m.

This is an excellent opportunity to see some of Wisconsin's most beautiful birds at close range, and also to learn about the process of bird banding. More than 20 species are typically banded during this event. A bird hike led by WSO members also occurs as part of the fundraiser, typically at 8 a.m. on Sunday. More information on this event can be found on the WSO website: wsobirds.org.

Donations to Honey Creek can also be made on our website at: http://wsobirds.org/support/donate

Volunteer for Our Annual Work Parties

We are always looking for additional help to clean and perform basic maintenance on the nature center and maintain our trail. We typically have a workday each spring and fall. If interested to help, please contact me and I will add you to our email list.

Kim Kreitinger

The Adventure of Atlasing

By the time this issue reaches you we will be nearing the end of the first summer of the Wisconsin Breeding Bird Atlas II (WBBA-II). Many species, however, are still nesting and producing young. So it's not too late to find an atlas block for yourself for this year or to assist someone with their block. Or, consider becoming a part of the atlas project next year. We want to encourage you to join in on this incredible and fun learning opportunity.

What are the requirements for being an observer? Seeing is the sense that is most useful for Atlasing. All the confirmations of nesting are done by sight. If you have a hearing issue, as Chuck has, that is not a problem. Confirmation is accomplished visually by any one of the following criteria: seeing a bird in a nest with young, seeing a bird feeding young, finding eggs in a nest, seeing a bird feeding young or carrying food, seeing a bird carrying nesting material, finding a bird building a nest, and seeing physiological evidence such as spotting a bird with a brood patch or carrying a fecal sac away from its nest and a distraction display by a bird luring you away from its nest.

In addition, you don't have to be an expert. We learn by doing, and volunteering to atlas birds is an incredible educational adventure that you can do at your own pace. Remember, the WBBA-II goes on for 5 years! You don't have to find all the breeding birds in a block in just one year. On the other hand, if you breeze through your block in one or two years, you can pick an additional block or more to atlas.

When we volunteered for the original atlas project in the 1990's, we were very much beginning birders. Atlasing helped us sharpen our ID and observation skills, and the process resulted in our seeing much, much more about the actual life of birds. It helped us slow down our birding to appreciate what a bird was actually doing. Before, we tended just to collect check marks on a list of possible species. While that works for many people, we've found richness in learning more about where birds choose to set up their homes, why they chose certain locations and not others, how they conceal their nests and young from predators, what they do when their young are in danger, what they eat and much more. The more you watch birds as they raise a family, you start to see similarities to how we raise and protect our children.

Many of the current volunteers would also welcome your joining them as they atlas. Even non-birders see things that experienced birders miss, and many birders enjoy sharing what they find with less-experienced birders.

If you like to take photos, there are many opportunities to capture fascinating sights that you can share with others— ranging from seeing babies in a nest, young being fed by parents and territorial disputes between birds to habitat shots often breathtaking in natural beauty to documenting the life stages of a species.

We could go on and on, but it will be much more enjoyable if you start atlasing and see for yourself.

Chuck Heikkinen & Delia Unson

American Avocet (*Recurvirostra americana*) Flexing its Wings in Milwaukee County in September, 2014 – Jim Edlhuber.

Wildlife Mitigation Plan State Hwy 49, Horicon Marsh, Wisconsin, USA

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February 2015

A report prepared for
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Disclaimer

The contents of this report reflect the views of the authors, who are responsible for the facts and accuracy of the data presented herein. The contents do not necessarily reflect the official policies of the Western Transportation Institute (WTI) or Montana State University (MSU)

This report does not constitute a standard, specification, or regulation.

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The US Fish & Wildlife Service as well as other stakeholders (e.g. naturalists including bird watchers) have been concerned about the high number of animals being killed along the section of State Hwy 49 that bisects Horicon Marsh for well over a decade. In response, US Fish & Wildlife Service employees initiated a road-kill monitoring program. Several mitigation measures have been proposed in the past, but no mitigation has been implemented yet (situation 2014). This report contains an analysis of the existing wildlife road-kill data, especially for amphibians and reptiles, birds, and mammals. In addition it contains the results of interviews with different stakeholder groups; employees from natural resource management agencies, the Wisconsin Department of Transportation, and non-governmental organizations/university. The interviews focused on the problems related to State Highway 49 and wildlife as the individual stakeholders experienced it, their level of support for the implementation of various avoidance, mitigation and compensation strategies, how likely it is that the measures will be implemented in the future, and the problems that may be associated with the different measures. Based on the existing road-kill data and the interviews with stakeholders, the researchers formulated a series of objectives and suggested accompanying measures. The final recommendations were presented as different "packages" of measures, including how well they address the different potential objectives.</td></tr>
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1. INTRODUCTION

1.1. Background

Horicon Marsh is located about 50 miles north-east of Madison, Wisconsin (Figure 1). It is a national (Horicon National Wildlife Refuge) and state wildlife refuge (Horicon Marsh Wildlife Area), about 32,000 acres in size. It consists of a mixture of open water and marsh vegetation (mostly cattail (*Typha* spp.)) separated by embankments to control water levels. The northern section of Horicon marsh is bisected by State Highway 49 (about 2.3 miles (3.7 km) in road length) (Figure 1). This highway connects Waupun and US Hwy 151 (west side of the marsh) to Brownsville and US Hwy 41 (east side of the marsh) and has a daily traffic volume of about 4,100 vehicles (in 2008), has 2 lanes, and the posted speed limit is 55 mi/h (88 km/h) (Lee et al., 2013; Personal communication Brandon Jutz, Regional Transportation Coordinator, U.S. Fish & Wildlife Service - Region 3; Wisconsin Department of Transportation, 2008). Average vehicle speed is about 59 mi/h (95 km/h), and the 85th percentile is about 61 mi/h (98 km/h) (Kemnitz, 2007). Truck traffic is about 22-26% (Kemnitz, 2007). While there are other paved and unpaved roads in and around Horicon Marsh, the current project only relates to State Highway 49.

The US Fish & Wildlife Service as well as other stakeholders (e.g. naturalists including bird watchers) have been concerned about the high number of animals being killed along the section of State Hwy 49 that bisects Horicon Marsh for well over a decade. In response, US Fish & Wildlife Service employees initiated a road-kill monitoring program. The species groups that are hit include amphibians, rep-

Figure 1: State Highway 49 and Horicon Marsh, just east of Waupun, Wisconsin, USA.

tiles, birds, and mammals; 7,480 road-killed animals have been recorded from 2001 through 2012 by Horicon National Wildlife Refuge staff (Lee et al., 2013; Pers. Comm. Sadie O'Dell). The most commonly recorded species found dead on or along State Highway 49 are muskrat (*Ondatra zibethicus*) (47.9%), painted turtle (*Chrysemys picta*) (6.9%), Canada goose (*Branta canadensis*) (6.8%) (Lee et al., 2013). Geese (6.8% of all reported road-killed animals) and ducks (mallard (*Anas platyrhynchos*) 2.2%; blue-winged teal (*Anas discors*) 0.5%; redhead (*Aythya americana*) 0.2%; ruddy duck (*Oxyura jamaicensis*) 0.1%; wood duck (*Aix sponsa*) <0.1%) may be a concern for traffic safety. The observed number of goose and duck carcasses totaled 730 between 2001 through 2012 (Lee et al., 2013).

While one can argue that any road-killed animal should be a concern, only one federally listed threatened or endangered species has been reported as road-kill between 2001-2012; Piping plover (*Charadrius melodus*). However, an experimental population of whooping cranes (*Grus americana*) is nearby (Personal communication Brandon Jutz, Regional Transportation Coordinator, U.S. Fish & Wildlife Service–Region 3), whooping cranes are now also residing at Horicon Marsh (Personal communication Steve Lenz, Horicon National Wildlife Refuge) and a low flying whooping crane has had several narrow escapes with vehicles along State Hwy 49 through Horicon Marsh in spring 2014 (Personal communication and images of the situation through Sadie O'Dell, Horicon National Wildlife Refuge).

1.2. Brief History of Horicon Marsh

In the Pleistocene, the area that is now known as Horicon Marsh was a glacier. After the glacier retreated, about 12,000 years ago, a lake (Glacial Lake Horicon) formed behind the moraine and the drumlins (small hills) left behind by the glacier became islands in the lake (Wikipedia, 2014). As the Rock River eroded the moraine the lake drained, but layers of silt, clay and peat meant that that the area remained a wetland. In 1846 a dam was built to power a sawmill and a grist mill, and also to transport logs and agricultural products (US Fish & Wildlife Service, 2014a). This caused the water level behind the dam to rise 2.7 m (9 ft) with "Lake Horicon" as a result (Wikipedia, 2014). However, farmlands and other property flooded and damage claims eventually caused the dam to be removed in 1869 transforming the lake into a marsh once again. The birds and other wildlife species were subjected to unregulated hunting which resulted in massive slaughter of the bird populations (US Fish & Wildlife Service, 2014). Between 1910 and 1914 there was an attempt to drain the marsh for agricultural purposes (Wikipedia, 2014). This attempt failed and the marsh was left to itself again, but the dry peat caused massive fires. In 1927 the Horicon Marsh Wildlife Refuge Bill was passed which allowed for the construction of a dam (completed in 1934) to bring the water levels up to what was considered "normal". The southern third of the marsh became the "Horicon Marsh State Wildlife Area", managed by the Wisconsin Department of Natural Resources (DNR) (Wisconsin Department of Natural Resources, 2014a). The US Fish & Wildlife Service

purchased the northern two-thirds of the marsh (now "Horicon National Wildlife Refuge") in the 1940s (Wikipedia, 2014). The two refuges are now known as "Horicon Marsh" which is one of the largest freshwater marshes in the United States. The marsh provides important habitat for a range of bird species, especially for migrating ducks and Canada geese. In addition, the marsh is important for fish, frogs, snakes, turtles, mammals, insects and plants. In 1990 Horicon Marsh was designated as a Ramsar site; a wetland of international importance. The marsh, especially the area managed by the US Fish & Wildlife Service, is split into different water level management units separated by dikes, levees or embankments. This results in optimum habitat for ducks with a mixture of open water, and vegetated portions of the marsh. Depending on the phase in the water level management cycle, different sections of the reserve are more attractive to ducks than others.

The current State Highway 49 was built in the 1950s–1960s (Personal Communication Jon Krapfl, US Fish & Wildlife Service). It replaced the old route ("old marsh road") that is now used for management and non-motorized recreational purposes only. The current State Highway 49 has 13 culverts under the road. In 1999 "elbows" were installed on one side of the culverts (north of the highway), allowing for more effective water management, reduced culvert maintenance, and higher wetland quality (Personal Communication Jon Krapfl, US Fish & Wildlife Service). Note that the area on the north side of State Highway 49 has a different water level management than the area on the south side (Personal Communication Jon Krapfl, US Fish & Wildlife Service).

1.3. Goal and Objectives

US Fish & Wildlife Service approached the Western Transportation Institute at Montana State University (WTI-MSU) to explore the potential implementation of mitigation measures aimed at improving human safety and reducing the overall road-kill of wildlife along the section of State Highway 49 through Horicon Marsh, without increasing the existing barrier effect of the road and traffic on wildlife.

The goal is to eventually implement effective mitigation measures along the highway section described above. However, implementing effective mitigation measures is likely to come with some difficult choices or the measures may require creative solutions. One of the complications is that the water levels north and south of State Highway 49 are managed differently; the culverts under the highway are blocked at least part of the year to allow for different water levels on the north and south side of the highway. Therefore water may not be allowed to flow freely under an elevated highway should a long bridge be constructed. Landscape aesthetics of measures that encourage birds to fly high enough to avoid being struck by vehicles may also be an issue as this may involve tall poles at regular intervals (similar to Bard et al., 2002) that may be visible from a long distance. Note that such tall poles have been suggested in the past (Lee et al., 2013).

The objective of the project that this report reports on is to have a better understanding what the different stake-

holders experience as a problem with regard to State Highway 49 and wildlife through Horicon Marsh.

1.4. Tasks

This report is structured around the following tasks:

Task 1. Establish contact with the local reserve managers (National Wildlife Refuge (NWR) and State), representatives of Friends of Horicon National Wildlife Refuge, and employees of the Wisconsin Department of Transportation for review of and comment on the goals and tasks of WTI-MSU's technical support.

Task 2. Conduct a field visit and interview representatives or employees of reserve managers (NWR and State), Friends of Horicon NWR, and of the Wisconsin Department of Transportation with regard to the problems they would like to see solved (along State Highway 49 and other roads through and around Horicon Marsh)—species of concern and road segment locations—and their perspective on the various mitigation measures that have already been suggested for State Highway 49 in the past.

Task 3. Acquire and analyze existing road-kill data for State Highway 49 through Horicon Marsh.

Task 4: Compile potential mitigation measures for State Highway 49, and document the pros and cons of these mitigation measures, estimate relative costs of implementation, and highlight the measures that seem most appropriate.

Task 5: Provide a written report.

2. PROBLEM DEFINITION AND STRATEGIES TO ADDRESS THE PROBLEM

2.1. Collision Data Types and Problem Definition

For most federal and state roads in the U.S. there are two types of wildlife-vehicle collision data available: crash data collected by law enforcement agencies and carcass removal data collected by road maintenance crews. By definition, the crash data relate to the most serious collisions from the human perspective with substantial vehicle damage and/or human injuries and human fatalities. The reported crashes tend to be associated with large mammals because of their size and weight. Carcass removal data typically also relate to large mammals only as their size and weight can be a serious obstacle and safety risk and distraction to the traveling public. Small and medium sized animal species, including most amphibians, reptiles, and small and medium sized mammal species are typically not removed and thus not recorded in carcass removal databases maintained by transportation agencies. Thus, in most cases, crash data and carcass removal data can only be used to identify and prioritize locations along highways that that may require wildlife mitigation measures from the perspective of human safety or from the perspective of reducing collisions with large mammals. Furthermore the crash and carcass data are dominated by the most common ungulates in North America such as white-tailed deer (*Odocoileus virginianus*), mule deer (*Odocoileus hemionus*), elk (*Cervus canadensis*) and moose (*Alces alces*)

rather than threatened or endangered large mammal species.

If the concern is with direct road mortality for species or species groups other than common large mammals, specifically large common ungulates, then data sources other than crash data and carcass removal data may be required. A specific road-kill monitoring program may have to be developed. Depending on the exact goals of the project and the associated requirements such data may be collected by personnel from natural resource management agencies, researchers or the public.

While there is much emphasis on mitigating for wildlife-vehicle collisions in North America, crashes, dead animals, and associated costs and risks to humans are not the only reason mitigation for wildlife along highways may be considered. The authors of this report distinguish five different categories of effects of roads and traffic on wildlife that may trigger action (Figure 2):

- Habitat loss: e.g., the paved road surface, heavily altered environment through the road bed with non-native substrate, and seeded species and mowing in the clear zone.
- Direct wildlife road mortality as a result of collisions with vehicles.
- Barrier to wildlife movements: e.g., animals do not cross the road as often as they would have crossed natural terrain and only a portion of the crossing attempts is successful. This may disrupt daily, seasonal, and dispersal movements required for long term population persistence.
- Decrease in habitat quality in a zone adjacent to the road: e.g., noise and light disturbance, air and water pollution, increased access to the areas adjacent to the highways for humans.
- Right-of-way habitat and corridor: Depending on the surrounding landscape the right-of-way can promote the spread of non-native or invasive species (surrounding landscape largely natural or semi-natural) or it can be a refugium for native species (surrounding landscape heavily impacted by humans).

If mitigation is required for habitat loss, barrier effects, a decrease in habitat quality in a zone adjacent to the road, or the ecological functioning of right-of-ways, other types of data are needed than wildlife-vehicle collision data. Examples of such data are data on the quantity and quality of the habitat impacted, animal movement data, data on noise or chemical pollutants, and the presence and spread of non-native invasive species. Note that wildlife-vehicle collision hotspots are not necessarily the locations where animals cross the road most frequently or where safe crossing opportunities would have the greatest benefit to the long-term population viability for selected species.

For the current project the problem, as defined by the U.S. Fish and Wildlife Service (regional and local level), is the relatively high number of wildlife-vehicle collisions in general, specifically with birds, amphibians and reptiles, and the associated impacts on their populations.

2.2. Strategies to Address the Problem

While mitigation (reducing the severity of an impact) is common, avoidance is better and should generally be considered first (Cuperus et al., 1999). For example, deer-vehicle colli-

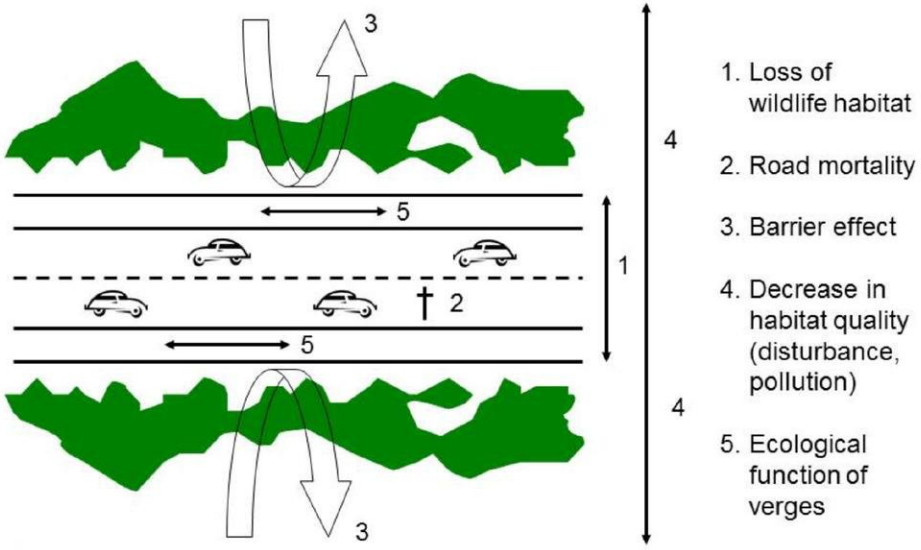

Figure 2: The effects of roads and traffic on wildlife.

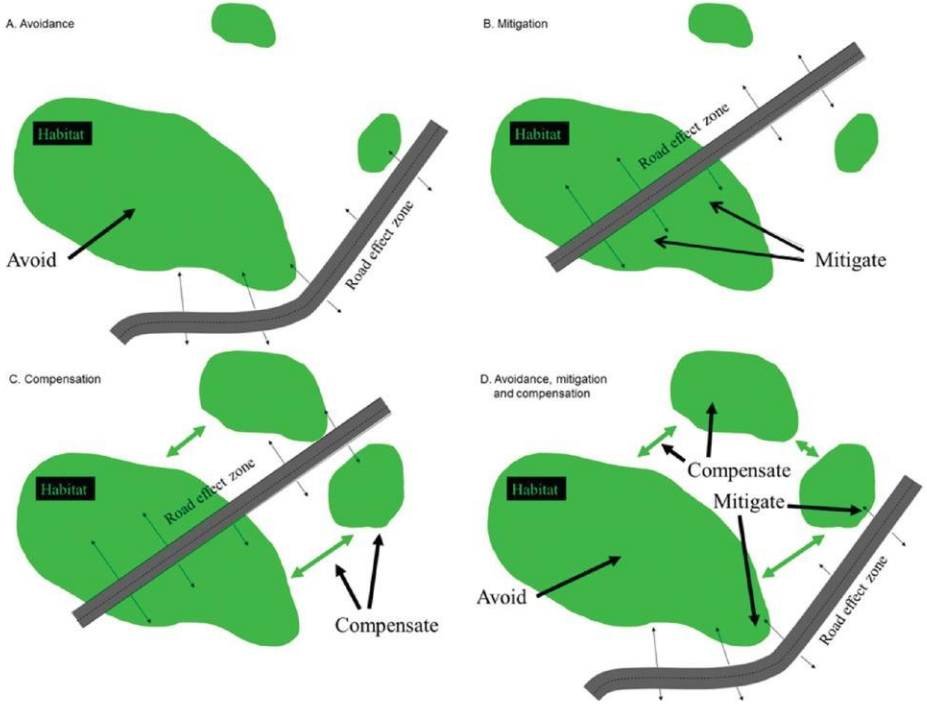

Figure 3: A three-step approach: A. Avoidance, B. Mitigation, C. Compensation, D. Combination of avoidance, mitigation and compensation.

sions, or the negative effects of roads and traffic on wildlife in general, may be avoided if a road is not constructed, or the most severe negative effects may be avoided by re-routing away from the most sensitive areas (Figure 2). If the effects cannot be avoided, mitigation is a logical second step. Mitigation is typically done in the road-effect zone (Figure 3) and may include measures aimed at reducing wildlife-vehicle collisions and reducing the barrier effect (e.g., through providing for safe wildlife crossing opportunities) (Huijser et al., 2008a; b; Clevenger & Huijser, 2011). However, mitigation may not always be possible or the mitigation may not be sufficient. Then a third approach may be considered: compensation or mitigation off-site. Compensation may include increasing the size existing habitat patches, creating new habitat patches or improving the connectivity between the habitat patches that would allow for larger, more connected, and more viable network populations. Finally, in some situations a combination of avoidance, mitigation, and compensation may be implemented.

For the current project the approach is primarily to suggest measures aimed at mitigating (reducing) the relatively high number of collisions with wildlife in general and birds, amphibians and reptiles in specific. However, some of the suggestions in this report can be classified as avoidance or compensation rather than mitigation.

Note that the potential implementation of mitigation measures aimed at reducing wildlife-vehicle collisions should not increase the barrier effect of roads and traffic for wildlife, particularly not for species which may already be threatened or endangered. Therefore measures that keep (terrestrial) wildlife from entering the road (e.g. wildlife fencing) are typically implemented in combination with safe crossing opportunities for terrestrial wildlife (e.g. wildlife underpasses or overpasses).

3. ROAD-KILL COUNTS ALONG S.H. 49 THROUGH HORICON MARSH

3.1. Introduction

The US Fish & Wildlife Service as well as other stakeholders (e.g. naturalists including bird watchers) have been concerned about the high number of animals being killed along the section of State Hwy 49 that bisects Horicon Marsh for well over a decade. In response US Fish & Wildlife Service employees initiated a road-kill monitoring program, mostly as part of their commute to work.

3.2. Methods

Between March 2001 and 31 December 2013 a survey was conducted for road-killed animals along a 2.3 mi (3.7 km) long section of State Highway 49 through Horicon Marsh (Figure 4). The survey was conducted on every weekday (Monday through Friday), though during some periods (e.g. when snow accumulated) the frequency dropped to three times per week or no survey at all (Stoddard, 2014).

The observers always started a survey at the I-4/I-5 dike gate (gravel road) just inside the west boundary of the refuge where it intersects Highway 49 (Stoddard, 2014). The observers set the vehicle's odometer to 0.0 and monitored State Highway 49 for road-killed

animals while driving 10–20 mi/h (16-32 km/h) headed east on the south shoulder. When a road-killed animal was observed, the date and location (to the nearest tenth of a mile) were recorded. The specific location of a carcass (e.g. which lane or shoulder) was recorded to reduce the likelihood of counting the same carcass more than once on different days. When needed, the observers (wearing a safety vest) left the car and approached the carcasses for species identification. When leaving the vehicle was considered too dangerous, binoculars were used instead for species identification.

Note that the files made available to the researchers did not contain location information (to the nearest 0.1 mi) between March 2001 and December 2002. Therefore data from this period were excluded from certain analyses.

3.3. Results

3.3.1. Species Groups

Mammals, amphibians, birds and reptiles were most frequently recorded along the monitoring route (Figure 5). However, only a small portion of the small mammals (e.g. mice and shrews), and amphibians (e.g. frogs, toads and salamanders) that were hit were recorded. Their small size in combination with the traffic driving over the carcasses made it hard for the observers to even see the carcasses. In addition, at certain times of the year, e.g. warm moist nights in the spring, amphibian migration and mortality was so substantial that the observers gave up counting completely from 2009 onwards (Personal communication Jon Krapfl, U.S. Fish & Wildlife Service, also see Appendix A). While the number of invertebrates killed by vehicles is likely extremely high only a few were recorded (Figure 5). There were also a few fish recorded as road-kill. It may be that birds dropped the fish on the highway (Personal Communication Jon Krapfl, US Fish & Wildlife Service).

Mammal mortality seems to be relatively evenly distributed along the route (Figure 6). However, amphibian road-kill was most frequent between mile markers 1.2–2.0. This road section is largely characterized by open water on one or both sides of the highway (Figure 4). Bird road-kill was more spread-out but appears highest between mile markers 0.9–1.8. Reptile mortality seems to be relatively evenly distributed along the route, but appear less frequent between mile markers 1.7–2.3. Interestingly, there appears a peak in road mortality around mile marker 1.3 for mammals, amphibians and birds. This location coincides with the embankment perpendicular to State Highway 49 on the south side.

3.3.2. Most Frequently Hit Species

The individual road-killed species within each species group are listed in Appendix A. Muskrat (*Ondatra zibethicus*) (82.8%) and raccoon (*Procyon lotor*) (5.81%) made up over 88% of all recorded road-killed mammals (Appendix A). Apart from the first and last few hundred meters (yards) muskrats are hit in relatively high numbers throughout the route (Figure 7). Raccoons appear to be hit in highest numbers around the start and end of the route where it is drier.

Amphibian road-kills were dominated by "frogs" (Anura) (96.95%) but some amphibians including the leop-

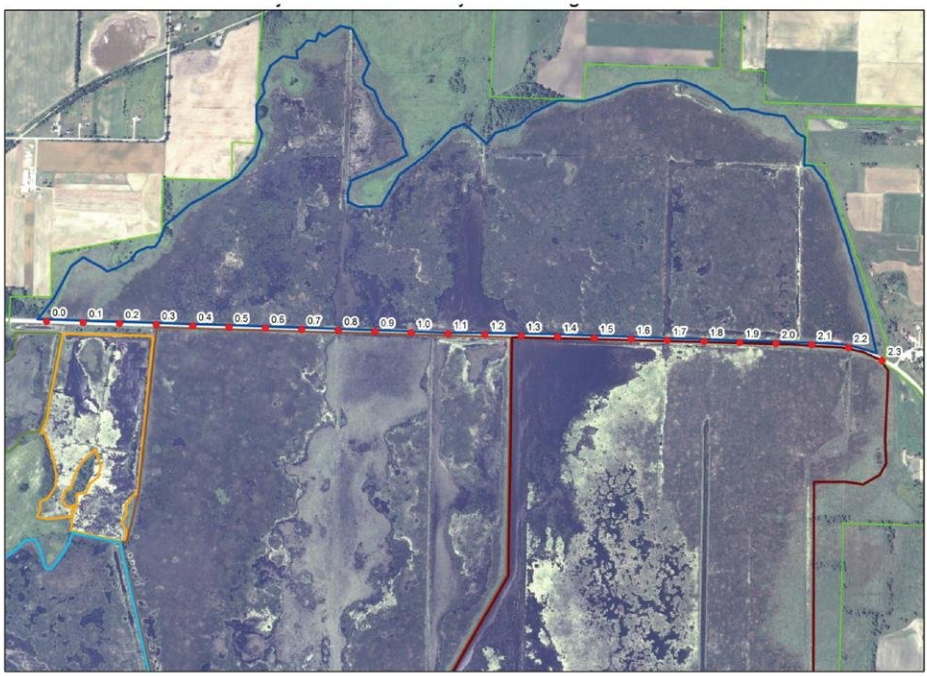

Figure 4: The 2.3 mi long (3.7 km) monitoring route along State Highway 49 through Horicon Marsh. While the highway does not have actual mile markers, the monitoring route started at mi 0.0 and ended at mi 2.3 based on the vehicle's odometer (Image courtesy of US Fish and Wildlife Service). The other colored lines indicate other (unpaved and paved) roads, embankments or dikes or levees, or impoundment boundaries.

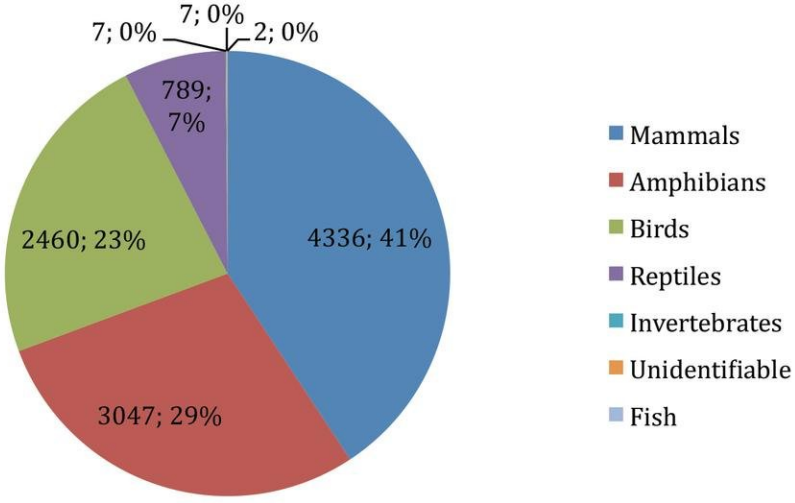

Figure 5: The number and percent of the different species groups recorded as road-kill along monitoring route along State Highway 49 through Horicon Marsh from 2001 through 2013 (n=10,648) (Based on data provided by the US Fish and Wildlife Service).

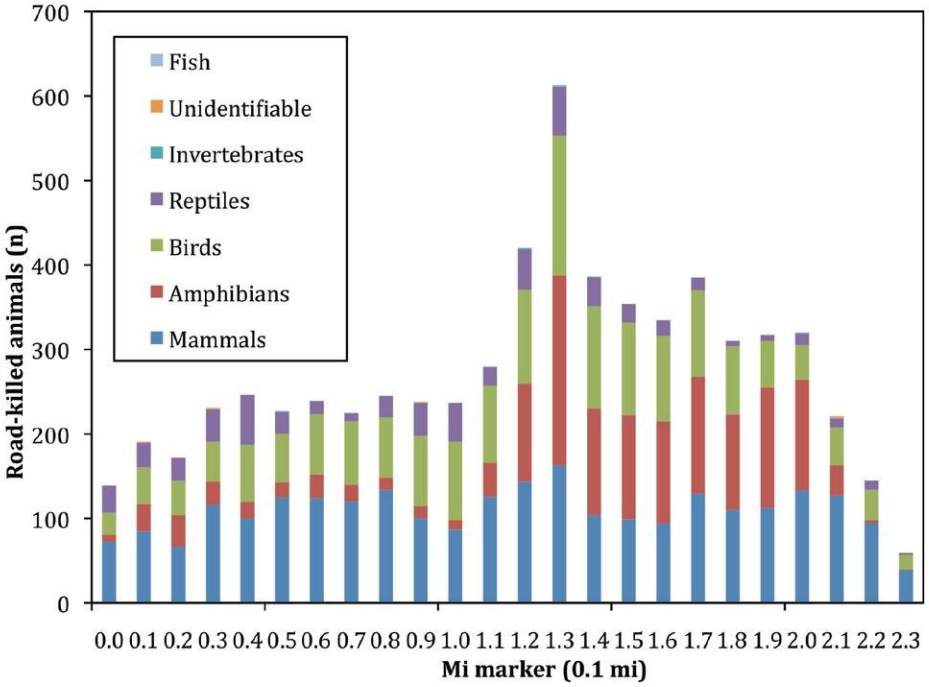

Figure 6: The number of the different species groups recorded as road-kill per 0.1 mile (160 m) along the monitoring route along State Highway 49 through Horicon Marsh from 2001 through 2013 (n=6,535) (Based on data provided by the US Fish and Wildlife Service).

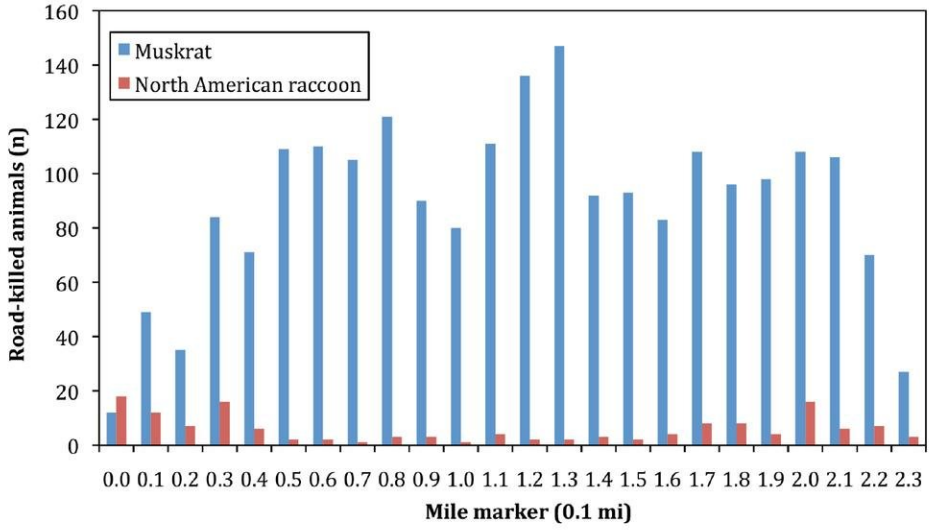

Figure 7: The number of the most frequently hit mammal species per 0.1 mile (160 m) along the monitoring route along State Highway 49 through Horicon Marsh from 2001 through 2013 (Based on data provided by the US Fish and Wildlife Service)

ard frog (*Rana pipiens*) (2.95%) were identified to the species level (Appendix A). Frogs were seen most frequently between mile markers 1.2–2.0 (Figure 8), a road section that is mostly characterized by the proximity of open water (Figure 4).

Bird mortalities were mostly with Canada goose (*Branta canadensis*) (20.89%), American coot (*Fulica americana*) (14.63%), red-winged blackbird (*Agelaius phoeniceus*) (12.07%), "unidentifiable birds" (8.89%), Mallard (*Anas platyrhynchos*) (6.71%), and tree swallow (*Tachycineta bicolor*) (5.12%) (Appendix A). Canada goose, American coot and tree swallows were mostly hit between mile markers 0.7–1.9 (Figure 9) where open water is close to the highway (Figure 4). The same is true for mallards, especially between mile markers 1.0–1.4. Apart from the first and last few hundred meters (yards) red-winged blackbirds are hit in relatively high numbers throughout the route.

Reptile mortalities were dominated by painted turtle (*Chrysemys picta*) (66.54%) and common snapping turtle (*Chelydra serpentine*) (29.28%) (Appendix A). There seem to be two road sections where turtle mortality is highest: mile markers 0.0-0.5 and 0.8-1.7 (Figure 10).

3.3.3. Large, Rare, Threatened, and Endangered Species

Species that may require specific attention include animals that are large enough to pose a serious threat to human safety, or those that are rare, or listed as threatened or endangered (Table 1). Note that the number of road-killed individuals for rare, threatened, or endangered species is almost always relatively low because of their scarcity.

White-tailed deer were predominantly hit between mile markers 0.0–0.5 where it is relatively dry and where there are some shrubs and trees (Figure 11). Black tern and Forster's tern were hit along open water (mile markers 1.0–1.6) and least bittern between mile markers 0.8–2.2 covering both open water and cattail stands. Yellow-headed black bird hits appear somewhat erratic in location. The number of hits for piping plover and great egret were so low that one cannot expect to detect a meaningful spatial pattern.

3.4. Discussion

The road-kill data show that while bird mortality was the primary concern (at least at the regional level of US Fish & Wildlife Service), the recorded mammal and amphibian mortality was higher than that for birds. This is despite the fact that amphibian mortality was severely underreported, especially from 2009 onwards. Amphibians and reptiles appear particularly vulnerable to direct road mortality and about half of all federally listed species for which direct road mortality is among the primary threats to the persistence of these species in the United States are amphibians or reptiles (Huijser et al., 2008a). In this context the high mortality of painted turtles and common snapping turtles may be of particular concern. Mature female turtles are typically attracted to roadsides to lay eggs; it is above the water level and the slope of the roadbed allows for higher temperatures (Aresco, 2005a; Steen et al., 2006). Natural mortality among adult turtles is very low, and the persistence

of turtles in the landscape depends on that. This means that whenever large numbers of adult turtles, especially females, are dying of unnatural causes, there is a substantial conservation concern (Aresco, 2005a;b; Steen et al., 2006; Crawford et al., 2014). Direct road mortality of turtles has led to substantial mitigation projects elsewhere such as Jackson Lake and Paynes Prairie in Florida and the Mobile Causeway in Alabama (e.g. Aresco 2005b; Dodd et al., 2004; Alabama Department of Transportation. 2011; Ecopassage, 2014)

The most frequently hit bird species were Canada goose and American coot. Interestingly, the vast majority of these mortalities most likely occurred when the birds were walking on and alongside the highway rather than flying (Personal communication Jon Krapfl, U.S. Fish & Wildlife Service). The geese (including goslings) and coots were likely walking on and along the road where they can find food (vegetation along the edge of the pavement and water), water, and grit.

The number of road-killed individuals of rare, threatened or endangered species is low almost by definition. However, black terns (listed in Wisconsin) were recorded 15 times, and least bittern and yellow-headed blackbirds (expert judgment) were recorded 102 and 45 times respectively.

Interestingly, least bittern were hit predominantly in only two of 13 years. The high mortality of least bitterns in 2001 and 2006 was likely related to a phase in the water level management which in turn may have influenced the location of the colony in relation to the highway.

4. INTERVIEWS WITH STAKEHOLDERS

4.1. Introduction

The US Fish & Wildlife Service as well as other stakeholders (e.g. naturalists including bird watchers) have been concerned about the high number of animals being killed along the section of State Hwy 49 that bisects Horicon Marsh for well over a decade. In response, US Fish & Wildlife Service employees initiated a road-kill monitoring program (see Chapter 3 for results). In addition various types of mitigation measures have been suggested at different times (e.g. US Fish & Wildlife Service. 2007; Lee et al., 2013). However, up until now (2014) no mitigation measures have been implemented. Therefore, the researchers conducted interviews with the stakeholders to document what they perceive as the problems and potential solutions with regard to State Highway 49 and wildlife through Horicon Marsh.

4.2. Methods

The researchers contacted 13 stakeholders associated with eight organizations for an interview (Table 2). The stakeholders were asked about what, if any, problems they perceived with regard to State Highway 49 through Horicon marsh in relation to wildlife, what measures they support implementing, how likely it is that these measures will be implemented, and what problems may be associated with the individual measures. Note that the responses are based on the personal experience, knowledge, and opinion of the respondents, and that their responses do not

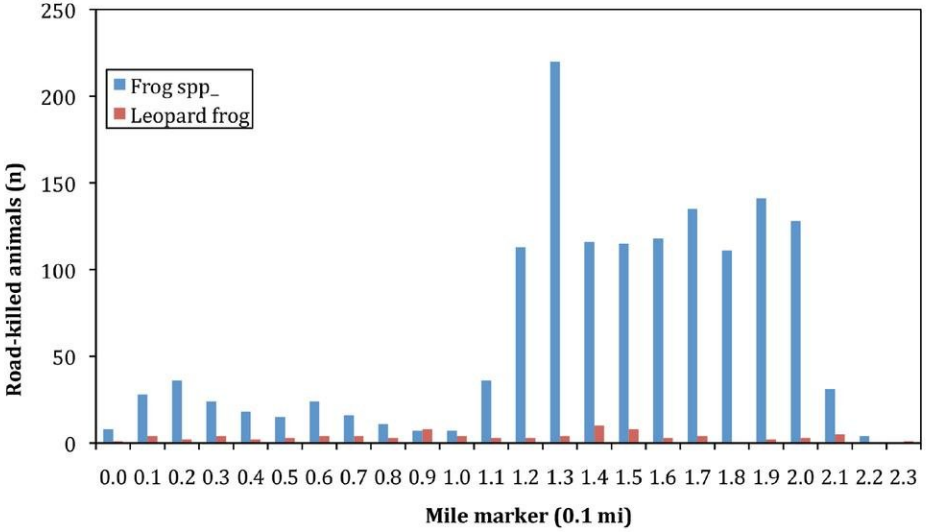

Figure 8: The number of the most frequently hit amphibian species per 0.1 mile (160 m) along the monitoring route along State Highway 49 through Horicon Marsh from 2001 through 2013 (Based on data provided by the US Fish and Wildlife Service).

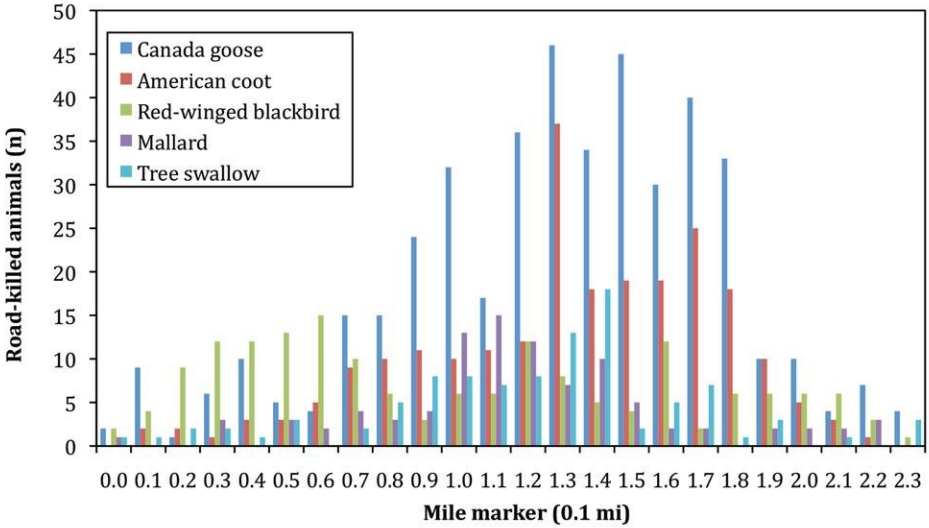

Figure 9: The number of the most frequently hit bird species per 0.1 mile (160 m) along the monitoring route along State Highway 49 through Horicon Marsh from 2001 through 2013 (Based on data provided by the US Fish and Wildlife Service).

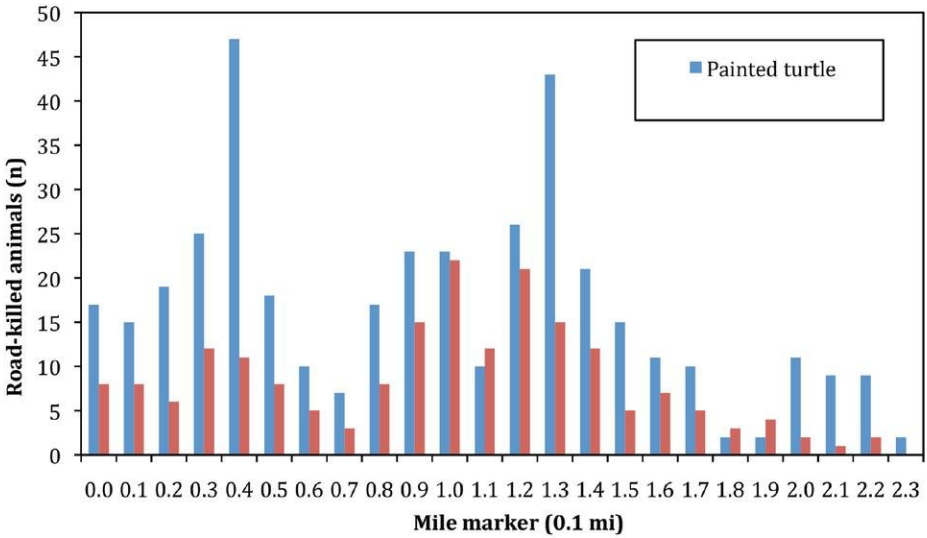

Figure 10: The number of the most frequently hit reptile species per 0.1 mile (160 m) along the monitoring route along State Highway 49 through Horicon Marsh from 2001 through 2013 (Based on data provided by the US Fish and Wildlife Service).

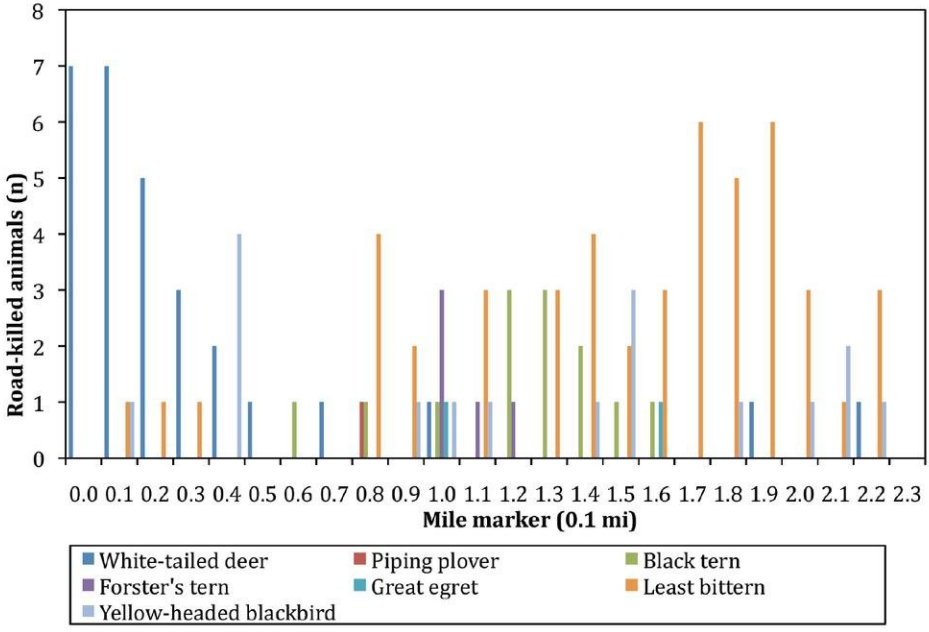

Figure 11: The number of individuals hit of species that are large enough to pose a serious threat to human safety or that are a substantial conservation concern according to federal, state or expert sources per 0.1 mile (160 m) along the monitoring route along State Highway 49 through Horicon Marsh from 2001 through 2013 (Based on data provided by the US Fish and Wildlife Service).

Table 1: Species hit that are large enough to pose a serious threat to human or that are a substantial conservation concern according to federal, state or expert sources.

Species	Road-kill (n)	Threat to human safety	Federal[1]	Wisconsin[2]	Experts[3]
White-tailed deer (*Odocoileus virginianus*)	66	X			
Piping plover (*Charadrius melodus*)	1		Endangered	Endangered	X
Black tern (*Chlidonias niger*)	15			Endangered	X
Forster's tern (*Sterna forsteri*)	5			Endangered	X
Great egret (*Ardea alba*)	2			Threatened	
Least bittern *(Ixobrychus exilis)*	102				X
Yellow-headed blackbird (*Xanthocephalus xanthocephalus*)	45				X

[1] US Fish & Wildlife Service (2014b), [2] Wisconsin Department of Natural Resources (2014b), [3] Personal Communication William Mueller (Western Great Lakes Bird and Bat Observatory) and Karen Etter Hale (Wisconsin Bird Conservation Initiative, Madison Audubon Society)

necessarily reflect the position of the organizations they are affiliated with.

While over 40 different mitigation measures aimed at reducing collisions with wildlife—particularly with large ungulates—have been described (e.g. Huijser et al. 2008a), the researchers selected the mitigation measures presented to the stakeholders based on reducing the number of road-killed birds, amphibians and reptiles.

Table 2: Stakeholder organizations and interviewees. Note: the views and opinions of the interviewees are not necessarily those of organizations they are affiliated with.

Stakeholder group	Stakeholder (organization)	Name interviewees
Natural resource management agency	US Fish & Wildlife Service, Horicon National Wildlife Refuge	Jon Krapfl Sadie O'Dell Steve Lenz
	Wisconsin Department of Natural Resources	Andrew Badje Eric Heggelund Lisie Kitchel Rori Paloski Jay Schiefelbein*[1]
Transportation agency	Wisconsin Department of Transportation, Maintenance	Pat Gavinski Ryan Murray
Nature oriented non-governmental organizations (NGO) and universities	Wisconsin Bird Conservation Initiative / Madison Audubon Society	Karen Etter Hale
	Friends of Horicon	Dave Edwards
	Western Great Lakes Bird and Bat Observatory	William Mueller
	Loras College, Dubuqueia, Iowa	David Shealer*[1]

*[1]Abbreviated interview through phone.

4.3. Results

Most stakeholders strongly agree that collisions with flying birds are primarily a conservation problem rather than a human safety issue (Table 3). Collisions with large mammals are mostly a problem for human safety, whereas collisions with small-medium sized mammals are both somewhat of a human safety and conservation concern. Collisions with reptiles and amphibians are generally considered a conservation problem.

State Highway 49 is considered a substantial barrier to reptiles and amphibians and (young) birds walking, and slightly less for small-medium and large mammals. Though mortality of birds flying across State Highway 49 is an issue, the highway is not considered a substantial barrier to flying birds.

The greatest perceived threat to human safety results from people pulling over on the side of the road to view wildlife, especially birds. The mixture of slower and faster vehicles on the highway, vehicles pulling off and on the highway, the opening of car doors of vehicles parked on the side of the road, and people walking alongside and on the highway often create dangerous situations.

Though the number of whooping cranes in Horicon Marsh is still relatively small, there is substantial concern about vehicles hitting whooping cranes. For example, a low flying whooping crane has had several narrow escapes with vehicles along State Hwy 49 through Horicon Marsh in spring 2014 (Personal communication and images of the situation through Sadie O'Dell, Horicon National Wildlife Refuge).

Natural resource management agencies and NGO's/university are generally supportive of avoiding the most severe impacts of State Highway 49 to Horicon Marsh through rerouting the highway around the marsh (Table 4). Most of the stakeholder groups think re-routing is very unlikely to happen though (Table 5) because of opposition by the public (longer commuting route), lack of political support, the costs, the difficulty of acquiring land for a new route.

Measures that encourage birds to fly higher over State Highway 49 may include poles installed at regular intervals along the road (e.g. Bard et al., 2002), shrubs and trees planted adjacent to the road (Kruidering et al., 2005), and embankments alongside the road (Huijser et al., 2008b). Poles have reduced strikes with royal terns on a high bridge by 64% (Bard et al., 2002). However, there are no effectiveness data available for shrubs/trees or embankments alongside the road. Interestingly NGO's/University generally support the implementation of poles whereas the natural resource management agencies and Wisconsin Department of Transportation are not or less supportive (Table 4). All stakeholder groups, including NGO's/University are concerned about the effect that poles will have on landscape aesthetics and wildlife viewing opportunities. Poles also do not address the amphibian and reptile mortality along the highway, and there may be problems with installation (habitat loss, clear zone) and maintenance. The different stakeholder groups have widely varying opinions on the likelihood that poles will be installed (Table 5). There is no or weak support for shrubs and trees or embankments alongside the highway (Table 4) and these measures are generally considered unlikely to be imple-

Table 3: State Highway 49 and wildlife problems as perceived by the different stakeholder groups. Light grey =range; Dark grey = ≥50% of responses.

	Nat. Res. mgmt agencies						Wisconsin DOT						NGO's and University				
	Strongly disagree	Disagree	Neither agree nor disagree	Agree	Strongly agree		Strongly disagree	Disagree	Neither agree nor disagree	Agree	Strongly agree		Strongly disagree	Disagree	Neither agree nor disagree	Agree	Strongly agree
A. Collisions																	
Human safety: Cars hitting flying birds	1	1	1	2	2					■						■	1
Conservation: Cars hitting flying birds	0	1	0	2	■				1	1							■
Human safety: Cars hitting large mammals	1	0	0	■	2					■							■
Conservation: Cars hitting large mammals	■	0	0	■	0					■				■	1		
Human safety: Cars hitting medium or small sized mammals	0	1	0	■	0					■					1	■	
Conservation: Cars hitting medium or small sized mammals	2	1	0	■	0					■							■
Human safety: Cars hitting reptiles (e.g. turtles) or amphibians	0	1	2	3	1					■			1		1	1	
Conservation: Cars hitting reptiles (e.g. turtles) or amphibians	0	1	0	1	■					■							■
B. Connectivity for wildlife																	
Flying birds	1	1	0	2	3			■					■				1
Non-flying / young birds walking	0	0	0	■	3					■							■
Large mammals	2	1	0	■	0			1	1				■				1
Medium or small sized mammals	0	1	1	■	0					■						■	1
Reptiles or amphibians	0	0	0	1	■					■							■
Fish (limit spread carp, a non-native species)	0	0	3	1	3					■					1	■	
Other species groups?	0	0	0	1	0				1	1							
C. Other problems?																	
Safety for people pulled off on shoulder to view birds	0	0	0	0	2						■						■
Potential whooping crane strikes by vehicles	0	0	0	0	1												1

Table 4: Level of support for various measures by the stakeholder groups. Light grey =range; Dark grey = ≥50% of responses.

	Nat. Res. mgmt agencies					Wisconsin DOT					NGO's and University				
	Strongly disagree	Disagree	Neither agree nor disagree	Agree	Strongly agree	Strongly disagree	Disagree	Neither agree nor disagree	Agree	Strongly agree	Strongly disagree	Disagree	Neither agree nor disagree	Agree	Strongly agree
MEASURES															
Avoidance: rerouting highway away from marsh	0	1	0	2			1		1						
Measures that encourage birds to fly higher															
Poles	0	2	1	1	3							1			
shrubs/trees	1	0		2	0	1	1					1			
Embankments	0	3	2	1	1		1	1					1		
Measures that keep terrestrial wildlife off road															
elevated roadway	0	0	0	0							1				
Fences	1	0	1	2	3						1				
barrier walls	0	0	0		3									1	
Measures that allow for safe crossing for terrestrial wildlife															
Underpasses	0	0	1	1			1		1				1		
Compensate: increase size marsh	0	1	3	1	2									1	
Compensate: new marsh habitat further away	0	2	2	0	3							1			
Compensate: Increase connectivity between marsh patches	0	2	1	0										1	
Other															
Reduce posted speed limit															1

Table 5: Likelihood for implementation of various measures according to the different stakeholder groups. Light grey =range; Dark grey = ≥50% of responses.

	Nat. Res. mgmt agencies						Wisconsin DOT						NGO's and University				
	Won't happen	Might happen	Likely to happen	Very likely to happen	Sure to happen		Won't happen	Might happen	Likely to happen	Very likely to happen	Sure to happen		Won't happen	Might happen	Likely to happen	Very likely to happen	Sure to happen
	1	2	3	4	5		1	2	3	4	5		1	2	3	4	5
MEASURES																	
Avoidance: rerouting highway away from marsh		2	0	0	0										1		
Measures that encourage birds to fly higher																	
Poles	1	2	3	1	0								1				
shrubs/trees		1	1	1	0		1	1									
Embankments	3	3	0	1	0		1	1									
Measures that keep terrestrial wildlife off road																	
elevated roadway	2		0	0	1												
Fences	1	2	3	1	0			1	1					1			
barrier walls	0	2	3	2	0			1	1				1				
Measures that allow for safe crossing for terrestrial wildlife																	
Underpasses	0	3	3	1	0								1				
Compensate: increase size marsh	1		2	0	0									1			
Compensate: new marsh habitat further away	1	3	2	0	1								1				
Compensate: Increase connectivity between marsh patches	1	2		0	0										1		
Other																	

mented (Table 5), mostly because of their effects on landscape aesthetics and wildlife viewing opportunities, habitat loss, costs, maintenance, shifting mortality to (bird) species that live in the shrubs and trees, and potential difficulties for water level management.

There is strong support among all stakeholder groups for a stretch of elevated highway above the marsh (Table 4) for non-flying species, but this is generally considered unlikely to be implemented because of the associated costs and effect on landscape aesthetics. Should the highway be placed on pillars though, the stakeholders strongly suggest attaching poles to the bridge to encourage birds to fly higher. In addition, if the highway would be elevated, the stakeholders would still like to see the existing embankment on which the current highway is located stay in place for water level management (different water level management units north and south of the highway), and to provide wildlife viewing opportunities away from high speed traffic.

The stakeholder groups are somewhat supportive of wildlife fencing for terrestrial species, but do not think it is very likely that fences will be implemented. The stakeholder groups are mainly concerned about the effect of fences on landscape aesthetics including opportunities to view wildlife, and maintenance issues. Tall wildlife fences (2.4 m (8ft)) reduce collisions with large mammals 79–99% (review in Huijser et al., 2009).

Barrier walls can be integrated into the roadbed (i.e. they act as a retaining wall and they do not stick out above the landscape). Depending on the target species the barrier walls may be 0.30–1.20 m (1–4 ft) high. They are mostly intended for amphibians, and higher barrier walls also for amphibian and reptile species including frogs (but excluding tree frogs that can climb walls), alligators, lizards, turtles and snakes. Barrier walls can be very effective in reducing road mortality: about 94% for all vertebrate species combined, excluding tree frogs (Dodd et al., 2004).

Barrier walls appear to have stronger support from the stakeholders than wildlife fencing (Table 4), and barrier walls are slightly more likely to be implemented (Table 5). Costs, maintenance (i.e. access for mowing, possible amphibian/reptile mortality when mowing), and landscape aesthetics were named as potential problems.

Wildlife underpasses have strong support from natural resource management agencies and NGO's/university and less so from the Wisconsin Department of Transportation (Table 4). Underpasses might be implemented or are considered likely to be implemented (Table 5). Concerns regarding wildlife underpasses include the ability to control water levels on the two sides of the highway separately, and costs.

Compensation strategies have most support from the natural resource management agencies, and less so from Wisconsin Department of Transportation and NGOs/university. Some of these strategies are already being implemented, but not necessarily in the context of compensating for the impacts of State Highway 49. The fact that compensation strategies would not address the ongoing impacts of State Highway 49 was a concern to some of the stakeholders. Other problems identified include costs and resources available to manage the areas.

4.4. Discussion

Based on the interviews it became clear what the different stakeholders perceive as the problem with State Highway 49 and wildlife through Horicon Marsh, which measures they would support, how likely they think it is they will be implemented, and what may be of a concern with regard to the individual mitigation measures. Note that the views and opinions of the interviewees are not necessarily those of the agencies they are affiliated with. The authors of this report use the names of the organizations only to better understand the statements made by the interviewees.

The key findings are:

1. Interviewees of the Wisconsin Department of Transportation, natural resource management agencies and NGOs/University have all identified cars pulling off and on State Highway 49 and people on and alongside the highway as a serious ongoing human safety concern.
2. Interviewees of the Wisconsin Department of Transportation see the wildlife-vehicle collisions and wildlife road-mortality as something that is the result of the water level management by US Fish & Wildlife Service.
3. The viewpoint of interviewees of natural resource management agencies is that over the last few hundred years many wetlands have disappeared due to agriculture and other human activities and that many wildlife species depending on wetlands are now a conservation concern. This is why we have so many laws and regulations with regard to wetlands now. The history of Horicon Marsh is "messy" in the sense that there have been many different types of substantial influences by humans over the last 150 years or so. The reality is that now Horicon Marsh is largely a human-managed wetland, but it is nevertheless considered a refuge that is critical to the survival of many wetland species. It is therefore essential that massive unnatural mortality, including that on State Highway 49, is addressed, regardless of what the habitat on the north side of the road may have looked like a few decades ago.
4. All stakeholders recognize that, depending on the species group, wildlife-vehicle collisions along State Highway 49 are both a human safety and a conservation concern. The conservation concern is especially with birds and reptiles and amphibians.
5. Connectivity for wildlife is especially a concern for walking (young) birds and reptiles and amphibians.
6. It seems only a matter of time before the first whooping crane is hit by traffic along State Highway 49 through Horicon Marsh. Note that a captive bred and released whooping crane (one single individual animal) is estimated to represent an investment of about $100,000 (Wikipedia, 2014b).
7. Avoiding the most severe impacts of State Highway 49 on Horicon Marsh through rerouting is supported by the stakeholders but is thought to meet stiff opposition from both the public and politicians.

8. Elevating the highway (i.e. putting the highway on pillars) is strongly supported by the stakeholders, but its implementation is thought less than likely.
9. Even if State Highway 49 is rerouted around Horicon Marsh rather than going through it, or even if the highway would be put on pillars on its current route, the embankment on which State Highway 49 is positioned will remain in place to allow for different water level management units north and south of the embankment. In addition, there is a strong desire to keep access to this part of the marsh for birdwatchers. Therefore the embankment may have a low volume low speed road on top of it.
10. Measures that encourage the birds to fly higher may not address the most frequently hit bird species as Canada goose and American coot, which are mostly walking on and alongside the road rather than flying. These types of measures also do not address the massive amphibian and reptile mortality. Therefore, possible mitigation measures should not be restricted to measures that encourage birds to fly higher.
11. Measures that encourage birds to fly higher or tall fences along the current embankment for State Highway 49 are mostly regarded as unacceptable as they affect landscape aesthetics and opportunities for wildlife viewing.
12. Lower fences (e.g. 0.90-1.20 m (3-4 ft)) may be less unacceptable but barrier walls integrated into the road bed are preferred.
13. Compensation strategies seem unsatisfactory as they do nothing to stop or reduce the massive wildlife mortality along State Highway 49.

5. RECOMMENDATIONS

The following recommendations for State Highway 49 through Horicon Marsh are based on different potential objectives:

5.1 Objective 1: Avoid the Most Severe Impacts on Wildlife in Horicon Marsh

This may consist of **rerouting State Highway 49, potentially north of Horicon Marsh**. This is likely the most drastic measure, and also a relatively costly one, but it would avoid most of the impacts of the highway on the wildlife in Horicon Marsh. Naturally, the new route would have its own set of impacts to wildlife, but that should be put into perspective to what the current impacts on the wildlife in Horicon Marsh are.

Alternatively, **State Highway 49 may be tunneled under Horicon Marsh**. This is likely an even more costly option than rerouting, but there would not be other impacts elsewhere.

Note that both of the options described above would also improve human safety as the high speed through traffic would be spatially separated from where the wildlife viewers are (see next objective).

Note that both of the options would not eliminate the embankment on which State Highway 49 is currently located. The embankment is likely to remain in place for water level management purposes and to provide access to the marsh for bird watchers (see Chapter 4).

5.2. Objective 2: Improve Human Safety

The greatest threat to human safety is vehicles pulling off and on the highway and people on and along the highway looking for birds. There are two basic approaches to addressing this hazard:

a. No longer allow or no longer make it possible for drivers to park their vehicle on the shoulder and in the right-of-way along the highway section through the marsh. Note that this is likely to result in public opposition and it may lead to slow driving vehicles on State Highway 49, mixed in with commuting and through traffic. Speed dispersion and associated impacts on human safety could result.
b. Human safety is more likely to be improved **if the desire of people to watch wildlife is accepted** and if appropriate measures are taken to improve the safety for wildlife watchers as well as people driving through on State Highway 49. This may include **wider shoulders or wider right-of-ways, and/or designated pull-outs** in combination with measures that make it impossible to stop elsewhere (e.g. guard rails).

Human safety can be further improved by addressing collisions with white-tailed deer, particularly on the west side of the marsh (mile markers 0.0–0.5). Note that white-tailed deer collisions are very likely to continue further to the west (west of the 0.0 mile marker), and those measures should probably be further extended in the direction of Waupun. Typical measures for large ungulates include **2.4 m (8 ft) tall wildlife fencing in combination with safe crossing opportunities for wildlife** (Clevenger & Huijser, 2011). The terrain is generally flat and the water level is generally very close to the surface. This makes the construction of wildlife underpasses suitable for white-tailed deer a challenge (e.g. 7 m (23 ft) wide, 4 m (13 ft) high). The **bridge across the Rock River** could be expanded to include space for terrestrial and semi-aquatic species, but the height of the bridge may remain a challenge. In addition, **at grade crossing opportunities** may be provided through **gaps in the fence on either side of the road and electric mats embedded in the roadway** to discourage wildlife from wandering in the fenced road corridor. Note that the east side of the fence should also have a safe crossing opportunity around mile marker 0.5. Alternatively, the wildlife fence could extend through mile marker 1.0, to include a buffer zone to discourage white-tailed deer from simply crossing at the fence end. However, the latter would mean that fence extends well into the open area of the marsh. This would likely not be acceptable because the fence affects landscape aesthetics and wildlife viewing opportunities. Safe crossing opportunities for large mammals are typically about 2 km (1.2 mi) apart (Huijser et al., 2013).

Lower vehicle speed is sometimes suggested as a way to reduce wildlife-vehicle collisions. It may also reduce hazards associated with vehicles turning off and on a highway (e.g. similar to the situation for the highway through Horicon Marsh). However, lowering the posted speed limit substantially below the design speed of the highway is typically not recommended. Drivers tend to drive a speed that is consistent with

the design speed of a highway rather than adhere to a posted speed limit that is substantially lower than the design speed. On the other hand, some drivers will obey the posted speed limit which results in having both slow and fast moving vehicles on the same highway. This is referred to as "speed dispersion". Speed dispersion is associated with an overall increase in crashes because it triggers dangerous and irresponsible maneuvers (e.g. drivers of fast moving vehicles get annoyed with the drivers of slow moving vehicles and overtake when it is not safe). A common response to drivers disobeying the posted is limit is to increase law enforcement effort. However, the law enforcement effort would have to continue in perpetuity, and ticketed drivers will likely experience the ticket as "unjust" as the design of the highway encourages drivers to drive a speed that is substantially higher than the posted speed limit. For these reasons it is almost never a good idea to have a posted speed limit that is substantially lower than the design speed of a highway. Thus, if a lower operating speed is desired (i.e. the actual speed of the vehicles), it typically requires a lower design speed of the highway. A lower design speed may include narrower lanes and shoulders, reduced sight distance, and traffic calming measures such as bulbouts and speed bumps. These types of measures are typically not appropriate for highways that are to provide safe and efficient transportation over longer distances.

5.3. Objective 3: Reduce Mass Bird Mortality

The two most frequently hit bird species are Canada geese and American coot (35.61% of all recorded bird road-mortalities). These two species were likely walking on or adjacent to the road when they were hit by vehicles rather than flying across State Highway 49. This supports the **placement of barriers alongside the highway to discourage geese and coots from entering the actual lanes with traffic**. **Fences** (e.g. 0.90–1.20 m (3–4 ft) tall) would likely keep these birds off the roadway, but will possibly affect landscape aesthetics and wildlife viewing opportunities, and may require substantial maintenance including repairs. **Barrier walls** integrated into the roadbed (i.e. like a retaining wall) would not affect landscape aesthetics and roadside wildlife viewing opportunities. Barrier walls are likely to be more robust than wildlife fences. On average there were 67.2 (SD 40.8) Canada geese and American coots recorded per year (Appendix A). Assuming that fencing or barrier walls reduce collisions with walking birds by 86% (Huijser et al., 2009), it would take 3 years to detect a reduction of 86% in Canada goose and American coot strikes (power analyses, 80% power, α=0.05), should the 86% reduction indeed exist.

Fences or barrier walls should generally be accompanied by **safe crossing opportunities**. There may only be (0.6–0.9 m (2–3 ft) of space between the top of the pavement and the water level above which the US Fish & Wildlife Service does not mind that the water level would be equal north and south of the road, but in general the US Fish & Wildlife Service wants to be able to control the water levels north and south of the highway independently. At this time it is unknown whether Canada geese, American coot, or other terrestrial species for which the fence or bar-

rier wall is a barrier would use underpasses with limited (2–3 ft) height. One option is to install barriers and underpasses on a limited road section and evaluate their performance before implementing the measures on a larger scale. The underpasses should probably be relatively wide to compensate for their limited height (perhaps about 5 m (16 ft) wide). As a long term alternative, it is also possible to increase the height of the road bed to increase the potential height of underpasses. Of course there are substantial costs associated with such an effort and the road and traffic would stick up above the surrounding landscape more. Somewhat similar sized culverts for a wide variety of species, but specifically amphibians and reptiles, have been spaced about 350 m (1,150 ft) apart (Dodd et al., 2004).

Massive bird mortality may be further reduced by **mitigation measures that encourage birds to fly higher (e.g. poles, shrubs/trees or embankments)**. However, if such measures are implemented along the current embankment of State Highway 49, the negative effects to landscape aesthetics and wildlife viewing opportunities [would] probably be at an unacceptable level for several of the stakeholders. Note that, given the objective, measures aimed at encouraging birds to fly higher are secondary to keeping birds from walking onto the road. On average there were 122 (SD 72.9) birds (excluding Canada geese and American coots) recorded per year (Appendix A). Assuming that poles reduce collisions with flying birds by 64% (Bard et al., 2002), it would take 3 years to detect a reduction of 64% in strikes with birds (excluding Canada goose and American coot) (power analyses, 80% power, α=0.05), should the 64% reduction indeed exist.

Another approach to reducing mortality of birds walking on and along State Highway 49 is to **elevate the road over the length of the marsh**. Any terrestrial species would be able to cross freely under the road which would be situated on pillars. Poles may need to be installed on the bridge to reduce strikes with flying birds (Bard et al., 2002). The embankment on which the current State Highway 49 is located would remain in place to allow for water levels in the areas north and south of the highway. In addition, the **embankment could house a low volume, low speed road, perhaps even a one-way road, with parking spaces** over (nearly) the entire length of the embankment through the marsh. Birdwatchers appear to prefer that the elevated road to be situated north of the current embankment to provide unhindered views of the marsh to the south. The view to the north would be hindered by the pillars and the elevated road itself. The poles on the bridge would likely not impact the view from the embankment. Naturally an elevated road and poles would be visible from a greater distance from areas away from the road. It is important though to clearly distinguish between landscape aesthetics from the highway/recreation corridor vs. landscape aesthetics from elsewhere in the area.

Note that elevated highways are typically installed over floodplains. They do not only allow individual species to cross safely under the road, but they also allow for ecosystem processes (e.g. water flow) to continue under the transportation corridor. In the case of Horicon Marsh, the "ecosystem process" argument does not apply as the water level management

north and south of the current embankment requires the embankment to stay in place.

5.4. Objective 4: Reduce Mortality of Rare, Threatened or Endangered Bird Species

Mortality of rare, threatened or endangered bird species may be reduced by encouraging birds, especially piping plover, black tern, Forster's tern, great egret, least bittern, and yellow-headed blackbird, to fly higher when they cross State Highway 49. Note that, almost by definition, the number of road-killed rare, threatened or endangered bird species is relatively low: 13.1 recorded individuals per year on average (SD = 18.5). The relatively low numbers and high standard deviation makes that it is relatively difficult to demonstrate that the mitigation measures are addressing the objective. Assuming that poles reduce collisions with flying birds by 64% (Bard et al., 2002), it would take 14 years to detect a reduction of 64% in strikes with flying rare, threatened or endangered birds (power analyses, 80% power, α=0.05), should the 64% reduction indeed exist.

Note that poles, shrubs/trees or embankments along the current embankment of State Highway 49, will affect landscape aesthetics and wildlife viewing opportunities, perhaps at an unacceptable level for several of the stakeholders. However, if the highway would be elevated and poles would be attached to the elevated highway, the poles may not affect landscape aesthetics or wildlife viewing opportunities from the current embankment on which State Highway 49 is located.

5.5. Objective 5: Reduce Mass Amphibian and Reptile Mortality

On average, there were 60.7 (SD 27.6) reptiles and amphibians recorded per year (Appendix A). Assuming that fencing or barrier walls reduce collisions with reptiles and amphibians by 94% (Dodd et al., 2004), it would take 3 years to detect a reduction of 94% in amphibian and reptile mortality (power analyses, 80% power, α=0.05), should the 94% reduction indeed exist. Bear in mind that amphibian mortality was likely severely underreported and also inconsistently reported.

On average there were 58.4 (SD 57.2) turtles recorded per year (Appendix A). Assuming that fencing or barrier walls reduce collisions with turtles by 94% (Dodd et al., 2004), it would take 3 years to detect a reduction of 95% in turtle mortality (power analyses, 80% power, α=0.05), should the 94% reduction indeed exist.

Another measure that may reduce turtle mortality on State Highway 49 is to provide alternative nesting sites away from the roadbed (Paterson et al., 2013). This may reduce the number of adult female turtles on and alongside State Highway 49. It may also lead to higher reproduction, perhaps somewhat compensating the high mortality associated with State Highway 49.

5.6. Final Recommendations

5.6.1. Re-routing

Re-routing State Highway 49 north of the marsh is likely the best option to avoid the negative effects of the highway and traffic on the birds in Horicon Marsh. It also eliminates the human safety risk of having people on and

alongside State Highway 49 who may be viewing wildlife and high speed and high volume traffic driving by. However, re-routing is also an option that comes with its own set of problems (see earlier).

5.6.2. Elevated Highway

The "next best" option would be to:

a. Elevate the highway for the road section that cuts through Horicon Marsh. It appears birdwatchers prefer the elevated highway to be on the north side of the current embankment.
b. Keep the embankment on which the current highway is situated to allow for different water level management regimes north and south of the highway, and turn the current highway on the embankment into a recreational, low volume, low speed route. Consider one-way traffic with ample parking space or large pull-outs. On certain road sections consider only one lane and no stopping opportunity to reduce the barrier effect of the low speed low volume road for wildlife (less unnatural substrate to cross). Also consider making it only accessible to non-motorized traffic (except for people who depend on motorized transport) or installing traffic calming measures (speed bumps, bulb-outs etc.).
c. Install poles (e.g. Bard et al., 2002) on the elevated roadway.

This option would address the following objectives:

a. Human safety concerns with vehicles pulling off and on State Highway 49 and people on and alongside the road.
b. Reduce mass bird mortality as the most frequently recorded road-killed species (Canada goose and American coot) can mostly walk safely across the low volume low speed road on the current embankment (likely a very substantial reduction, perhaps 80% or greater) and can cross safely under the new elevated highway (100% mortality reduction).
c. Reduce mass mortality further through the poles installed on the elevated roadway that encourage birds to fly higher (perhaps 64% mortality reduction).
d. Reduce mortality of rare, threatened or endangered species that fly across State Highway 49 (perhaps 64% mortality reduction).
e. Reduce mass amphibian and reptile mortality on the current embankment (likely a very substantial reduction, perhaps 80% or greater mortality reduction) and eliminate it for the elevated State Highway 49 altogether (100% mortality reduction).

Note that this option would not eliminate the embankment on which State Highway 49 is currently located. The embankment is likely to remain in place for water level management purposes and to provide access to the marsh for bird watchers.

5.6.3. Barrier Walls and Underpasses along the Current State Highway 49

A less preferred option would be to:

a. Keep State Highway 49 on its current embankment.
b. Create a limited number of pull-outs

so that people who want to watch wildlife can safely pull off the road.

c. In the immediate future, install barrier walls (about 0.60–1.20 m high on both sides of the highway, integrated into the road bed (i.e. "retaining walls). Make the barrier walls out of concrete or other material that will stand the test of time, vegetation maintenance, and the weight of the roadbed pushing against it. Allow for "mowing space" at the bottom and top of the barrier walls. Mowing is essential as vegetation growing up against the barrier walls would allow certain species to climb over the barrier wall. In addition, have a certain minimum mowing height (e.g. about 15 cm (6 inches) above the ground level) to minimize injuring and killing animals, specifically reptiles and amphibians.

d. In the immediate future, install underpasses in the roadbed (open roof structure so that air and soil temperature and humidity are similar to the surroundings, top of overpass is at the pavement level). Make the underpasses as high as possible. Currently there is only perhaps 0.6–0.9 m (2–3 ft) between the top of the pavement and the water level above which US Fish & Wildlife Service does not mind equal water levels on the north and south side of the highway, but in general the US Fish & Wildlife Service wants to be able to control the water levels north and south of the highway independently. Consider making the underpasses at least 5–7 m (16–23 ft) wide. Somewhat similar sized culverts for a wide variety of species, but specifically amphibians and reptiles, have been spaced about 350 m (1,150 ft) apart (Dodd et al., 2004).

e. On the long term, consider raising the height of the embankment so that taller barrier walls (e.g. 1.5 m (5 ft) high) and taller underpasses can be constructed (e.g. 1.2–4.0 m (4–13 ft) high). Consider making the underpasses at least 5–7 m (16–23 ft) wide.

f. Do not install poles along the current embankment because of the effects on landscape aesthetics and hindering the view for wildlife watchers. If poles are installed along the current embankment they would likely not have the support of natural resource management agencies and birdwatchers, and therefore the project would risk losing their support altogether.

This option would address the following objectives:

a. Human safety concerns with vehicles pulling off and on State Highway 49 and people on and alongside the road. However, people may still stop in dangerous road sections where there is no pull-out.

b. Reduce mass bird mortality as the most frequently recorded road-killed species (Canada goose and American coot)—at least the young individuals—can no longer access the actual travel lanes and they may or may not be willing to use the underpasses (likely a very substantial reduction, perhaps 80% or greater).

c. Reduce mass amphibian and reptile mortality on the current embankment (likely a very substantial reduction, perhaps 95% mortality reduction).

This option would not or only partially address the following objectives:

Human safety concerns with vehicles pulling off and on State Highway 49 and people on and alongside the road. Despite designated pull-outs people may still stop in dangerous road sections for birds where there is no pull-out.

Reduce mass mortality further for flying birds as there are no measures that encourage birds to fly higher over State Highway 49.

Reduce mortality of rare, threatened or endangered species that fly across State Highway 49 as there are no measures that encourage birds to fly higher.

5.6.4. No Changes to State Highway 49

The least preferred alternative is to not implement any measures that would address the problems with regard to State Highway 49 and wildlife through Horicon Marsh.

5.7. Cost Considerations

Avoidance, mitigation and compensation strategies are deployed regularly to address the negative effects of highways and traffic on human safety and wildlife. However, the costs associated with the avoidance, mitigation or compensation strategies are almost always regarded a substantial problem though they may only represent a fraction of the total project costs of highway (re)construction. This is partly because the strategies are often regarded as stand-alone projects after a road has been built, or after plans for new roads are all but complete. It is essential to incorporate these human safety and wildlife considerations in plans from

Table 6: Indicative costs measures.

Measure	Cost indication	Source
2.4 m high mesh wire fencing for large ungulates	$96,000 / km road length with fencing on both sides	Huijser et al. (2009)
Large mammal underpass	(7 m wide, 4–5 m high) $500,000	Huijser et al. (2009)
Turtle Fencing(excluding underpasses)	$31,000 / km road length ($50,000 /mi)	LA Times (2012)
Barrier wall (1.1 m (3.6 ft) high with 15 cm (6 inches) overhang) in combination with 8 culverts (varying sizes 0.9 m (3 ft) diameter,1.8×1.8 m (6×6 ft) 2.4×2.4 m (8×8 ft), all structures spanned 44 m (144 ft) of road width)	$3,6 million for 2.8 km (1.7 mile) of road length	Ocala Star Banner (2000)
Elevated roadway and bridges	$285,000,000 for 5.5 mi of elevated highway and bridges	National Park Service (2012)
Poles on bridge (3 m (10 ft) long metal poles, 5.1 cm (2 inches) diameter, 3.7 m (12 ft) spacing)	$5,900 for 122 poles	Bard et al. (2002)

the earliest phase onwards, and to not treat the efforts as an add-on. That is how avoidance, mitigation, and compensation strategies can be most effective, both with regard to human safety and wildlife as well as the costs.

While the model is heavily based on parameters associated with human safety, Huijser et al. (2009) illustrated that mitigation measures aimed at reducing collisions with large ungulates and at providing safe crossing opportunities are not necessarily a cost to society. In fact, there are many road sections in North America where it is more expensive to not implement wildlife mitigation than it is to invest in effective mitigation measures. There is no reason why this model cannot be expanded to include a wider range of parameters. These parameters may include those that relate to the values and costs associated with threatened and endangered species (e.g. a captive bred and released whooping crane represents an investment of about $100,000 (Wikipedia, 2014b)), and the economic importance of wildlife and nature based recreation (Carver & Caudill, 2013).

Indicative costs for the measures recommended are summarized in Table 6.

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7. APPENDIX A

Species group	Common name	Scientific name	Total (n)	%	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
Amphibians	Frog spp.	Anura	2954	96.95		1370			119	1218	245	2					
Amphibians	Leopard frog	*Rana pipiens*	90	2.95			81	7	2								
Amphibians	American toad	*Anaxyrus americanus*	2	0.07			1			1							
Amphibians	Spotted salamander	*Ambystoma maculatum*	1	0.03						1							
Total			3047	100.00	0	1370	82	7	121	1220	245	2	0	0	0	0	0
Birds	Canada goose	*Branta canadensis*	514	20.89	28	41	18	13	7	20	80	113	81	35	29	41	8
Birds	American coot	*Fulica americana*	360	14.63	51	64	26	97	2	16	9	27	27	21	8	5	7
Birds	Red-winged blackbird	*Agelaius phoeniceus*	297	12.07	40	87	9	17	13	21	31	19	28	11	4	13	4
Birds	Unidentifiable	Unidentifiable	221	8.98					19	55	46	38	21	13	7	9	13
Birds	Mallard	*Anas platyrhynchos*	165	6.71	34	26	12	20	32	8	9	6	5	7	1	3	2
Birds	Tree swallow	*Tachycineta bicolor*	126	5.12	7	15	21	6	3	13	30	4	3	14	8	2	
Birds	Least bittern	*Ixobrychus exilis*	102	4.15	41	12	1	2		31	6	4	5				
Birds	Sparrow spp.	Passeridae spp.	50	2.03	4	9	9	15	9		2	1	1				
Birds	Yellow-headed blackbird	*Xanthocephalus xanthocephalus*	45	1.83	18	9		1	2	5	3	2	5				
Birds	Marsh wren	*Cistothorus palustris*	36	1.46	6	1		1	2	4	13	3	6				
Birds	Blue-winged teal	*Anas discors*	35	1.42	7	6	4	1	5	4	2	2	2			2	
Birds	Swamp sparrow	*Melospiza georgiana*	32	1.30		2	3	4	2	10	5	6					
Birds	Virginia rail	*Rallus limicola*	29	1.18	3	6	3	2	4		2	5	1	1		1	1
Birds	Bird spp.	Aves	28	1.14	0	1	26	1									
Birds	Common gallinule	*Gallinula galeata*	28	1.14	9	12	2	2			1	2					
Birds	European starling	*Sturnus vulgaris*	28	1.14	3	3	1	5		2	10	2		1		1	
Birds	Sora	*Porzana carolina*	26	1.06	5	5	6	3	1	2	1	1		2			
Birds	Common pheasant	*Phasianus colchicus*	25	1.02	1	1	2	7	5	4	3	1			1		
Birds	Barn swallow	*Hirundo rustica*	20	0.81	0	5	9		1	1	4						
Birds	American yellow warbler	*Setophaga petechia*	19	0.77	2	8	2		2	4							1
Birds	Common yellowthroat	*Geothlypis trichas*	19	0.77	2	3	3	4	1		1	4				1	
Birds	Gull spp.	*Larus* spp.	18	0.73			1	2		2	2	5	2	1	3		
Birds	Black tern	*Chlidonias niger*	15	0.61	2	0	2			6	1	1	1	1			1
Birds	Cedar waxwing	*Bombycilla cedrorum*	14	0.57		1			1		8		4				
Birds	Swallow spp.	*Hirundinidae* spp.	14	0.57	0	0	5	3	5	1							
Birds	Common grackle	*Quiscalus quiscula*	13	0.53	3	1	1		2	1	1	3	1				
Birds	Pied-billed grebe	*Podilymbus podiceps*	13	0.53		4	2			2		1	1	1			2

(Continued)

Species group	Common name	Scientific name	Total (n)	%	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
Birds	Redhead	*Aythya americana*	12	0.49	6	3	1	1		1							
Birds	Great horned owl	*Bubo virginianus*	11	0.45		3		3	2	1	1	1					
Birds	Ring-billed gull	*Larus delawarensis*	11	0.45	1	5							1		1	3	
Birds	Ruddy duck	*Oxyura jamaicensis*	10	0.41		3				2		2	3				
Birds	Blackbird spp.	Unknown	8	0.33			2	3		2		1					
Birds	Black-crowned night heron	*Nycticorax nycticorax*	8	0.33	4	2	1	1									
Birds	Gray catbird	*Dumetella carolinensis*	7	0.28		1					4			1	1		
Birds	Killdeer	*Charadrius vociferus*	7	0.28	0	2	2		1								2
Birds	Chipping sparrow	*Spizella passerina*	6	0.24							2		1	3			
Birds	American bittern	*Botaurus lentiginosus*	5	0.20	2			1		1		1					
Birds	Forster's tern	*Sterna forsteri*	5	0.20							1	3	1				
Birds	Wild turkey	*Meleagris gallopavo*	5	0.20		1	1					2				1	
Birds	American goldfinch	*Carduelis tristis*	4	0.16	1	1			1			1					
Birds	American herring gull	*Larus argentatus*	4	0.16	3							1					
Birds	Warbler spp.	Passeriformes spp.	4	0.16		1	1				1					1	
Birds	Wilson's snipe	*Gallinago delicata*	4	0.16	1	1	1					1					
Birds	Yellow-rumped warbler	*Setophaga coronata*	4	0.16	1	3											
Birds	American robin	*Turdus migratorius*	3	0.12		1			1	1							
Birds	Red-tailed hawk	*Buteo jamaicensis*	3	0.12		2								1			
Birds	Semipalmated sandpiper	*Calidris pusilla*	3	0.12		1			1							1	
Birds	Songbird	Passeriformes spp.	3	0.12	0	0	3										
Birds	Wren spp.	*Troglodytes* spp.	3	0.12			2		1								
Birds	Brown-headed cowbird	*Molothrus ater*	2	0.08		1						1					
Birds	Great egret	*Ardea alba*	2	0.08								1			1		
Birds	Least sandpiper	*Calidris minutilla*	2	0.08													2
Birds	Mourning dove	*Zenaida macroura*	2	0.08							2						
Birds	Wood duck	*Aix sponsa*	2	0.08								1			1		
Birds	American black duck	*Anas rubripes*	1	0.04				1									
Birds	American crow	*Corvus brachyrhynchos*	1	0.04									1				
Birds	American golden plover	*Pluvialis dominica*	1	0.04									1				
Birds	American white pelican	*Pelecanus erythrorhynchos*	1	0.04								1					
Birds	Bank swallow	*Riparia riparia*	1	0.04		1											
Birds	Black-bellied plover	*Pluvialis squatarola*	1	0.04									1				
Birds	Chickadee	*Parus* spp.	1	0.04				1									
Birds	Chimney swift	*Chaetura pelagica*	1	0.04			1										
Birds	Cliff swallow	*Petrochelidon pyrrhonota*	1	0.04			1										
Birds	Duck spp.	Unknown	1	0.04		1											

Birds	Eastern screech owl	*Megascops asio*	1	0.04						1						
Birds	Flycatcher spp.	*Empidonax* spp.	1	0.04					1							
Birds	Great blue heron	*Ardea herodias*	1	0.04		1										
Birds	Great Crested Flycatcher	*Myiarchus crinitus*	1	0.04		1										
Birds	Greater yellowlegs	*Tringa melanoleuca*	1	0.04												1
Birds	Green heron	*Butorides virescens*	1	0.04	1											
Birds	Hawk sp.	*Buteo* spp.	1	0.04						1						
Birds	House sparrow	*Passer domesticus*	1	0.04			1									
Birds	House wren	*Troglodytes aedon*	1	0.04			1									
Birds	Litlle gull	*Larus minutus*	1	0.04										1		
Birds	Oriole spp.	*Icterus* spp.	1	0.04		1										
Birds	Piping plover	*Charadrius melodus*	1	0.04											1	
Birds	Shorebird spp.	*Charadriiformes spp.*	1	0.04		1										
Birds	Snow bunting	*Plectrophenax nivalis*	1	0.04								1				
Birds	Snowy owl	*Bubo scandiacus*	1	0.04	1											
Birds	Song sparrow	*Melospiza melodia*	1	0.04			1									
Birds	Western sandpiper	*Calidris mauri*	1	0.04			1									
Birds	Willow flycatcher	*Empidonax traillii*	1	0.04									1			
Total			2460	100.00	287	359	188	217	126	221	282	268	204	113	66	85	44
Fish	Bullhead spp.	*Ictalurus* spp.	2	100.00			1					1					
Invertebrates	Monarch butterfly	*Danaus plexippus*	7	100.00			1					4	1				1
Mammals	Muskrat	*Ondatra zibethicus*	3591	82.82	597	842	71	13	80	22	97	180	378	1089	169	44	9
Mammals	North American raccoon	*Procyon lotor*	252	5.81	36	40	14	17	9	10	29	31	14	15	16	8	13
Mammals	Virginia opossum	*Didelphis virginiana*	150	3.46	4	31	16	14	12	32	15	3		4	6	10	3
Mammals	White-tailed deer	*Odocoileus virginianus*	66	1.52	4	4	6	6	8	5	8	5	5	7	2	3	3
Mammals	Eastern cottontail	*Sylvilagus floridanus*	64	1.48			7	9	1	22	14		3	2		1	5
Mammals	Skunk spp.	*Mephitidae* spp.	47	1.08	8	0	5	4	5	3	4	5	2	1	4	3	3
Mammals	North American river otter	*Lontra canadensis*	33	0.76	2	2	2	8	2	1	1	7	1	2	1	2	2
Mammals	American mink	*Neovison vison*	22	0.51	2			1		2	6	5	2	1			3
Mammals	Vole spp.	Arvicolinae spp.	21	0.48			1	1	1	16				1	1		
Mammals	Rodent spp.	Rodentia spp.	11	0.25	0	6	5										
Mammals	Woodchuck	*Marmota monax*	11	0.25	1	2	1	2		1	1	1		2			
Mammals	North American beaver	*Castor canadensis*	9	0.21			2	2	1			1	2		1		
Mammals	Weasel spp.	*Mustela* spp.	8	0.18	0	0	4				3			1			

(Continued)

Species group	Common name	Scientific name	Total (n)	%	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
Mammals	Squirrel spp.	Sciuridae spp.	7	0.16	4	1				2							
Mammals	Coyote	*Canis latrans*	5	0.12		1					1		1		2		
Mammals	Eastern gray squirrel	*Sciurus carolinensis*	5	0.12			3							1		1	
Mammals	Mole spp.	Talpidae spp.	5	0.12						3			1	1			
Mammals	Bat spp.	Chiroptera spp.	4	0.09	0	0	2		2								
Mammals	Domestic cat	*Felis catus*	4	0.09		2				2							
Mammals	Eastern fox squirrel	*Sciurus niger*	4	0.09				1				1			1	1	
Mammals	Mouse spp.	Muridae spp.	3	0.07						3							
Mammals	Shrew	Soricidae spp.	3	0.07		2	1										
Mammals	Short-tailed weasel	*Mustela erminea*	2	0.05					1								1
Mammals	Unidentifiable	Unidentifiable	2	0.05						1				1			
Mammals	American short-tailed shrew	*Blarina brevicauda*	1	0.02		1											
Mammals	Chipmunk spp.	Sciuridae spp.	1	0.02				1									
Mammals	Ground squirrel spp.	Sciuridae spp.	1	0.02						1							
Mammals	Norway rat	*Rattus norvegicus*	1	0.02						1							
Mammals	Red fox	*Vulpes vulpes*	1	0.02		1											
Mammals	Star-nosed mole	*Condylura cristata*	1	0.02			1										
Mammals	Thirteen-lined ground squirrel	*Ictidomys tridecemlineatus*	1	0.02		1											
Total			4336	100.00	658	936	141	79	122	127	179	239	409	1128	203	73	42
Reptiles	Painted turtle	*Chrysemys picta*	525	66.54	54	69	40	66	34	47	63	43	33	25	27	10	14
Reptiles	Common snapping turtle	*Chelydra serpentina*	231	29.28	6	25	6	17	22	41	40	25	6	6	7	9	21
Reptiles	Garter snake	*Thamnophis* spp.	28	3.55	2	5	12		2		2	1	3		1		
Reptiles	Turtle spp.	Testudinata spp.	3	0.38								3					
Reptiles	Northern redbelly snake	*Storeria occipitomaculata*	1	0.13			1										
Reptiles	Unidentifiable	Unidentifiable	1	0.13						1							
Total			789	100.00	62	99	59	83	58	89	105	72	42	31	35	19	35
Unidenti-fiable	Unidentifiable	Unidentifiable	7	100.00	0	0	6					1					

50 Years Ago—Autumn 1965, Volume 27, number 3

A highlight from the 1965 Convention—James Fuller and Edward Peartree, both of Oconomowoc, teamed up to present their paper on "Dual Projection as a Visual Aid in Bird Identification." By using two slide projectors and two screens simultaneously, they demonstrated vividly how dual projection can be used to show differences between male and female birds of the same species or differences between two similar species.

From Field Notes—"One trend that appears to be developing is the drop in the number of Double-crested Cormorants. It would be interesting to know what is the cause of reduction in these birds not only in Wisconsin but also in Minnesota and Upper Michigan. I suspect that botulism is the culprit. This severe disease, caused by a deadly toxin, which is produced by bacteria, is definitely believed to be the reason for the dead Common Loons reported in the notes. (27 found dead along the beach in Door County on October 19 by Louise Erickson, who mentions that there have also been heavy kills in northern Michigan).—Charles A. Kemper

Season Summary: Hudsonian Godwit—One noted in Marinette County on Sept 6-7, (Carl Richter); one in Ozaukee county on October 10 (Ed Prins, Bill Weber, Bob Fiehweg). Marbled Godwit—A well-documented record comes from Green Bay (Tom Erdman and Gary Henkelmann) of a bird seen on October 24. Dovekie—A bird that flopped down exhausted at Ladysmith on November 12 died the next day (Lester Tiews). The specimen was later determined to be a Dovekie by Prof. J.J. Hickey at Madison. This is a third state record.

Barred Owl (*Strix varia*) Found Perched in Dane County in October, 2014 – Sunil Gopalan.

The Fall Season: 2014

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This fall and the previous fall, birders in Wisconsin and the eastern United States in general, experienced temperatures and precipitation that were within normal ranges. Along with this normalcy came a period of calm relative to weather extremes and calamities. Wisconsin birders, living within such pleasant conditions, might find it difficult to realize that the year 2014 was, worldwide, the warmest on record. June was a wet month followed by a dry July. July was without rain until a few scattered showers in its waning days. August continued this spell of dryness. The first August rain came on the morning of the twelfth. Although helpful in easing dry conditions in Wisconsin, this line of rain caused damaging floods to the east. Within a short span of time places in Michigan received 5+ inches of rain and parts of New York State better than 12 inches. August 13 found flash flooding across the Mid-Atlantic States. After its day of rain, Wisconsin experienced an idyllic period of cool, calm, sunny weather. The first cold front of note arrived on 11–13 September. After the coolness, wind, and rain of this front there followed another period of calm. On certain clear nights a September frost touched down upon sections of the state. November was the month that varied most from historic averages. What was variously termed an "omega block" or an "artic vortex" settled upon the Mid-West. This large area of cold, stable air caused the jet stream to stay far to our west and south. Thus, while Alaska and the West Coast were basking in above normal temperatures, the Mid-West suffered continued temperatures well below normal. These cool temperatures were accompanied by frequent snows. The early accumulation of snow melted slightly in a short warm spell in late-November. Having had snow on the ground for such a long period, this slight warming felt like a January thaw in November. With the early onset of cold and snow, one might have feared for a bitter winter, much like the winter before. What happened was that December was the opposite of November. Temperatures were above normal, the snow melted away, and rivers that had turned to ice became partly open. For the Christmas Bird Counts, the main hindrance to finding birds was not snow drifts and biting winds but, rather, days of light rain and heavy fog. This warm December came to a crisp end on Sunday, December 28 when a cold front sent temperatures spiraling to zero. After this cold front, Wisconsin became trapped within another omega block. The remainder of the winter was

cold and dry with the mainly barren ground exposed to subzero temperatures and fierce winds.

From the information gathered this does not seem to have been a strong fall for shorebirds. For some reason, shorebird numbers were down from recent years. This was most evident with the more common species. To show this drop there follows a comparison of the 2014 high numbers with their 10-year averages.

	2014	10-year Average
Lesser Yellowlegs	120	518
Semipalmated Sandpiper	45	187
Least Sandpiper	70	181
Baird's Sandpiper	12	45
Pectoral Sandpiper	152	970
Dunlin	76	557
Stilt Sandpiper	5	95

Last fall, under conditions similar to this fall, there were numerous late sightings of passerines. This year these birds came and went without any notable dates. After last year's bleak showing of winter finches, this fall was nearly as disappointing. The one species to show marked improvement was the Common Redpoll.

A record high 318 species was reported for the fall of 2014. The nearest number to this was 315 in 2006 followed by 314 in 2002 and 313 in 2007. Species not found were Gray Partridge and Loggerhead Shrike. Among the many great finds were Pacific Loon, Tricolored Heron, Yellow-crowned Night-Heron, White-faced Ibis, Yellow Rail, King Rail, Purple Sandpiper, Ruff, Red Phalarope, all three jaegers, Sabine's Gull, Laughing Gull, California Gull, Artic Tern, Northern Hawk-Owl, Anna's Hummingbird, Western Wood-Pewee, Kentucky Warbler, Yellow-throated Warbler, Summer and Western Tanager, Blue Grosbeak, and Hoary Redpoll.

There were ebird reports from all 72 counties. There were nine counties with 200+ species, which compares to eight in 2013 and 11 in 2012. Those nine, in order of how many species were found, were Dane (235), Ozaukee (226), Milwaukee (225), Brown (219), Manitowoc (214), Racine (213), Jefferson (204), Waukesha (204), and Douglas (202). These are the same eight counties as in 2013 plus Douglas joining the mix. There was but one county with fewer than 50 species, that being Langlade with 46. Typically the least birded area is Menominee. Last fall there were 18 species from Menominee. This year that number increased to 53.

I again want to thank the birders at the Eagle Valley Nature Preserve in Grant County along with the birders at Forest Beach in Ozaukee County for whatever information they were able to provide on raptor migration. The WSO also thanks the Western Great Lakes Bird and Bat Observatory. By way of this program, the birder Calvin Brennan was able to spend the entire fall season observing bird migration along the shore of Lake Michigan at Harrington Beach State Park in Ozaukee County. During this count, over 100,000 individuals from over 165 species were tabulated. Throughout the various species accounts to follow, not only for lake birds but also for passerines, one will continuously encounter the name of Brennan. His was a wonderful day-by-day account of fall migration and a great accompaniment to the state records.

Reports
(1 August to 30 November 2014)

Species marked with "*" need documentation that is sent to the records committee.

Greater White-fronted Goose—There were two reports. The first was of five birds on 29 October at Eagle Valley in Grant County (Thiele) followed by two birds on 2 November in Dane County (Lindemer).

Snow Goose—The first find was 11 September at Harrington Beach in Ozaukee County (Brennan) followed by 13 September at Nine Springs in Dane County (Dunnington). Reports of this goose then continued into the winter season. The high count was 95 on 9 November in Taylor County (Peche) followed by 15 on 15 September in Douglas County (Pendergast), 15 on 22 September in Ozaukee County (Brennan), and 15 on 24–26 September in Dunn County (Geraghty).

Ross's Goose—The Ross's Goose was found in 11 counties, which is record high for the fall season. The former high had been set just last fall with reports from 10 counties. The first date was on 27 September in Clark County (Belter) followed by 3 October in Dane County (Lindeman). The last finds were 15 November in Douglas County (Geraghty) followed by 17 November in Dane County (Bailey). The only count higher than a single individual was of four birds on 27 September in Clark County (Belter).

Cackling Goose—This goose was reported from 31 counties, which compares to 37 the fall before. The first date was 11 September in Brown County (Petherick) followed by 13 September in the counties of Iowa (Holschbach) and Rock (Cullum). Cackling Geese were then found into the winter season. The high count was 70 on 12 October in Rock County (Alkhan) followed by 65 on 4 October in Milwaukee County (Lubahn).

Canada Goose—The only counts of 2,000 or better were 2,000 on 6 November in Adams County (Anich) and 2,700 on 29 October in Outagamie County (Swelstad).

Mute Swan—Reported from 15 counties, which compares to 16 the previous two years. The only early season finds for this year-round resident were from the counties of Ashland and Wood. The high count was 18 on 30 November in Door County (Walsh) followed by eight on 21 October in Door County (Walsh).

Trumpeter Swan—Found in 33 counties, which compares to 34 in 2013. Early season reports came from the counties of Adam, Burnett, Dodge, Fond du Lac, Grant, Polk, St. Croix, Vilas, and Waukesha. These nine early season counties compare to seven in the fall of 2013. In past years the largest number of these swans were usually found in November bunched along the St. Croix River in Polk County. This year comparatively small numbers were found here. The high count for late November in Polk County was 24 on 25 November (Maercklein). This compares to highs in the upper 60s in 2013. The high count for the fall season was 38 on 15 October in Forest County (Backus) followed by 36 on 1 September in Burnett County (G. Meyer).

Tundra Swan—An unusual find that was approved by the records committee was of two birds observed from April through 27 August in Chippewa County (Ann Geraghty and Janine Polk). It was believed that one of the birds was ill but later recovered. The next sighting was not until 4 October in Brown County (Prestby and Walton) followed by 7 October in Marathon County (Hurlburt). Tundra Swans were then found into the winter season. The high count was 865 on 24 November in Monroe County (Epstein) followed by 650 on 29 November in Dane County (Treves).

Wood Duck—As is customary Wood Ducks were found throughout the period, with a number of finds extending into the winter season. In the period 9–16 September better than 300 of these ducks were found at Myrick Marsh in La Crosse County with the high being 355 on 16 September (Allen). Nearest to this were 300 at Crex Meadows in Burnett County on 1 September (Paulios).

Gadwall—Early season reports of this nesting species came from the counties of Brown, Dodge, Marathon, and Outagamie. As expected, numbers of Gadwall were found into the winter season. The only counts of better than 100 came from Lake Monona in Dane County with 209 on 9 November (A. Williams) and 160 on 12 November (Henrikson). These numbers are lower than the 400–500 reported last fall from various locations along the Mississippi River.

American Wigeon—Early season finds of this uncommon nester came from the counties of Chippewa, Dodge, Dunn, and Fond du Lac. As with most duck species, Wigeon were found into the winter season. The high count was 100 on 20 October in Vernon County (Roth-Reynolds) and 100 on 8 November in Grant County (Geraghty). This number is well below the 400–500 reported the previous fall from along the Mississippi River. This decrease is likely due to the lack of reports from birders along the Mississippi.

American Black Duck—Early season reports of this possible nester came from the counties of Ashland, Brown, Fond du Lac, Ozaukee, Taylor, and Vilas. The only counts of 20 or more came from Brown County, mainly from Bay Beach in Green Bay. The high count was 70 on 12 November (Swelstad).

Mallard—Estimates of 2,000+ were 2,600 on 17 November in Vernon County (Rossiter and Rothe), 2,500 on 12 November in Brown County (Prestby), and 2,200 on 8 November in Outagamie County (Swelstad).

Blue-winged Teal—The last dates were 4–5 November at Harrington Beach in Ozaukee County (Brennan). The high count was 250 on 30 September in Waukesha County (Bridge) followed by 235 on 3 October in Dane County (Henrikson).

Northern Shoveler—Early season reports of this nesting species came from the counties of Brown, Dodge, Fond du Lac, Outagamie, and Winnebago. Numbers of Shovelers remained into the winter season. The only locations to report better than 100 individuals were Nine Springs in Dane County and Cat Island in Brown County. The high count was 210 on 21 October at Nine Springs (Hannah) followed by 150 on 12 October at Nine Springs (Henrikson).

Northern Pintail—There were no early season reports of this uncommon nester. The first fall finds were on 16 August at Lake Barney in Dane County (Aldrich) and at Horicon Marsh in Dodge County (M. Cullen). There were then reports of Pintails remaining into the winter season. The only location to report 100 or more birds was the Horicon Marsh in Dodge County with the high count being 200 on 12 October (Tessen). This is a strong drop from numbers as high as 500 along the Mississippi River the previous fall. This seems to be due to a lack of Mississippi reports this fall.

Green-winged Teal—The last fall Green-winged Teal was seen on 30 November at Pike Lake in Washington County (Schaefer and Szymczak) and in Winnebago County (Ziebell). Reports of this species then continued into the winter season. The high count was 150 on 17 October in Waukesha County (Hahn) followed by 140 on 19 October in Buffalo County (Russell).

Canvasback—The first fall sighting was of a single bird on 9 August at Bay Beach in Brown County (Collison) followed by two birds on 16 August at Horicon Marsh in Dodge County (Cullen). There were then reports of single birds in late August in Door and Marinette Counties with two more sightings in the month of September. Reports of Canvasbacks did not become regular until the second week of October. This duck then remained into the winter season. Again, due to little birding along the Mississippi River, the large numbers found the fall before were absent. The only find of 1,000+ individuals was of an estimated 2,000 on 29 October in Vernon County (Duerksen).

Redhead—Early season reports of this nesting species came from the counties of Brown, Dane, Dodge, Dunn, Fond du Lac, Kewaunee, Marinette, Outagamie, and Winnebago. Counts of better than 500 were 620 on 13 November in Milwaukee County (Wanger) and 550 on 21 October in Ashland County (Anich).

Ring-necked Duck—The only early season reports of this nesting species came from the counties of Racine and Vilas. The Racine find (by Howe) was of a single bird that had remained through the summer. The two locations reporting consistently high numbers were Stricker's Pond in Dane County and Shelp Lake in Forest County. The high count at Shelp Lake was 1,000 on 25 October (Backes), with the high at Stricker's Pond being 400 on 11 November (Schwarz).

Greater Scaup—As is now regular, a number of Greater Scaup over summered along Lake Michigan in the City of Manitowoc. On the first of August, seven birds were found at this location (Sontag) and continued to be reported through the month of August. There was also a report of Greater Scaup from Kewaunee County on 2 August (Sinkula). The first indications of migrants were two birds on 14 August at Cat Island in Brown County (Prestby) and a single bird on 15 August at Port Washington in Ozaukee County (Dolan). An influx of Greater Scaup did not begin until the latter half of September, with double digit numbers appearing by early October. Cat Island in Brown County reported consistently high numbers with reports of 2,500+ in the period 29 October through 10 November. The high count was 4,500 on 1 November (Prestby). The only other location with such numbers was Milwaukee County where 2,500 were estimated on 23 November (Wanger).

Lesser Scaup—Early season reports came from the counties of Brown (Prestby) and Kewaunee (Sinkula) with double digit numbers being found by 13 August at Cat Island in Brown County (Prestby). The high count was 200 at Lake Tomahawk in Monroe County on 3 October (Epstein) and at Harrington Beach in Ozaukee County on 27 October (Brennan). This species is often reported in the thousands along the Mississippi River but such numbers were absent this fall.

Harlequin Duck—A male was reported near North Point in the City of Sheboygan from 7–10 November (first by Gray and Grgic). This bird was then replaced by a female in the period 14–27 November (first by King). These birds were never seen together on the same day.

Surf Scoter—The only September finds were 18 September off Wisconsin Point in Douglas County (Pendergast and Tessen) and 21 September off Wind Point in Racine County (Goldberg). Inland counties with this bird were Dane, Eau Claire, and Waukesha. As is customary, the densest concentrations were found off Milwaukee County with numerous reports of 20+ individuals. The high was 35 on 2 November (Bridge, Hahn, and Stutz). The only other county finding 20+ such scoters was Ozaukee with the high being 30 on 18 October (Tessen).

White-winged Scoter—The first fall bird was seen 3 October off Harrington Beach in Ozaukee County (Brennan) followed by sightings on 8 October at Harrington Breach in Ozaukee County (Brennan) and 8 October in Milwaukee County (Putnam). Of the three scoter species this

is the one most likely to be found inland. Inland counties this year were Dane, Grant, Jefferson, Oneida, and Portage. The high count was 150 on 15 November off Kohler Andre SP in Sheboygan County (King and Malcolm). This was considered a "possible underestimate" of the scoters flying past. The nearest total to this was 42 on 5 November off Harrington Beach SP in Ozaukee County (Brennan). In the history of the fall reports, there have been five other years with 100+ White-winged found on a single day in any one location. Those five years were: 1980 (160 on 1 November in Sheboygan County, Tessen), 1983 (140 on 11 November in Sheboygan County, Tessen), 1986 (132 on 29 November in Milwaukee County, Bontly), 1987 (125 on 8 November in Ozaukee County, Jeff Baughman), and 1994 (165 on 9 October in Ozaukee County, Tessen).

Black Scoter—The first fall date was 10 October off Harrington Beach SP in Ozaukee County (Brennan) followed by 11 October in Milwaukee County (Lubahn). Inland counties were Dane, Jefferson, Marathon, and Waukesha. The high count was 27 on 24 October in Milwaukee County (Wenzel) followed by 25 on 18 October in Ozaukee County (Tessen) and 22 on 2 November in Milwaukee County (Fissel, Heikkinen, and Schwarz).

Long-tailed Duck—The first report was on 20 September in Florence County (Bob and Kay Kavanagh). The next finds were of single birds on 2 and 4 October at Harrington Beach SP in Ozaukee County (Brennan). The 20 September report is record early. The previous arrival record date had been 25 September 1985 in Bayfield County by Scott Swengel. Inland sightings came from the counties of Chippewa, Dane, Florence, and Washington. The high count was 20,000 on 8 November at Point Beach in Manitowoc County (Tessen) followed by 1,000 on 15 November at Kohler-Andrea SP in Sheboygan County (Malcolm). The nearest count to these was a comparatively minor 45 birds on 16 November off Harrington Beach SP in Ozaukee County (Brennan). The only historic totals higher than 20,000 were 35,000 on 16 November 1998 at Point Beach in Manitowoc County (Tessen) and 27,000 on 9 November 2004 at Point Beach in Manitowoc County (Tessen).

Bufflehead—The first fall find was a single bird on both 20 August and 8 September off Washington Island in Door County (Walsh). The only other September sighting was a single bird on 12 September off the Schlitz Audubon Center in Milwaukee County (Bontly and Finney). It was not until mid-October that Bufflehead began to show with regularity. The first total greater than 10 birds came on 21 October in Ozaukee County (Brennan). The high count was 800 on 29 November from Lake Geneva in Walworth County (Szymczak) followed by 235 on 10 November off Harrington Beach SP in Ozaukee County (Brennan).

Common Goldeneye—Several Common Goldeneye over-summered near Cat Island in Brown County and were reported through the month of August from that location (Prestby). August sightings beyond Brown County were 12 August in Bayfield County (Dave and Kerry Sehloff) and 27–29 August in Oneida County (Frank). The first total of greater than 10 individuals did not arrive until 31 October at Harrington Beach in Ozaukee County (Brennan). The fall high counts did not come from Lake Michigan but from Winnebago County on 28 November with 1,110 (Ziebell) and the Mississippi River off Vernon County on 17 November with 1,075 (Rossiter and Rothe). Other fall highs were 800 on 19 November in Brown County (Prestby) and 600 on 30 November in Jefferson County (Stutz).

Hooded Merganser—This nesting species was found near the start of the season in 19 counties, which compares to 21 such counties in 2013 and 11 in 2012. The high count was 128 on 16 November at Harrington Beach in Ozaukee County (Brennan) followed by 75 on 16 November at Rock Lake in Jefferson County (Stutz) and 70 on 11 November at Stricker's Pond in Dane County (Schwarz).

Common Merganser—Reported early in the season from the counties of Ashland, Marathon, Marinette, Vilas, and Washburn. As early as 8 August there were 52 reported from Trout Lake in Vilas County (Stone), which is the same number found on this date in Vilas County in 2013 by Stone. The high count was 1,376 on 28 November in Winnebago County (Ziebell) followed by 1,000 on 25 November off Lake Winnebago in Fond du Lac County (Dave and Kerry Sehloff) and 750 on 23 November off Pewaukee Lake in Waukesha County (Szymczak).

Red-breasted Merganser—The only early season report of this uncommon nester was of an adult female with one young from 3–11 August at Ephraim in Door County (S. Peterson). The one other August find was of a single bird on 10 August in Vilas County (Koch). The first September date was 6 September in the counties of Door (Noeldner) and Ozaukee (Brennan). All the high counts came from Harrington Beach SP in Ozaukee County where Calvin Brennan conducted a daily count of migrant waterfowl. In the period 22 October through 12 November Brennan had numerous days with 2,000+ migrating

Red-breasted Mergansers. In the history of the fall reports there have been only 3 years in which 10,000+ Red-breasted Mergansers were counted from a single county in a single day. Those 3 years were 2000 (12,000 on 6 November in Manitowoc County, Tessen), 2006 (10,000 on 18 November in Ozaukee County, Seegert), and 2010 (12,000 on 17 November in Sheboygan County, Tessen). Brennan entered into this realm of rarified numbers with a count of 11,378 on 5 November. He approached these numbers with 9,996 on 29 October and 8,183 on 3 November. Outside of Harrington Beach, the only count of 2,000+ was of 2,200 on 1 November at Wind Point in Ozaukee County (Gustafson).

Ruddy Duck—This nesting species was reported in early August from the counties of Brown, Columbia, Dane, Dodge, Dunn, Fond du Lac, Outagamie, and Winnebago. Small numbers of Ruddy then remained into the winter season. The high count was 597 on 24 October at Harrington Beach SP in Ozaukee County (Brennan) followed by 459 on 19 October in Trempealeau County (Cameron).

Northern Bobwhite—A bird was heard in Dane County on 19 August (Schiffman). Also reported on 2 September in Taylor County (Peche).

Gray Partridge—As is now the custom, there were no fall finds. The last fall report of this species dates back to 18 November 2010 in Iowa County (Prestby).

Ring-necked Pheasant—Found in 36 counties, which compares to 37 in 2013. The high count was 72 on 11 October on Washington Island in Door County (Walsh) followed by 28 on 22 November at the Bong SRA in Kenosha County (Goldberg). In both instances the birds were claimed to have been recently released. In the history of the fall reports, the only count higher than 72 was 200 on 27 October 1975 in Dodge County (Sanford). These also were considered recently released birds.

Ruffed Grouse—Reported from 31 counties, which compares to 29 in 2013 and 28 in 2012. Outside of the northern third of the state plus the central sand counties, the counties reporting this grouse were Pepin, Sheboygan, and Vernon. The double digit counts were 16 on 13 September in Wood County (Hays) and 11 on 4 November in Douglas County (Sirvio).

Spruce Grouse—Reported from Forest and Vilas Counties. The only count better than two individuals was of nine birds on 1 November in Forest County (Pfitzinger and Dave and Kerry Sehloff). The only fall total higher than nine was 28 on 14 October 2010 in Vilas County (Anich).

Sharp-tailed Grouse—There were two reports from Douglas County and one report from Price County with the high count of three on 21 September in Douglas County (Geraghty).

Greater Prairie-Chicken—There were a number of reports from the Buena Vista Grasslands of Portage County and a single report from the Mead SWA in Marathon County (Belter). The high count was 30 on 16 November from Buena Vista (Zimmerman).

Wild Turkey—The high count was 99 on 27 November in Ozaukee County (Frank) followed by 50 on 22 November in Buffalo County (Geraghty and Reese) and 47 on 11 October in Door County (Walsh).

Red-throated Loon—Found in the Lake Superior counties of Ashland and Douglas, the Lake Michigan counties of Manitowoc, Milwaukee, Ozaukee, Racine, and Sheboygan, plus the inland counties of Dane (on Lake Waubesa) and Rock (on Lake Koshkonong). The first fall sightings were on 16 and 18 September at Wisconsin Point in Douglas County (Tessen) followed by 3 October at Harrington Beach in Ozaukee County (Brennan). The only historic arrival date earlier than 16 September is 5 September 2004 in Douglas County by Andy Paulios. For the majority of days in the period 11 October to 5 November, Brennan was able to find Red-throated Loons from his lookout spot at Harrington Beach. On the majority of these days there were multiple finds with the largest count being eight on 11 October. On 1 November there was a count of 10 from Ozaukee County (Tessen). The last fall date for the state was the finding of two birds on 26 November in Manitowoc County (Prestby) and another two that same day in Sheboygan County (Prestby).

Pacific Loon*—This loon was documented for 18 and 28 October at Harrington Beach State Park in Ozaukee County by Daryl Tessen. This was followed by a find on 19 November at Bradford Beach in Milwaukee County by Jym Mooney.

Common Loon—The first finds beyond nesting counties were 7 August on Washington Island in Door County (Walsh), 17 August in Waukesha County (Cullen), and 20 August in Brown County (Galbraith). Common Loons were then found into the winter season. In the history of the fall reports there have been but three years in which 100 or more Common Loons were

found on a single day within a single county. Those three years were 1978 (300 on 11 November in La Crosse County with no individual birder mentioned), 2002 (500 on 1 November in Ozaukee County, Tessen), and 2011 (107 on 21 October in Ozaukee County, Frank). This fall there were four dates on which better than 100 loons were counted. Those four were 13 October (145 at Ellison Bluff Park in Door County, Wilker), 23 October (116 at Bayview Park in Ashland County, Anich), 28 October (142 at Harrington Beach SP in Ozaukee County, Brennan), and 29 October (150 at Harrington Beach SP in Ozaukee County, Brennan).

Pied-billed Grebe—The last fall date was 30 November at Big Cedar Lake in Washington County (Schaefer and Szymczak) and 30 November in Winnebago County (Ziebell). The high count was 125 on 7 October in Dane County (A. William) and 125 on 12 October in Jefferson County (Stutz) followed by 90 on 5 October in Dane County (Schwarz).

Horned Grebe—Horned Grebes were reported in the month of August from the counties of Brown, Door, and Douglas. The first date was 28 August at Cat Island in Brown County (Beikle and Prestby) followed by 30 August in Douglas and 31 August in Door. As early as 31 August there were 78 counted off Washington Island in Door County (Howe). Numbers of this grebe were then found into the winter season. The high count was 179 on 6 October at Harrington Beach in Ozaukee County (Brennan) followed by 110 on 4 October at Harrington Beach (Brennan) and 110 on 7 November in Brown County (Prestby).

Red-necked Grebe—Reported from 15 counties, which compares to 19 in 2013 and 16 in 2012. Early season finds came from Crex Meadows in Burnett County (Haseleu) and Horicon Marsh in Dodge County (Haycraft). The last dates were 16 November at Lake Waubesa in Dane County (Thiessen) and 20 November at Harrington Beach SP in Ozaukee County (Brennan). The high count was eight on 8 November in Ozaukee County (Tessen) followed by four on 18 October in Ozaukee County (Tessen) and three on 19 October in Ashland County (Oksiuta).

Eared Grebe*—There were four reports. Those four were 23 August at Yellowstone Lake SP in Lafayette County (Nechvatal), 15–26 September at Dummer's Pond in Dunn County (Geraghty and Polk), 5 November off Texas Avenue in Milwaukee County (Lubahn), and 22–30 November at Festival Park in Racine County (first by Cuevas, Dixon, and Fare). The four areas reporting Eared Grebes is second only to the five in 1987.

Western Grebe*—A single individual was seen on 21 September off the City of Manitowoc lakefront (Sontag). A single bird was then found in the period 4–9 November and again in the period 13–18 November (Sontag and others). It is possible all sightings were of the same bird. The one other report was of a single bird in the City of Racine Harbor on 18 November (DeBoer and Fare).

Double-crested Cormorant—As expected there were consistent reports of thousands of cormorants at Cat Island in Brown County with the high of 8,000 coming on 5 and 29 September (Prestby). This is a lesser total than the 11,000 to 23,000 reported from this location last fall. High counts from other spots were 5,000 on 17 August off Washington Island in Door County (Walsh) and 3,974 on 18 September off Harrington Beach in Ozaukee County (Brennan).

American White Pelican—From the start of the period through 25 August there were nearly daily reports of better than 1,000 pelicans in the nesting colony at Cat Island in Brown County with the high count of 2,200 coming on 13 August (Prestby). The August high at the Horicon Marsh in Dodge County was 277 on 26 August (Frank), with 300 found on the Fond du Lac County side of Horicon Marsh on 16 August (Swelstad). By mid-July pelicans begin leaving their nesting colonies, many of them migrating to the Mississippi River in the southwestern part of the state. Indications of this movement were counts of 500 on 18 August on Lake Koshkonong in Jefferson County (Stutz) and 400 on 24 August in Trempealeau County (R. Anderson). As is now the norm, small numbers of pelicans remained into the winter season.

American Bittern—Reported from 20 counties, which compares to 23 in 2013. The last dates were 5 November in Winnebago County (Ward) and 7 November in Calumet County (Watson). The high count was six on 26 August at the Horicon Marsh in Dodge County (Dave and Kerry Sehloff).

Least Bittern—Reported from eight counties, which compares to four in 2013 and eight in 2012. The great majority of reports came from the Horicon Marsh of Dodge County. There were three finds in the month of September. Those three were the 6th at Horicon Marsh in Dodge County (Burnett-Hill), the 13th in Dane County (Laeser), and the 30th at Big Muskego Lake in Waukesha County (Gustafson). These were fol-

lowed by 1 October in Winnebago County (Ziebell). The high count was three on 11 and 16 August at the Horicon Marsh.

Great Blue Heron—As is customary, numbers of Great Blue Herons remained into the winter season. The high count was 30 on 9 August at the Horicon Marsh in Dodge County (Thiede) followed by 25 on 8 August at the Zeloski Marsh in Jefferson County (Stutz).

Great Egret—Reported from 45 counties, with compares to 39 in 2013. The last dates were 5 November at the Horicon Marsh in Dodge County (Dolan) and 15 November in Milwaukee County (Wood). The high count was 250 on 16 August from the Fond du Lac County side of Horicon Marsh followed by 200 on 4 August from the Dodge County side of Horicon Marsh (Wynn) and 120 on 24 August from the Zeloski Marsh of Jefferson County (Stutz).

Snowy Egret—A Snowy Egret was reported in the period 4–8 August at Bay Beach in Brown County. A Snowy was then reported for the period 22–28 August at nearby Cat Island in Brown County. A Snowy then re-appeared at Bay Beach in the period 6–10 September. These sightings may have been of the same individual. Another Snowy Egret was reported for the period 24–31 August at the Horicon Marsh in Dodge County with another sighting of a Snowy Egret in the period 11–21 October.

Tricolored Heron*—A Tricolored Heron was documented for 24–26 August from the Horicon Marsh of Dodge County (M. Gray and Tessen). This was but the seventh find of a Tricolored during the fall season. The most recent sighting dates back to 7 September 1996 at Horicon Marsh in Fond du Lac County (Sam Robbins).

Cattle Egret—Reported from the counties of Calumet, Dodge, Door, Lafayette, and Winnebago. In the period 9 August through 2 September there were numerous sightings of the Calumet birds, which were along Lake Shore Drive south of Brothertown near Lake Winnebago. The high estimate was 100 birds on 30 August (the Sehloffs) with most counts ranging from 77 to 81. This is a stretch of road along which strong numbers of Cattle Egrets have been found in past years. The count of 100 is a match for the record fall high set on 12 September 1993 in Dodge County (Domagalski). The last dates were 4 October in Calumet County (Murkowski) and 24 October in Lafayette County (Nechvatal).

Green Heron—The last October date was 29 October at Mitchell Park in Milwaukee County. This was followed by a find on 3 November at the Havenwoods SF in Milwaukee County (Bontly and Zehner). The only double digit totals were 12 on 21 August at Vernon Marsh in Waukesha County (Mertins) and 12 on 24 August at Zeloski Marsh in Jefferson County (Stutz).

Black-crowned Night-Heron—Reported from 18 counties, which compares to 19 in 2013 and 14 in 2012. The last October date was 27 October in Outagamie County (R. Mueller) with final finds on 11 November in Winnebago County (Ziebell) and 15 November near Collins Marsh in Manitowoc County (the Sehloffs). The high count was 23 on 4 August at Horicon Marsh in Dodge County (W. Mueller) followed by 12 on 22 August at Cat Island in Brown County (Swelstad).

Yellow-crowned Night-Heron*—The sole report was of a single immature bird that was first found on 29 July near Wausau in Marathon County (Belter) and was last seen on 23 August (Geraghty).

White-faced Ibis*—A grouping of 5–6 White-faced Ibis were first documented on 16 June along the Mascoutin Valley Trail in Winnebago County (Fissel and Heikkinen) with finds continuing through 9 September (last reported by Ziebell). There are only three state records later than 9 September. A Plegadis ibis was found on 9 October in Dane County (Bridge and Lindemer).

Turkey Vulture—The last fall date was 27 November in Ozaukee County (Frank). The high count was 100 on 28 September at the Horicon Marsh in Dodge County (Petherick) followed by 89 on 2 October in Dane County (Thiessen) and 83 on 19 September in Grant County (McKay).

Osprey—The last October find was on 31 October in Rock County (Cullum) followed by one November report on 4 November from High Cliff SP in Calumet County (L. Miller). The high count was 10 on 21 August at Collins Marsh in Manitowoc County (Woodcock) followed by nine on 4 November in Calumet County (L. Miller).

Bald Eagle—All of the high counts were from the month of November in counties that border the Mississippi River in the southwestern corner of the state. The high count was 265 on 30 November at Eagle Valley in Grant County (McKay) followed by 206 on 28 October at Eagle Valley (McKay) and 179 on 4 November at Eagle Valley (Bill Smith and Thiele).

Northern Harrier—This harrier was found throughout the season. The high count was 15 on 7 November in Iowa County (Kivikoski) followed by 12 on 6 November at the Killsnake SWA in Calumet County (Woodcock) and 12 on 11 November in Iowa County (Kivikoski).

Sharp-shinned Hawk—Early season reports came from the counties of Douglas (the LaValleys) and Portage (Zinda). The high count was 551 on 8 October at Eagle Valley in Grant County (B. Mandernack and Thiele) followed by 59 on 7 October at Eagle Valley (Thiele). Outside of Eagle Valley the high count was 39 on 5 October at Forest Beach in Ozaukee County (Schaefer).

Cooper's Hawk—The high count was 12 on 8 October at Eagle Valley in Grant County (Thiele) followed by 11 on 7 October at Eagle Valley (Thiele) and eight on 17 October at Kern Park in Milwaukee County (Collison).

Northern Goshawk—Reported from 10 counties, which compares to six in 2013. The most southern finds were from the counties of Ozaukee (Schaefer), Manitowoc (Joel and Patti Trick), and Vernon (Hayes). The only early season find was on 1 August in Oconto County (Mooren). The two birds found that day were the state high for the season.

Red-shouldered Hawk—Reported from 23 counties, which is a match for the 23 reported in 2013. The only count that was better than two individuals was of four on 7 September in Waupaca County (Nowak).

Broad-winged Hawk—The last dates were 12 October in Manitowoc County (Reasoner) and 20 October in Buffalo County (Spencer). There were no reports of particularly large kettles. The high count was 350 on 13 September in Jefferson County (Daley) followed by 300 on 13 September in Dane County (M. Anderson) and 259 on 21 September at Eagle Valley in Grant County (McKay).

Red-tailed Hawk—Without consistent reports from hawk watch locations, the only place showing numbers of Red-tailed higher than 10 came from Eagle Valley in Grant County. The high counts from Eagle Valley were 191 on 28 October (McKay), 55 on 4 November (Thiele), and 46 on 8 October (Thiele). The WSO needs to be thankful to the birders of Eagle Valley for their willingness to share information and thus give us at least some insight into raptor migration.

Rough-legged Hawk—The first sighting was on 9 October in the counties of Door (the Lukes) and Lafayette County (Nechvatal) with the next find not coming until 18 October in the counties of Manitowoc (Domagalski), Marathon (Backus and Belter), and Rock (Cullum). The only double digit count (that being 22) came on 16 November from the Buena Vista Marsh of Portage County (C. Zimmerman).

Golden Eagle—Reported from eight counties, which is a match for the number of counties in 2013. The first sighting was on 12 October at Forest Beach in Ozaukee County (many observers) followed by 17 October in Milwaukee County (Lubahn). The high was four on 22 November in Buffalo County (Geraghty and Reese).

Yellow Rail*—The one report was a documented find on 13 September at Crex Meadows in Burnett County (Pendergast).

King Rail*—The one report was a documented find on 8 August at the County V Ponds in Dane County (Lindemer).

Virginia Rail—Reported from 14 counties, which compares to 13 in 2013. The last dates were in the period 13–20 October from various locations in Waukesha County (Hahn) and 5 November in Winnebago County (Ziebell). Virginia Rails were later reported from a number of CBC circles in December. The high count was three on 3 and 6 August in the Horicon Marsh of Dodge County and on 13 October in Waukesha County.

Sora—Reported from 27 counties. This compares to 36 in 2013 and 46 in 2012. The last dates were 18 October at the Horicon Marsh in Dodge County (Goodman) and 24 October in Winnebago County (Ziebell). The high count was 40 on 2 September from the Clam River Flowage in Burnett County (Paulios) followed by four on 23 September in Waukesha County (Gustafson).

Common Gallinule—Reported from seven counties, which compares to eight in 2013 and 11 in 2012. The vast majority of reports came from the Horicon Marsh of Dodge and Fond du Lac Counties. The last dates were 10 and 13 October from the Horicon Marsh of Dodge County (last by Wood). The high count was 30 on 9 August (Thiede) followed by 23 on 15 August (Wood) with both numbers coming from the Horicon Marsh of Dodge County. Outside of the Horicon Marsh, the high count was eight on 2 September at the Schoeneberg Marsh in Columbia County (S. Miller).

American Coot—Found throughout the period with numbers remaining into the winter. Consistent reports of 3,000+ coots came from Eagle Valley in Grant County (with a high of 4,000 on 17 October by Thiele), Rock Lake in Jefferson County (with a high of 6,000 on various dates in the period 12 October to 3 November by Daley and Stutz), Pewaukee Lake in Waukesha County (with a high of 4,100 on 23 October by Hahn), and 5,000 on 30 October in Winnebago County (Ziebell).

Sandhill Crane—Despite a cool November, large numbers of Sandhill Cranes remained into the winter season. Although there were reports of 1,000+ cranes from a number of locations, the headlines in crane numbers came from the Crex Meadows SWA in Burnett County. On 2 November Robin Maercklein made a count of 8,030 with the added statement "Staff told us that currently 24,000 were present." On 25 October Jerry Griggs made an estimate of 14,000 with a statement that there may have been as many as 20,000. On 8 November Griggs made an estimate of 11,000. Next to Crex Meadows, the high count was 3,199 at the Sixth Avenue Marsh in Adams County (Reese). The numbers from Crex Meadows are record high for the fall season. The former high had been 8,500 on 18 October 2008 at Crex Meadows by Larry Persico.

Whooping Crane—Reported from 11 counties, which compares to 12 in 2013 and 17 in 2012. Early season finds came from the counties of Adams, Dodge, Fond du Lac, and Juneau. The last date was 17 November in Dane County (Hottman). The high count was nine on 12 September at the Necedah NWR in Juneau County (Huebner).

Black-necked Stilt—The Black-necked Stilts that spent the summer at Horicon Marsh in both Dodge and Fond du Lac counties were last seen in Dodge County on 31 August. The last sighting was by Tom Wood.

American Avocet—There were fall reports from seven counties, which compares to 11 in 2013. The first fall migrant was found 12 July at Cat Island in Brown County (Prestby). The last September sighting was on 15 September at Wisconsin Point in Douglas County (Nienhaus, Pendergast, and Tessen). Four birds were then documented for 4 November at Harrington Beach SP in Ozaukee County (Brennan). The 4 November report is but the seventh fall record for the month of November. The fall high was seven on 25 August at Cat Island in Brown County (Prestby).

Black-bellied Plover—The first fall migrant was found on 13 July in Racine County (Goldberg) followed by 17 July in Manitowoc County (Sontag). After sightings on 24 October in the counties of Ashland (Anich) and Racine (Goldberg), the last date was 30 October at Cat Island in Brown County (Swelstad). The high count was 52 on 24 August in Dodge County (Cook) followed by 40 on 12 October at Cat Island in Brown County (Prestby and Walton).

American Golden-Plover—The first fall date was 12 August in the counties of Ozaukee (W. Mueller) and Racine (Howe). The last dates were 18 October in Marathon County (Backus, Belter, and Hurlburt) and 29 October at Cat Island in Brown County (Prestby). The high count was 80 on 9 October at the Horicon Marsh of Dodge County (Tessen) followed by 20 on 27 September at Cat Island in Brown County (Prestby and Walton) and 18 on 12 October at Cat Island (Swelstad).

Semipalmated Plover—The first fall migrants arrived in July of the summer season. The last dates were of a bird in the period 16–21 October at the impoundment in Manitowoc County (Sontag) followed by an individual in the period 20–24 October at McKinley Beach in Milwaukee County (last by Wanger and Wenzel). The high was 21 on 4–5 September in Manitowoc County (Sontag and Woodcock) followed by 16 on 5 August in Clark County (Belter).

Piping Plover—There were two fall reports. The first was of one bird over the period 17–23 August at North Point in Sheboygan County (first by Aaron and Jim Holschbach) followed by an individual on 24 August at Wisconsin Point in Douglas County (Svingen).

Killdeer—The last fall find was on 29 November at North Point in Sheboygan County (Haycraft, Walsh, and Yoerger). The high count was 250 on 30 August in Rock County (Boone) followed by 180 on 11 August in Winnebago County (Tessen).

Spotted Sandpiper—The last October dates were 26 October in Racine County (Havel) and 30 October in Fond du Lac County (Boehlke). These were followed by a find on four November at the Horicon Marsh in Dodge County (Heikkinen). All the high counts came from Cat Island in Brown County with the highest being 70 on 17 August (Prestby). These 70 were record high for the fall season, the old record being 50 set on 2 September 1982 in Winnebago County (Ziebell).

Solitary Sandpiper—The bulk of fall arrivals occurred in July of the summer season. The last dates were 10 October in Dane County (Hannah) and 12 October in Lafayette County (Nechvatal). The high count was 24 on 10 August in Dodge County (M. Weber) followed by 19 on 3 August at Nine Springs in Dane County (Paul and Stanley Senner).

Greater Yellowlegs—The last date was 11 November in the counties of Dane (Lindemer) and Waukesha (Hahn). The high count was 60 on 25 October in Dodge County (Leonard) followed by 51 on 23 October at another location in Dodge County (Frank).

Willet—The only fall arrival during the summer season was 12 July in Racine County (Howe). This was followed by four finds during the fall season. Those four were 4 August in Douglas County (the LaValleys); on 26 August one bird at Samuel Myers Park in Racine County (Gustafson and Horn); on 28 August two birds at North Point in Sheboygan County (Howe and R. Mueller); and 1 September four birds at Cat Island in Brown County (Prestby and Schilke).

Lesser Yellowlegs—All of the November reports came from the Horicon Marsh of Dodge County with the last date being 9 November (Szal). The high count was 120 on 6 August from the Horicon Marsh of Dodge County (Tessen) followed by 65 on 18 August at the Zeloski Marsh in Jefferson County (Stutz).

Upland Sandpiper—The only fall find was of a single bird on 31 August at Lost Creek in Portage County (Janz).

Whimbrel—There were six reports from five counties. The first find was on 22 August at Cat Island in Brown County (Prestby) with the last on 26 September at Lakeshore SP in Milwaukee County (Edlhuber). All sightings were of one or two individuals.

Hudsonian Godwit—There were four fall reports. They were: on 25 August one bird in Brown County (Joel Trick); on 26 August one bird in Racine County (Gustafson and Horn); on 30 August four birds in Manitowoc County (Watson); and then 18 October two birds in Kenosha County (Veltman).

Marbled Godwit—There were two fall reports. The first was of 13 birds on 28 August at Cat Island in Brown County (Beilke and Prestby). The second was of 12 birds on 6 September at Cat Island (Prestby).

Ruddy Turnstone—The first fall migrant was found in the period 25–30 July at Cat Island in Brown County (Prestby). The first August find was not until 10 August at Cat Island in Brown County (Swelstad) followed by 24 August at Wisconsin Point in Douglas County (Keyel). Birders at Jaegerfest at Wisconsin Point were able to view a lone Turnstone on 19–20 September. The 20 September date was also the last date for the fall season, matching a find that same day in Milwaukee County (Lubahn). Most reports were of one or two individuals. The high count was five on 24 August at Wisconsin Point (Keyel).

Red Knot—The first fall find was over the period 31 July through 1 August at North Beach in Racine County (Fare and Pugh) followed by 1 August in Sauk County (many birders). A great many Jaegerfest birders were able to see a Red Knot on 21 September at Wisconsin Point in Douglas County. The last sighting was on 28 September from Cat Island in Brown County (Prestby and Walton).

Sanderling—The first fall migrant was found on 14 July at Cat Island in Brown County (Prestby). The last October dates were 24 and 27 October at Cat Island in Brown County (Prestby). The one November find was 2 November at Atwater Park in Milwaukee County (numerous birders). The high count was 60 on 13 September at Bradford Beach in Milwaukee County (Wilke) followed by 55 on 8 October at Cat Island in Brown County (Prestby).

Semipalmated Sandpiper—The bulk of fall migrants arrived in July of the summer season. The last dates were: 14 October at the Horicon Marsh of Dodge County (Gustafson); 20 October at Cat Island in Brown County (Walton); and 6 November at the Horicon Marsh of Dodge County (Tessen). The high count was 45 on 16 August at Cat Island in Brown County (Prestby and Yoerger) followed by 33 on 16 August in Manitowoc County (Aaron and Jim Holschbach) and 30 on 5 August in Clark County (Belter).

Western Sandpiper*—There were two fall reports. The first was 8–9 September in Ashland County (first by Anich and Brady) with the second on 14–17 September at Bradford Beach in Milwaukee County (first by Edlhuber, Jacoby, and Luedtke).

Least Sandpiper—The bulk of fall arrivals took place in July of the summer season. The last October dates were 18 October in Marathon County (Backus) and 21 October in Dodge County (Mezera). These were followed by a find of three birds on 9 November at the Horicon

Marsh in Dodge County (Szal). The high count was 70 on 5 August in Clark County (Belter) followed by 45 on 2 August in Sauk County (Bridge) and 45 on 14 August in Brown County (Prestby).

White-rumped Sandpiper—Reported from seven counties, which is a drop from 11 in 2012 and 2013. The first fall find was on 2 August at the Horicon Marsh in Dodge County (Tessen) followed by 17 August at Muscoda in Grant County (Ouren) and 18 August at Cat Island in Brown County (Swelstad). The last dates were 18 October in Marathon County (Belter), 20 October at Cat Island in Brown County (Walton), and 25 October in Winnebago County (Malcolm). The only count of better than one individual was of three on 10 October at Cat Island in Brown County (Sonneland and Swelstad) and on 18 October in Marathon County (Belter).

Baird's Sandpiper—The first fall migrant was found 11 July in Dane County (Thiessen). The last September date was over the period 24–26 September along the Manitowoc City Lakefront (the Kocoureks, Sontag, and Woodcock). This was followed by a single bird on 12 October at Cat Island in Brown County (Prestby and Watson). The only count better than 10 was 12 on 7 September at Cat Island in Brown County (Watson).

Pectoral Sandpiper—The bulk of fall migrants arrived in July of the summer season. November departure dates were 1 November at the Horicon Marsh in Dodge County (W. Mueller), 7 November at the Bong SRA in Kenosha County (Wood), and 8–9 November at the Horicon Marsh of Dodge County (Hahn and Szal). The only counts of better than 18 birds were 50 on 5 August from Clark County (Belter) and 152 on 25 August at the DM Ponds in Dane (Lindemer). These are well below the high counts of 200+ from various locations in 2013.

Purple Sandpiper—There was one report, which was of a single bird on 31 October at Harrington Beach in Ozaukee County (Brennan).

Dunlin—Reported from 13 counties, which compares to 18 in 2013. The only August report came on 16 August from the Arena Boat Landing in Iowa County (Snitkin). The next find did not come until 8 September along the Manitowoc City Lakefront (Prestby and Sontag) followed by 14 September at the Horicon Marsh of Dodge County (Allison). The first double digit counts did not come until October. The high count was 76 on 27 October at Cat Island in Brown County (Prestby) followed by 47 on 29 October at Cat Island (Prestby).

Stilt Sandpiper—The first fall migrants were found 4 July at the Horicon Marsh of Dodge County (Howe and Wegner) followed by 6 July at Bay Beach in Brown County (Wanger). October departure dates were 3 October in Manitowoc County (Sontag), 11–12 October at the Horicon Marsh in Dodge County (Malcolm and Tessen), and 23 October near Waupun in Dodge County (Frank). The high count was but five from a number of counties and dates. To find a fall with fewer than five individuals one would need to go back to 1981 when an abbreviated fall report did not include the Stilt Sandpiper.

Buff-breasted Sandpiper—Reported from five counties, which is a significant drop from 19 in 2013 and 16 in both 2011 and 2012. The only August finds were 21–30 August at the Anderson Sod Farm in Winnebago County (Gray and Tessen), 25–30 August at Cat Island in Brown County (Prestby), and 30 August at the Wind Lake Sod Farm in Racine County (Winter). The last dates were 15 September at Wisconsin Point in Douglas County (Pendergast) and 17 September at Cat Island in Brown County (Prestby). All counts of better than two individuals came from Cat Island in Brown County with a high of nine on 6 September (Prestby).

Ruff*—Documented for 10 August in Dodge County by Magill Weber. This is the tenth state record for the fall season.

Short-billed Dowitcher—The bulk of fall migrants arrived in July of the summer season. Reported from 17 counties, which is a match to the 17 of 2013. The last September dates were 7 September in Dodge County (Evanson and Heikkinen) and 8 September at Cat Island in Brown County (Prestby). These were followed by a documented find on 23 October from Dodge County (Frank). The 23 October date is record late. The previous record had been 17 October 1991 in Manitowoc County by Charles Sontag. The only double digit count was 14 on 29 August in Dodge County (Heikkinen and Pope).

Long-billed Dowitcher—Reported from five counties, which is a significant slip from 14 in 2013. The first fall find was 29 August at the intersection of County A and Highway 151 in Dodge County (Heikkinen and Pope) followed by 30–31 August from the Horicon Marsh of Dodge County (Wood). The last October date was 28 October from the Horicon Marsh of Dodge County (Tessen). This was followed by reports over the period 1–8 November at the Horicon Marsh of Dodge County (last report from Hahn). The high count was 50 on 28 October from the Horicon Marsh of Dodge County

(Tessen) followed by 37 on 26 October (Wood) from the Horicon Marsh of Dodge County.

Wilson's Snipe—This nesting species was found near the start of the season in 10 counties, which compares to seven in 2013. The last fall dates were 24–25 November in different locations in Dane County (Baker and Swift) and 25 November in Milwaukee County (Wood). The high count was 40 on 9 November at the Mead SWA in Marathon County (Belter) followed by 24 on 5 September in Portage County (Pendergast).

American Woodcock—Early season reports came from the counties of Clark (Lund), Douglas (the LaValleys), and Vilas (Lumpkin). November departure dates were 3 November at Eagle Valley in Grant County (Thiele), 6 November at Harrington Beach SP in Ozaukee County (Brennan), and 12 November in Dane County (Schaning). The one double digit count was 15 on 6 August in Vilas County (Lumpkin).

Wilson's Phalarope—Reported from six counties, which compares poorly to 11 in 2013. Early season reports came from the counties of Dane, Fond du Lac, and Jefferson. The only September find was on 13 September at Goose Pond in Columbia County (Walsh). The high count was three on 8 August at Zeloski Marsh in Jefferson County (Stutz) and on 14 and 17 August along the Mascoutin Valley State Trail in Winnebago County (Stratton and Wanger).

Red-necked Phalarope—The first fall migrant was found 16 July in Dane County (Schwarz) followed by 17 July in Dodge County (Wood). There were six fall season reports. Those six were 6 August in Dodge County with four birds (Tessen), 8 August in Outagamie County with three birds (R. Mueller), 12–18 August in Dunn County with two and three birds (Cameron, Geraghty, and Polk), 16 August in Chippewa County with two birds (Geraghty), 28 August in Brown County with three birds (Beilke and Prestby), and 30 August in Dodge County with one bird (Wood).

Red Phalarope*—Documented for 3 October at Cat Island in Brown County (Prestby) and 16 October in Racine County (Vickery). Of 39 state records for this species, 36 are from the fall season.

Pomarine Jaeger*—Documented for 17 September (Pendergast) and 27 September (Fall) at Wisconsin Point in Douglas County. These were the twentieth and twenty-first state records, of which 17 are from the fall season.

Parasitic Jaeger—All August reports of Parasitic Jaegers came from Wisconsin Point in Douglas County. The first date was 20 August (Keyel). This species of jaeger continued to be found on a regular basis at Wisconsin Point through 2 October. The last reports from this location were 18–19 October (Hendrickson, R. Johnson, and Svingen). The high count was five on 17 September (Pendergast and Tessen) and five on 29 September (Svingen). Outside of Wisconsin Point, this jaeger was found on 9 September at Cat Island in Brown County (Prestby), 19 September at Bradford Beach in Milwaukee County (Edlhuber and Mooney), and 20 September at Wind Point in Racine County (Dixon).

Long-tailed Jaeger*—Documented for 17 September at Wisconsin Point in Douglas County by Rob Pendergast. This was the eighteenth state record, of which sixteen are for the fall season.

Sabine's Gull*—Documented for 16–17 and 21 September at Wisconsin Point in Douglas County (Pendergast and Tessen) with a high count of three on 17 September (Tessen). Also documented on 18 and 29 September from Bayfield County (Anich and Brady).

Bonaparte's Gull—The last dates were 15 November at Wisconsin Point in Douglas County (Geraghty), 16 November in Grant County (Haycraft and Yoerger), and 14–19 November at Harrington Beach SP in Ozaukee County (Brennan). All counts of better than 100 individuals came over the period 25 October through 10 November from Harrington Beach SP in Ozaukee County (Brennan). The high count was 162 on 10 November (Brennan).

Little Gull*—The Little Gulls that had been found along the Manitowoc City lakefront through the summer continued to be seen into early September, with the last find on 6 September (Ristow).

Laughing Gull*—The sole report was of a single bird on 23 October at the Johnson Creek Landfill in Jefferson County (Bridge). There are only three state records of a date later than 23 October.

Franklin's Gull—Reported from seven counties, which compares to nine in 2013. The last dates were 27 October at the County Landfill in Dane County (Thiessen) and 28 October at Lake Altoona in Eau Claire County (Polk). The high count was four on 6 October at Lake Barney in Dane County (Thiessen).

Ring-billed Gull—The counties of Dane, Douglas, Fond du Lac, Jefferson, Kewaunee, Ozaukee, Racine, and Rock reported numbers of 1,000+. The most consistent high numbers came from Wisconsin Point in Douglas County in the period 20 August through 14 October. The high count was 5,500 on 2 October (Svingen). Outside of Wisconsin Point, the high counts were 5,000 on 18 October at Rock Lake in Jefferson County (Stutz) and 5,000 on 15 November in Rock County (Haycraft and Yoerger).

California Gull*—A first cycle bird was found 19–20 October at Wisconsin Point in Douglas County with numerous birders providing documentation. This was the eighteenth state record for this gull.

Herring Gull—Numbers of 1,000+ were found in the counties of Brown, Douglas, Jefferson, Manitowoc and Milwaukee. The reports of high numbers were again most consistent from Wisconsin Point in Douglas County with the high count of 2,500 coming on 16 October (Svingen). Outside of Wisconsin Point, the high count was 2,000 on 15 November in Milwaukee County (Hunter).

Thayer's Gull—Reported from 10 counties, which compares to 11 in 2013 and 10 in 2012. Of these 10 counties, only three of them (Douglas, Milwaukee, and Ozaukee) bordered one of the Great Lakes. By far the most reports came from Wisconsin Point in Douglas County. The first find was on 29–30 September at Wisconsin Point (Nienhaus and Svingen). There were numerous reports of five or more Thayer's from Wisconsin Point. The high count was 10 on 19 October and 4 November (R. Johnson and Svingen).

Iceland Gull—The only counties reporting were Douglas, Dane, and Outagamie with, again, the great majority of the finds coming from Wisconsin Point in Douglas County. The first find was 19 October at Wisconsin Point in Douglas County (Hendrickson, R. Johnson, and Svingen) followed by 26 October at Wisconsin Point (Jan and Larry Kraemer and Svingen). The high count was two birds over the period 4–8 November at Wisconsin Point (Svingen).

Lesser Black-backed Gull—Reported from 15 counties, which compares to 13 in 2013 and 11 in 2011. Fifteen counties is a record high for the fall season. Inland counties reporting this gull were Dane, Dodge, Eau Claire, Jefferson, Outagamie, and Waukesha. Early season reports came from the counties of Manitowoc, Milwaukee, and Sheboygan. Counts of better than two birds were: six on 5 August at North Point in Sheboygan County (Stutz), four on 30 September in the City of Milwaukee Harbor (Lubahn), and three on 16 October from the Johnson Creek Landfill in Jefferson County (Stutz).

Glaucous Gull—Reported from 11 counties, which compares to nine in 2013. Inland counties were Dane, Jefferson, and Outagamie. The first find was 13 September along the City of Manitowoc Lakefront (Sontag) followed by 18 September at the same location (Steinmetz). The next report came 8 October from McKinley Beach in Milwaukee County (Bontly, Mooney, and Wanger). The high was three on 15 November in Manitowoc County (Gray) and three on 4, 11, and 17 November at Harrington Beach in Ozaukee County (Brennan).

Great Black-backed Gull—Reported from 11 counties, which is a match with 2013. Inland counties were Eau Claire (Geraghty and Polk) and Jefferson (Stutz). Early season finds came from the counties of Manitowoc (Sontag) and Ozaukee (Loss). The high count was eight on 13 November at Harrington Beach SP in Ozaukee County (Brennan) followed by six on 10 and 24 November at Cat Island in Brown County (Prestby).

Caspian Tern—The last dates were 9 October in Ozaukee County (Tessen), 9 October at Eagle Valley in Grant County (Kruse), and 16 October in Door County (the Lukes). There were consistent reports of 50+ terns from Cat Island in Brown County including the two finds that were better than 100. Those two were 110 on 14 August and 105 on 25 August (Prestby). Outside of Cat Island, the high counts were 76 on 12 August at North Point in Sheboygan County (Schroeder) and 67 on 2 August in Manitowoc (Sontag).

Black Tern—Reported from 21 counties, which compares to 18 in 2013 and 17 in 2012. This tern was found in the early days of September in the counties of Ashland, Dane, Dodge, and Polk with the late date being 5 September in Dane County (Lindemer). This was followed by the sighting of a single bird on 15 September on Lake Koshkonong in Jefferson County (Boone). The great majority of reports came from the Horicon Marsh of Dodge and Fond du Lac Counties. This marsh also provided the high count of 150 on 9 August (Winesett) followed by 90 on 4 August (W. Mueller).

Common Tern—Reported from nine counties, which compares to 11 in 2013 and 10 in 2012. All reporting counties bordered one of the Great Lakes. The last dates were 6 October in Douglas County (Lau), 6 October in Ozaukee

County (Brennan), and 13 October in Kewaunee County (Prestby). The high count was 130 on 6 September at Cat Island in Brown County (Prestby) followed by 105 on 10 September at Cat Island (Prestby). Outside of Cat Island, the high was 50 on 28 September at Wisconsin Point in Douglas County (Lau).

Artic Tern*—One bird was documented and accepted for 15 September at Wisconsin Point in Douglas County (Pendergast). This date was record early for the fall season, the record having been 19 September 2001 at Wisconsin Point by Robbye Johnson. Of seven fall records, six have come from Wisconsin Point.

Forster's Tern—Reported from 23 counties, which compares to 19 in 2013. Unlike the Common Tern, which had no reports from inland counties, 13 of the 23 counties noting Forster's were from inland locations. Early season reports came from the counties of Brown, Dane, Dodge, Fond du Lac, Manitowoc, Sauk, and Winnebago. The last dates were 17 October on Lake Winnebago in Fond du Lac County (the Sehloffs) and 21 October at Cat Island in Brown County (Swelstad). The high count was 60 on 3August at Cat Island in Brown County (Prestby) followed by 40 at Cat Island on 5 August (Sonneland and Swelstad). Beyond Cat Island the high was 19 on 3 October in Bayfield County (Anich and Brady).

Rock Pigeon—The high count was 300 on 23 November in Milwaukee County (McKinley) followed by 262 on 9 November in Barron County (Maercklein).

Eurasian Collared-Dove—Reported from seven counties, which is a drop from 12 in 2013. The only count higher than four was 11 on 18 October in Dunn County (Geraghty).

Mourning Dove—The high count was 140 on 22 September in Wood County (Benson) followed by 100 on 17 August in Washington County (Frank).

Yellow-billed Cuckoo—Reported from 21 counties, which compares to 13 in 2013 and 23 in 2012. There were early October finds in the counties of Jefferson, Manitowoc, Ozaukee, and Rock with the last finds on 12 October in Door County (the Lukes) and 12 October at Nelson Dewey SP in Grant County (Thiele). The high count was three on 24 August at the Zeloski Marsh in Jefferson County (Stutz).

Black-billed Cuckoo—Reported from 21 counties, which compares to 22 in 2013. October departure dates were 5 October at Bender Park in Milwaukee County (R. Wiskowski), 7 October at Havenwoods SF in Milwaukee County (Wood), and 9 October at Warnimont Park in Milwaukee County (Wood). All counts were of one or two individuals.

Eastern Screech-Owl—Reported from 27 counties, which compares to 19 in 2013 and 21 in 2012. The most northern counties were Door, Kewaunee, Oconto, Pierce, and Taylor. The high count was four on 8 October in Winnebago County (Benson) and four on 26 October from Grant Park in Milwaukee County (Wanger).

Great Horned Owl—The high count was four on 30 October from Fox Point in Milwaukee County (Petherick) and four on 26 November from Eagle Valley in Grant County (Thiele).

Snowy Owl—Reported from 21 counties, which compares to 12 in both 2012 and 2013 and 42 in 2011. Although these 21 counties are only half the number reporting Snowy Owls in 2011, these finds were a prelude to perhaps the greatest winter invasion of Snowy Owls in state history. The first sightings were 1 November at Cat Island in Brown County (Prestby) and 1 November near the Collins Marsh of Manitowoc County (Watson). These were followed by 9 November in Dodge County (Weberpal) and 9 November in Winnebago County (Amy and Daniel DeKeyser). The high was four on 26 November along the City of Ashland Waterfront (Brady).

Northern Hawk Owl*—One bird was documented on 29 November near Tigerton in Shawano County by Michael Gray.

Barred Owl—Reported from 46 counties, which compares to 45 in 2013 and 48 in 2012. The high count was six on 29 November from Eagle Valley in Grant County (McKay) followed by five on 28 September in Washington County (Steger).

Long-eared Owl—There were six reports, which compares to four in 2013. As in 2013, all sightings were of single birds. The six reports were: 7 August in Waupaca County (Gray), 25 October in Portage County (D. Baumann), 26 October in Ozaukee County (Paulson), 13 November in Monroe County (Epstein), 22 November in Milwaukee County (Collison), and 1 November in Portage County (Ambrose and R. Wiskowski).

Short-eared Owl—Reported from 17 counties, which contrasts to seven in 2011 and 2013 and nine in 2012. Although this is a nesting species within the state, the first fall find did not

Male Pileated Woodpecker (*Dryocopus pileatus*) at Work in September – David Franzen.

come until 5 September in Portage County (Pendergast). The only other September report was for the 15th from Wisconsin Point in Douglas County (Pendergast and Tessen). All high counts came from the Killsnake SWA in Calumet County with the highest total being 12 on 6 November (Woodcock) and 12 on 14 November (Ristow). The only fall with a count greater than 12 was 15 in late November 1979 in Dodge County (Drieslein).

Northern Saw-whet Owl—Reported from 13 counties, which compares to 10 in 2013 and 13 in 2012. Michael Gray was able to find one of this nesting species on 1 August in Waupaca County. From then until 9 October, the only other find was on 26 September in Forest County (Leo Miller). The high count was seven on 18 October in Eau Claire County (Zuhlke).

Common Nighthawk—Reported near the start of the season in the counties of Brown, Door, Douglas, Grant, Milwaukee, Monroe, Sauk, and Waukesha. The only October departure date was 8 October from Mequon in Ozaukee County (Arnholt). The high count was 475 on 21 August in Dunn County (Hoyland) followed by 325 on 24 August in St. Croix County (Persico) and 250 on 1 September in Brown County (Prestby and Schilke).

Eastern Whip-poor-will—Reported from 11 counties, which compares to nine in 2013 and 16 in 2012. Early season reports came from the counties of Clark, Door, Florence, Iowa, Marinette, Vilas, and Waukesha. The only report after 7 September came in the period 11–19 September from the Arena Boat Landing in Iowa County (A. Holschbach). The high count was three on 10 August in Vilas County (Bennett) and three on 7 September in Florence County (Bob and Kay Kavanagh).

Chimney Swift—The last dates were 13 October in Dane County (Schwarz), 16 October at Lake Park in Milwaukee County (Wanger), and 17 October at Kern Park in Milwaukee County (Collison). The high count was 1,339 on 16 September at St. Patrick's Church in the City of Racine (Pugh and Sharkozy) followed by 860 on 7 September in Rock County (Denker) and 800 on 15 August in Walworth County (M. Nowak).

Ruby-throated Hummingbird—The last date was 8 October in the counties of Jefferson (Bridge) and Manitowoc (Betsy and Tom Kocourek). From the start of the season to 2 September there were 20+ hummingbirds each day at the Judy Lund feeders at Hazel Run in Clark County. The high count was 52 hummers on 17 August. Aside from the Lund feeders, the high counts were 40 on 9 August in Juneau County (Schiffman) and 30 on 9 August at Wyalusing SP in Grant County (Bucci).

Anna's Hummingbird*—An adult male Anna's Hummingbird came to the feeder of Linda Atkins in Prairie du Sac in Sauk County. It was much documented and photographed over the period 21–22 October with banding by O'Connor. This bird was first noticed by the landowner before these dates. This sighting was followed by a find of an adult male Anna's on 16 November at the University of Wisconsin Botanical Gardens in Madison, Dane County. It seems this bird was first seen and documented by William Holton with numerous other birders then arriving later that day. These are but the fifth and sixth state records for the Anna's.

Rufous Hummingbird*—There were five reports. The first was 17–21 August of an adult male at the feeder of Elizabeth Herzmann of Mayville in Dodge County with the bird banded by Wisconsin's hummingbird bander Mickey O'Connor on 18 August. The second report was 12–27 October from the feeder of Cynthia Bridge of Ft. Atkinson in Jefferson County, with the bird banded on 19 October and identified by O'Connor as an adult female. The third report was 23–24 October at the feeder of Danielle Warzynski of Eagle in Waukesha County, with the bird banded by O'Connor and identified as an adult female. The fourth report dated from late October through 5 November at a feeder in the City of Waukesha. The fifth report was 2–22 November at the feeder of V. Allen White of the City of Manitowoc, with the bird banded and identified as an adult female by O'Connor. It is likely that without the banding and identification abilities of Mickey O'Conner some of these adult females might have been passed off as Selasphorus species.

Belted Kingfisher—The high count was six on 8 September from Marathon County (Sheeter). As is customary, numbers of kingfishers remained into the winter season.

Red-headed Woodpecker—Reported from 41 counties, which compares to 38 in 2013 and 41 in 2012. The only double digit counts came from the Necedah NWR in Juneau and from the hawk watch center at Eagle Valley in Grant County. The high was 35 on 19 September at Eagle Valley in Grant County (McKay) followed by 30 on 9 September at Eagle Valley (Thiele) and 18 at Necedah on 23 August (Geraghty).

Red-bellied Woodpecker—The top 11 counts of Red-bellied came from Kelly McKay in Grant County. His highest total was 38 on 24 October followed by 29 on 25 September. The total of 38 breaks the fall season record high of 36 set on 25 September 2013 at Eagle Valley in Grant County by McKay.

Yellow-bellied Sapsucker—The finding of Yellow-bellied Sapsuckers continued into the winter season. The high count was 30 on 28 September at Twin Falls Beach in Ashland County (DeWitt) followed by 16 on 28 September in Bayfield County (Brady) and 15 on 4 October in Douglas County (S. Meyer).

Downy Woodpecker—The high count was 38 on 24 October in Grant County (McKay) followed by 25 on 9 August at Bay Beach in Brown County (Collison) and 20 on 13 August in Oconto County (Merritt). The high of 38 breaks the fall season record high of 25 set on 5 October 2010 at Eagle Valley in Grant County by Kelly McKay.

Hairy Woodpecker—The high count was 13 on 29 November at Eagle Valley (McKay) and 13 on 18 September at the Schlitz Audubon Center in Milwaukee County (Bontly) followed by 12 on 19 September at Nelson Dewey SP in Grant County (McKay).

Black-backed Woodpecker—Reported in Forest County on 22 September (Bridge) and 5 October (Gray). Reported in Price County on 9 October (Krakowski), and reported in Vilas County on 22 September (Wood). All finds were of single birds.

Northern Flicker—The high count was 25 on 18 September along the City of Milwaukee Lakefront (M. Nowak) and 25 on 28 September at Twin Falls Beach in Ashland County (DeWitt). These were followed by 20 on 17 September at Washington Park in Milwaukee County (Vargo).

Pileated Woodpecker—The high count was 10 on 29 November at Eagle Valley in Grant County (McKay) followed by eight the next day at the same location and then six on 25 September at Eagle Valley by McKay.

American Kestrel—The high count was 12 on 11 August at the Buena Vista Grasslands in Portage County (Gilbert) followed by seven from a variety of locations and dates.

Merlin—Reported early in the season from the counties of Ashland, Door, Douglas, Kewaunee, Marathon, and Vilas. The high count was 49 on 8 October at Concordia College in Ozaukee County (Wanger) followed by 33 on 5 October at Forest Beach in Ozaukee County (many birders).

Peregrine Falcon—Reported from 33 counties, which compares to 38 in 2013 and 36 in 2012. The high count was seven on 14 September from Eagle Valley in Grant County (Thiele) and seven on 29 September from Wisconsin Point in Douglas County (Svingen) followed by six on 20–21 September at Eagle Valley in Grant County (C. Mandernack and McKay).

Olive-sided Flycatcher—Early season reports from possible nesting counties came from Bayfield (Brady), Door (the Lukes), and Vilas (Draper), though Brady considered his bird a migrant. Early season reports of birds south of nesting counties were 7 August in Dane County (Herb), 7 August in Grant County (Ouren), and 8 August in Waukesha County (Marvelli). The last dates were 24 September at Lake Park in Milwaukee County (Jablonski) and 27 September at Lake Park in Milwaukee County (Wood). All finds were of one or two individuals.

Western Wood-Pewee*—Documented with photos on 19 October at a banding station at the Forest Beach Preserve in Ozaukee County (William Mueller). This is the third state record. The other two are 7 June 1981 in Bayfield County by Laura Erickson and 17 September 1996 in Oconto County by Thomas Erdman.

Eastern Wood-Pewee—The last dates were 6 October at the Schlitz Audubon Center in Milwaukee County (Bontly and Zehner) and 11 October at Kohler-Andre SP in Sheboygan County (Szymczak). The high count was 15 on 30 August and on 13 September at Nelson Dewey SP in Grant County (Thiele).

Yellow-bellied Flycatcher—Early season reports from possible nesting counties came from Bayfield (Brady) and Washburn (Haseleu), through Brady considered his bird a migrant. The first dates of migrants beyond possible nesting counties were 15 August at Lake Park in Milwaukee County (Wanger) and 23 August at the Marsh Haven Nature Center in Fond du Lac County (Ledbetter). The last dates were 18 September in Douglas County (Tessen) and 21 September at Forest Beach in Ozaukee County (Schaefer and Szymczak). All reports were of one or two individuals.

Acadian Flycatcher—Reported from six counties, which compares to eight in both 2012 and 2013. Early season reports came from the

American Golden Plover (*Pluvialis dominica*) Spotted in Milwaukee County in September, 2014 – Jim Edlhuber.

Black-bellied Plover (*Pluvialis squatarola*) Recorded in Milwaukee County in September, 2014 – Jim Edlhuber.

Red Knot (*Calidris canutus*) Wading in Sauk County in August, 2014 – Sunil Gopalan.

Red Knot (*Calidris canutus*) Searching for Food in August, 2014 – Jennifer Ambrose.

counties of Grant, Milwaukee, and Waukesha. An interesting find was an Acadian at Whitnall Park in Milwaukee County on 1 August (Szymczak) followed by other finds in that park through most of August. The last dates were 21 September at Nelson Dewey SP in Grant County (Thiele) and 26 September in the Kettle Moraine SF of Waukesha County (Szymczak). The only count of better than three birds was 10 on 2 August in the Kettle Moraine SF of Waukesha County (Szymczak).

Alder Flycatcher—Although the Alder Flycatcher has a nesting range further north than the Willow Flycatcher, there are locations in the southern section of the state where this bird might be found. The more southern early season finds this year were in the counties of Green Lake (T. Schultz), Manitowoc (Knickelbine and Lardinois), and Walworth (Howe). The last dates were 28 August in Forest County (Frank), 30 August in Bayfield County (Geraghty), and 9 September in Douglas County (the LaValleys). The high count was three on 1 August at the Woodland Dunes Nature Center in Manitowoc County (Knickelbine and Lardinois).

Willow Flycatcher—The most northern finds of this more southern flycatcher came from the counties of Brown (Collison) and Manitowoc (Sontag). The last date was 14 September in the counties of Brown (Schilke) and Ozaukee (Frank). The high count was five on 1 August in Racine County (Howe) followed by four from several locations.

Least Flycatcher—The last dates were 1 October in Dane County (Heikkinen) and 3 October in Ozaukee County (Jablonski). The high count was six on 26 August in Bayfield County (Brady) and six on 18 September in Douglas County (Bob and Kay Kavanagh) followed by four on 2 September in Bayfield County (Brady).

Eastern Phoebe—November departure dates were 3 November in Dane County (M. Gibson), 15 November at Eagle Valley in Grant County (Kristin and John Anderson-Bricker), and 15 November at the Schlitz Audubon Center in Milwaukee County (Bontly). The high count was 15 on 14 August from Trempealeau County (Epstein) followed by 10 on 2 August from Clark County (Lund) and nine on 2 September from Burnett County (Maercklein).

Great Crested Flycatcher—The last dates were 25 September in Milwaukee County (Natural Areas Staff), 25 September in Outagamie County (Maertz), and 29 September in Milwaukee County (Natural Areas Staff). The high count was six on 2 August in Dodge County (Paul and Stanley Senner) followed by five on 13 August in Outagamie County (Boyle).

Western Kingbird*—There were two reports. The first was 26 August in Kewaunee County (Sinkula) followed by 8 September in Marathon County (Belter, Hurlburt, Sabatke, and Widmann).

Eastern Kingbird—The last dates were 18 September at Harrington Beach SP in Ozaukee County (Frank), 19 September at Pheasant Branch in Dane County (Bailey), and 21 September at the Bong SRA in Kenosha County (Goldberg). The high count was 12 on 11 August in Portage County (A. Gilbert), on 14 August in Douglas County (Larry and Jan Kraemer), and on 23 August in Winnebago County (Kloepping and Ward). This was followed by a number of reports of 10 from various locations.

Loggerhead Shrike*—No reports, which makes three out of the last five fall seasons without a find.

Northern Shrike—The first fall find was 17 October at Harrington Beach SP in Ozaukee County (Jablonski). This was quickly followed by finds on 18 October in the counties of Bayfield (Oksiuta), Dunn (P. Campbell), Marinette (Hurst), and Oconto (Schaefer and Szymczak) with an additional find on 19 October in Manitowoc County (J. Trick). The only count better than one was two on 17 November at the Hook Lake SWA in Dane County (Paulios).

White-eyed Vireo—The only reports were of single birds over the period 16 August through 16 September at Yellowstone Lake SP in Lafayette County (Matthew Nechvatal).

Bell's Vireo—There were five fall reports. Those five were four birds on 8 August in Dane County (Hottman), a single bird on 9 August at the Avoca SWA in Iowa County (Fissel and Heikkinen), on 11 August at the Muralt Bluff SNA in Green County (Hottman), and on 22–23 August at different locations in Richland County (Ouren and Senner).

Yellow-throated Vireo—The last dates were 5 October in Rock County (Cullum) and 9 October in Milwaukee County (Lubahn). The high count was five on the following dates 31 August at Willow River SP in St. Croix County (Persico), 11 September at Eagle Valley in Grant County (Thiele), and 17 September at Yellowstone Lake SP in Lafayette County (Nechvatal)

Blue-headed Vireo—Early season reports came from the nesting counties of Bayfield (Daley), Douglas (the LaValleys), Florence (Kavanagh), Monroe (Fissel and Otto), and Waukesha (Szymczak). Monroe and Waukesha Counties are southern outliers from the more normal breeding range of the Blue-headed. Likely migrants were first noticed on 26 August in the counties of Marinette (J. Campbell and Hurst) and Taylor (Evanson) followed by 27 August in Door County (Walzer). The last dates were 19 October at Sheridan Park in Milwaukee County (Lubahn) and 24 October in Grant County (McKay). The high count was five on 27 September at Rock Island SP in Door County (Jeffers) followed by four on 8 September at Fischer Lake in Florence County (Kavanagh) and four on 19 September at Nelson Dewey SP in Grant County (McKay).

Warbling Vireo—The last dates were 25 September in Dane County (Hannah), 27 September in Manitowoc County (Murkowski), and 28 September at a second location in Manitowoc County (Murkowski). The high count was 18 on 7 September along the Glacial Drumlin Trail in Jefferson County (Stutz) followed by seven on 1 September in Marathon County (Belter and Hurlburt).

Philadelphia Vireo—The first fall finds were 28 August in the counties of La Crosse (Wiegel) and Oneida (Brezinski) followed by 30 August in Marathon County (Sabatke) and 31 August in Douglas County (Svingen). The last date was 6 October at Pheasant Branch in Dane County (Heikkinen), Peninsula SP in Door County (S. Peterson), and the Schlitz Audubon Center in Milwaukee County (Bontly, Huf, and Zehner). The high count was five on 8 September in Marathon County (Sheeter) and five on 18 September in Douglas County (the Kavanaghs and Tessen).

Red-eyed Vireo—The last dates were 15 October in Milwaukee County (Wood) and 19 October in Sheboygan County (Szymczak). The high count was 20 on 4 and 8 September at Peninsula SP in Door County (S. Peterson) followed by 18 on 9 August in Bayfield County (Brady).

Gray Jay—Reported from the northern counties of Florence, Forest, Oneida, and Price with most reports coming from Forest. The high count was four on 26 September from Forest Road 2182 in Forest County (L. Miller).

Blue Jay—In the period 22 September to 1 October large numbers of Blue Jays passed the hawk watch station at Eagle Valley in Grant County. The high count was 3,211 on 25 September. Other strong days were 957 on 24 September and 945 on 1 October (Thiele). The nearest total to the Eagle Valley numbers was 133 on 27 September in Polk County (Maercklein). The total of 3,211 surpasses the former high of 2,916 set on 2 October 2013 at Eagle Valley by Kelly McKay.

American Crow—The high count was 413 on 25 November in Iowa County (Kivikoski) followed by 200 on 6 October in Monroe County (Epstein) and 175 on 11 October in St. Croix County (Persico).

Common Raven—Reported from 40 counties, which is the same as in 2013. As usual the most southern reports came from the central sand counties. The high count was 21 on 22 September in Bayfield County (Brady) followed by 13 on 3 August in Vilas County (M. Anderson) and 13 on 24 November in Florence County (the Kavanaghs).

Horned Lark—This lark was present throughout the period. The high count was 100 on 17 November in Jefferson County (Daley) followed by 92 on 3 August in Racine County (Howe) and 80 on 29 October in Brown County (Benson).

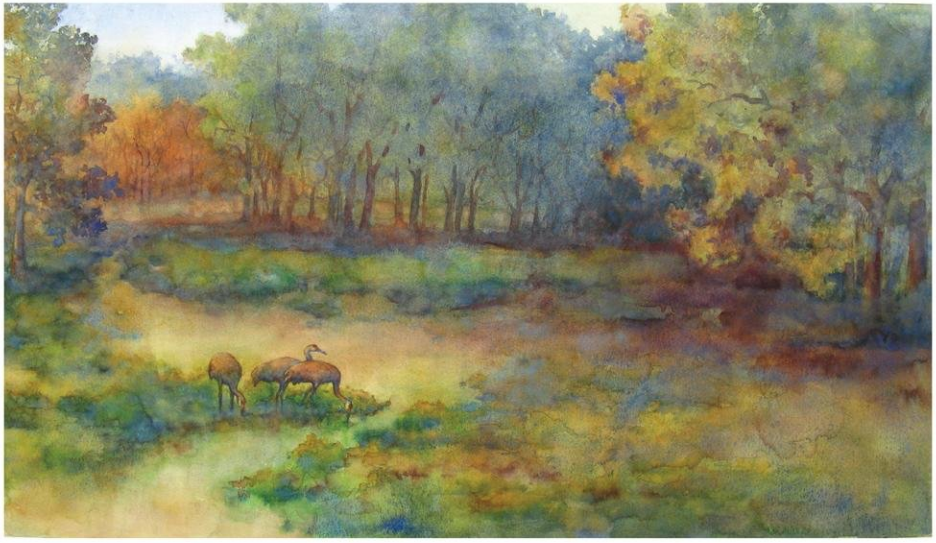
Purple Martin—The last dates were 9 September at Eagle Valley in Grant County (Thiele) and 11 September at Point au Sauble in Brown County (Prestby). The high count was 35 on 8 August in Marinette County (Mezera) followed by 32 on 4 August in Polk County (Maercklein) and 30 on 3 August in Jefferson County (J. Gray).

Tree Swallow—The last October date was 24 October in the counties of Grant (McKay) and Winnebago (Ziebell). These were followed by the find of a single bird on 9 November at Two Rivers in Manitowoc County (Sonneland and Swelstad). The high count was 1,500 on 18 September in the Rock County portion of Lake Koshkonong (Boone). On this same day an additional 1,000 Tree Swallows were counted from the Jefferson County side of Lake Koshkonong (Boone). Nearest to these were 480 on 4 October off Harrington Beach SP in Ozaukee County (Brennan).

Northern Rough-winged Swallow—The last dates were 25 September at Eagle Valley in Grant County (McKay) and 27 September at Pheasant Branch in Dane County (Henrikson and McDowell). The high count was 105 on 20 September at Eagle Valley (McKay) followed by 55 on 20 September in Grant County (McKay).

American Tree Sparrow (*Spizella arborea*) Surrounded by Last October's Colors in Dane County – Shawn Miller.

Yellow-rumped Warbler (*Setophaga coronata coronata*) Feasting in Bayfield County in October, 2014 – Laura Erickson.



Cranes in Copper Creek – Watercolor by Janet Flynn

Anna's Hummingbird (*Calypte anna*) Ignoring the Dane County Snow in November, 2014 – Delia Unson.

Bank Swallow—The last dates were 12-13 September from the counties of Dane, Dodge, Manitowoc, and Ozaukee followed by a single bird on 14 September at Forest Beach in Ozaukee County (Brennan). The high count was 145 on 20 August in Racine County (Howe) followed by 100 on 8 August in Jefferson County (Stutz).

Cliff Swallow—The last dates were 18 September at Lake Koshkonong in Rock County (Boone), 19 September at Wisconsin Point in Douglas County (Oksuita), and 21 September in Winnebago County (Ziebell). The high count was 125 on 21 August in Brown County (Swelstad) followed by 120 on 12 August in Polk County (Maercklein) and 97 on 5 August in St. Croix County (Maercklein).

Barn Swallow—The last dates were of single birds on 19 October at Sheridan Park in Milwaukee County (Lubahn) and 20 October at Harrington Beach SP in Ozaukee County (Brennan). The high count was 2,500 on 24 August at Cat Island in Brown County (Prestby) followed by 450 on 28 August at Cat Island (Beilke and Prestby). The nearest numbers to Cat Island were 300 on 17 September at Forest Beach in Ozaukee County (Schaefer) and 250 on 12 September at Yellowstone Lake SP in Lafayette County (Boone). The total of 2,500 is record high for the fall season. The previous high had been 2,000 set on 4 August 1991 in Shawano County by Mark Peterson.

Black-capped Chickadee—The high count was 91 on 24 October in Grant County (McKay) followed by 50 on 10 October in Milwaukee County (Coulter) and 45 on 4 October in Polk County (Collins).

Boreal Chickadee—There were 10 reports from Forest County (most of them coming from Forest Road 2182) plus one report from Oneida County (Duchek). The high count was three on a number of dates.

Great Tit—Although this is not a countable bird, it is best to keep a record of sightings as it might later become a valid species. There were three reports. The first was of two birds on 12 October at Kohler-Andre SP in Sheboygan County (Szymczak), then two birds on 17 October at Harrington Beach SP in Ozaukee County (Wood), and then one bird on 25 October at Harrington Beach (D. Baumann).

Tufted Titmouse—Reported from 39 counties, which compares to 34 in 2013, 36 in 2012, and 26 in 2011. The high count was 19 on 24 October in Grant County (McKay) followed by 10 on 21 October in La Crosse County (Stark) and 10 on 22 November in Iowa County (Kivikoski) . The total of 19 is record high for the fall season. The high had been 15 set in 2007 in Crawford County (Stutz) and in 2009 in Green Lake County (Burckhardt).

Red-breasted Nuthatch—The most southern early season finds came from the counties of Green Lake (T. Schultz), Milwaukee (Zehner), Racine (Howe and Wegner), and Waukesha (Szymczak). The high count was 14 on 25 September in Oneida County (G. David) followed by 10 on 22 September in Forest County (Bridge) and 10 on 29 October in Marathon County (Backus).

White-breasted Nuthatch—All the fall high counts came from Kelly McKay in Grant County. His high was 40 on 24 October followed by 21 on 29 November. The 40 of 24 October is record high for the fall season. The record had been 33 set on 16 October 1991 in Grant County by Kay Kavanagh.

Brown Creeper—Early season reports came from the counties of Bayfield (Daley), Iron (G. David), Marathon (Sabatke), and Marinette (J. Campbell). All of the fall high counts came from McKay in Grant County. His high was 16 on 24 October at Nelson Dewey SP followed by 10 on 29-30 November at Eagle Valley.

House Wren—The last regular dates were 21 October in Dane County (Bonk) and 22 October at Harrington Beach SP in Ozaukee County (Brennan). This was followed by a find from 18 November to 4 December at the feeder of Dan Panetti in Cedarburg, Ozaukee County. This was but the fourth state record of a House Wren remaining into the winter season. The high count was 22 on 1 August in Columbia County (Doverspike) followed by 18 on 21 September in Waukesha County (Hahn).

Winter Wren—Early season reports came from the counties of Door (Stutz), Douglas (the LaValleys), Florence (K. Kavanagh), and Marathon (Wynn). The only other county to report this nesting species in August was Ashland with a report on 14 August from the Apostle Islands (Brady). Reports of Winter Wrens then persisted into the winter season. The high count was seven on 11 October at the Schlitz Audubon Center in Milwaukee County (Bontly and Zehner) followed by five from several locations.

Sedge Wren—Reported from 31 counties, which compares to 34 in both 2012 and 2013. The last dates were 10 October at Lake Barney in Dane County (Lindemer), 11 October at the

Lion's Den in Ozaukee County (K. Brown), and 10–13 October at Forest Beach in Ozaukee County (first by W. Mueller and last by Brennan). The high count was 11 on 3 August from Pheasant Branch in Dane County (McDowell) followed by eight on 20 September in Ozaukee County (Brennan) and seven on 6 August from Outagamie County (Richmond).

Marsh Wren—Reported from 30 counties, which compares to 36 in both 2012 and 2013. The last October dates were 13 October in Dane County (Heikkinen) and 21 October in Waukesha County (Gustafson). These were followed by finds on 9 November in Winnebago County (Ziebell) and on 11 November at the Lion's Den in Ozaukee County by Jean Strelka. The high count was 25 on 3 August at the Horicon Marsh of Dodge County (E. Kasper) followed by 14 at the same location on 3 September (Longhenry).

Carolina Wren—Reported from 13 counties, which compares to 18 in 2013 and 22 in 2012. The only early season finds of this nesting species were from the counties of Dane (Paulios) and Walworth (Smallwood). The high count was three on 4 October in La Crosse County (Stark) and three on 30 November at Eagle Valley in Grant County (McKay).

Blue-gray Gnatcatcher—There were no reports north of the counties of Polk, Marathon, and Marinette. The only October finds were 3 October at Harrington Beach SP in Ozaukee County (Brennan), 5 October in Door County (the Lukes), and 11 October in Milwaukee County (Lubahn). The high count was 15 on 30 August at Lake Park in Milwaukee County (Vokoun) followed by 10 on 10 August at the Lion's Den in Ozaukee County (K. Brown) and nine from a number of locations.

Golden-crowned Kinglet—The only counties to report this nesting species in August were Ashland, Bayfield, Florence, and Vilas with the only early season find coming from Florence (Kavanagh). The first migrant was 16 September at Lake Park in Milwaukee County (Collison) followed by 22 September in the counties of Dane (Lindemer and McDowell) and Milwaukee (Hahn) and 23 September in Ozaukee County (Brennan). The high count was 30 on 11 October at Hubbard Park in Milwaukee County (Collison) followed by 25 on 10 October at the Lion's Den in Ozaukee County (Dolan) and 23 on 24 October at Nelson Dewey SP in Grant County (McKay).

Ruby-crowned Kinglet—The only August finds were 11 August in Douglas County (the LaValleys) and 17 August at the Jana Lind residence in Eau Claire County. The first September find was 6 September at the home of Ryan Brady in Bayfield County and at the home of Laura Wentz in Columbia County. The next report was not until 12 September with Ruby-crowned showing in a number of counties in the period 12–14 October. The last dates were 24 November in Buffalo County (Hurlburt) and 26 November in Kenosha County (Baron). The high count was 30 on 4 October at Sheridan Park in Milwaukee County (Collison) followed by 20 on 20 October at the Lion's Den in Ozaukee County (Dolan) and 20 on 22 October at Sheridan Park in Milwaukee County (Ambrose).

Eastern Bluebird—The high count was 79 on 24 October in Grant County (McKay) followed by 32 on 5 October at Willow River SP in St. Croix County (Persico).

Townsend's Solitaire—There were three reports. The first was 22 September at the Rainbow Flowage in Oneida County (Jim Krakowski) followed by 14 November at Ephraim in Door County (Sue Peterson) and 16–18 November in the Town of Bayfield in Bayfield County (Betsy Bartelt). The 22 September report is record early. The only other September arrival date is 23 September 1999 in Washburn County by Jim Williams. Likely due to the lack of cedar berries, there was no report from the usual Townsend's hangout at Devil's Lake SP in Sauk County.

Veery—Early season reports of this nesting species came from the counties of Ashland, Green Lake, Iron, St. Croix, Polk, Waukesha, and Winnebago. The last dates were 9 October at the Mequon Nature Preserve in Ozaukee County (Koester) and 10 October at the Schlitz Audubon Center in Milwaukee County (Coulter). The only counts better than two were six on 2 September at Forest Beach in Ozaukee County (Brennan) and 14 on 27 August in the Kettle Moraine of Waukesha County (Szymczak).

Gray-cheeked Thrush—The only August finds were 27 August in Winnebago County (Ziebell) and 28 August at the Ephraim Preserve in Door County (Walzer). The first September find was on 2 September at Forest Beach in Ozaukee County (Brennan) and at Harrington Beach SP in Ozaukee County (Wood) followed by 5 September in Manitowoc County (Sontag). The last dates were 10 October at the Schlitz Audubon Center in Milwaukee County (Coulter), 10 October at Lake Park in Milwaukee County (Jablonski), and 11 October in Door County (the Lukes). The high count was 10 on 21 September in Bayfield County (Brady) followed by eight on 22 Sep-

Rusty Blackbird (*Euphagus carolinus*) Wearing Fall Colors in Dane County in November, 2014 – Sunil Gopalan.

Cedar Waxwing (*Bombycilla cedrorum*) with November Berries Last Fall in Waukesha County– Naomi Steinruck.

Swainson's Thrush (*Catharus ustulatus*) Carrying Food in October, 2014 in Vilas County – Stephen Fisher.

Rufous Hummingbird (*Selasphorus rufus*) Imaged in October, 2014 in Jefferson County – Jim Edlhuber.

tember at Forest Beach in Ozaukee County (Brennan).

Swainson's Thrush—The first fall season dates were 19 August in Racine County (Howe) and 20 August in Vernon County (Roth-Reynolds). The last October date was 13 October in the counties of Dane (Baker) and Door (the Lukes). These were followed by the sighting of a single bird on 13 November at Harrington Beach SP in Ozaukee County (Wood). The high count was 150 on 26 September at Forest Beach in Ozaukee County (W. Mueller) followed by 58 on 15 September in Rock County (Cullum) and 50 on 2 September in Ozaukee County (Brennan).

Hermit Thrush—This nesting species was found near the start of the season in the counties of Burnett, Florence, Iron, Marinette, Oconto, and Vilas. The first migrants south of the nesting counties were found 6 September in the counties of Dane at two locations (Krerowicz and P. Senner) and Sheboygan (Andy and Janet Raddatz). As is usual, small numbers of this thrush then remained into the winter season. The high count was 40 on 8 October at Estabrook Park in Milwaukee County (McCaw) followed by 25 on 4 October in Douglas County (S. Meyer) and 20 from a number of locations.

Wood Thrush—Reported from 24 counties, which compares to 20 in 2013 and 23 in 2012. The far northern counties were Douglas (the LaValleys) and Florence (Kavanagh). There were no reports from the month of October. The last September dates were 28 September at Nelson Dewey SP in Grant County (Thiele), 29 September at Harrington Beach SP in Ozaukee County (Brennan), and 26–29 September in the Kettle Moraine SF of Waukesha County (Szymczak). The only counts better than three all came from the Kettle Moraine SF of Waukesha County with the high of seven coming on 27 August and on 26 September (Szymczak).

American Robin—The high count was a migration of 2,519 on 28 October past the hawk watch location at Eagle Valley in Grant County (McKay) followed by 732 on 24 October at Eagle Valley (McKay) and 380 on 3 October in Bayfield County (Brady).

Varied Thrush—There was one report: a single bird at the feeder of Jeff Kingery at Hidden Lakes in Waukesha County in the period 27–29 November.

Gray Catbird—The last fall dates were 12 November at Spirit Lake in Burnett County (Java) and 15 November at Doctors Park in Milwaukee County (Zehner). Individuals were then found into the winter season. The high count was 32 on 14 September at Gibbs Lake in Rock County (Haycraft and Yoerger) followed by 23 on 9 August in Iowa County (Decker).

Brown Thrasher—November departure dates were 1 November at Will-o-way Woods in Milwaukee County (J. Luedtke), 5 November at Pheasant Branch in Dane County (Bailey), and 18 November at the Treehaven Lodge in Lincoln County (Ricks). The high count was four on the dates of 3 August in Vernon County (Forchione), 10 August in Ozaukee County (K. Brown), and 13 September in Dane County (Herb).

Northern Mockingbird—There were three reports of single birds. The first was seen over the period 4 August through 3 September along Survey Road in Iowa County (Nechvatal). The second was seen on 12 November at Medford in Taylor County (Risch) and the third on 22 November at Eagle River in Vilas County (Jim Baughman).

European Starling—The high count was 6,185 on 24 October in Grant County (McKay) followed by 2,004 on 28 October in Grant County (McKay). The only fall numbers higher than 6,185 date back to the late 1970's when huge numbers of starlings were being found roosting under the viaducts of downtown Milwaukee. High counts from that era were 50,000 in 1978 and 125,000 in 1980 (both by John Idzikowski).

American Pipit—The first fall arrival date was 6–7 September at Cat Island in Brown County (Prestby and Swelstad). Aside from Cat Island, the first dates were 12 September in Ashland County (Oksuita) followed by 15 September in the counties of Bayfield (Brady) and Douglas (Pendergast and Tessen). The last fall find was 29 November at Governor Nelson SP in Dane County (Otto). In the period 3–16 October Melody Walsh found large numbers of pipits on Washington Island in Door County. The high count of 200 came on the dates 3–4 October and 16 October. Other counts of 100 or better were 120 on 16 November in Winnebago County (Benson) and 100 in the yard of Tim Oksiuta in Bayfield County.

Bohemian Waxwing—Found in eight counties, which compares to none in 2013 and 25 in 2012. Most reports came from Door County. The first find was of one bird on 24 October in Winnebago County (Clark and Douglas), which was the only find in a county not in the northern region of the state. The next find was not until 13 November at Sister Bay in Door County (S. Pe-

terson). The high count was 26 on 13 November in Door County (S. Peterson) followed by 23 on 22 November at Ephraim in Door (M. Gray) and 21 on 21 November at Sister Bay in Door County (S. Peterson).

Cedar Waxwing—The high count was 4,249 on 28 October seen migrating past the hawk watch at Eagle Valley in Grant County (Kelly McKay). Nearest to this were 256 on 26 August at Forest Beach in Ozaukee County (Cutright and Sher).

Lapland Longspur—The first report was 9 September in Ashland County (Anich and Oksiuta) followed by 17 September in Bayfield County (Brady) and 18 September in Sheboygan County (Murkowski). The high count was 800 on 16 November at East Rock Prairie in Rock County (Weberpal) followed by 300 on 19 November in Jefferson County (Bridge) and 275 on 25 November in Ozaukee County (W. Mueller).

Snow Bunting—The first fall date was 10 October at Cat Island in Brown County (Sonneland and Swelstad) followed by 14 October at the Powell Marsh SWA in Vilas County (G. David) and 15 October in the counties of Bayfield (Anich) and Brown (Prestby). The high count was 400 on 30 November in Iowa County (Kivikoski) followed by 295 on 24 November in Brown County (Prestby) and 220 on 9 November in Barron County (Maercklein).

Ovenbird—The last dates were 6 October at the Lion's Den in Ozaukee County (Dan and Samantha Scheiman), 7 October in Downtown Milwaukee (Diehl), and 7–9 October at the Schlitz Audubon Center in Milwaukee County (Huf, Finney, Putnam, and Scheiman). The high count was 10 on 2 September in Bayfield County (Brady) followed by eight on 6 September in Racine County (Willard) and six on 16 September in Iowa County (A. Holschbach).

Louisiana Waterthrush—There were two reports, each of single birds. Those two were 5 and 7 August at Eagle Valley in Grant County (Thiele) and 8 August in Polk County (Fitzpatrick).

Northern Waterthrush—Early season reports for this nesting species came from the counties of Ashland (Oksiuta), Dodge (Wood), Fond du Lac (R. Mueller), Manitowoc (Knickelbine and Lardinois), Milwaukee (Zehner), and Outagamie (Boyle). The last dates were 12 October at the Lion's Den in Ozaukee County (Jablonski) and 13–16 October at the Schlitz Audubon Center in Milwaukee County (Bontly, Finney, and Huf). The high count was four on 3 September in Milwaukee County (Zehner), 8 September in Marathon County (Sheeter), and 18 September in Milwaukee County (Hahn).

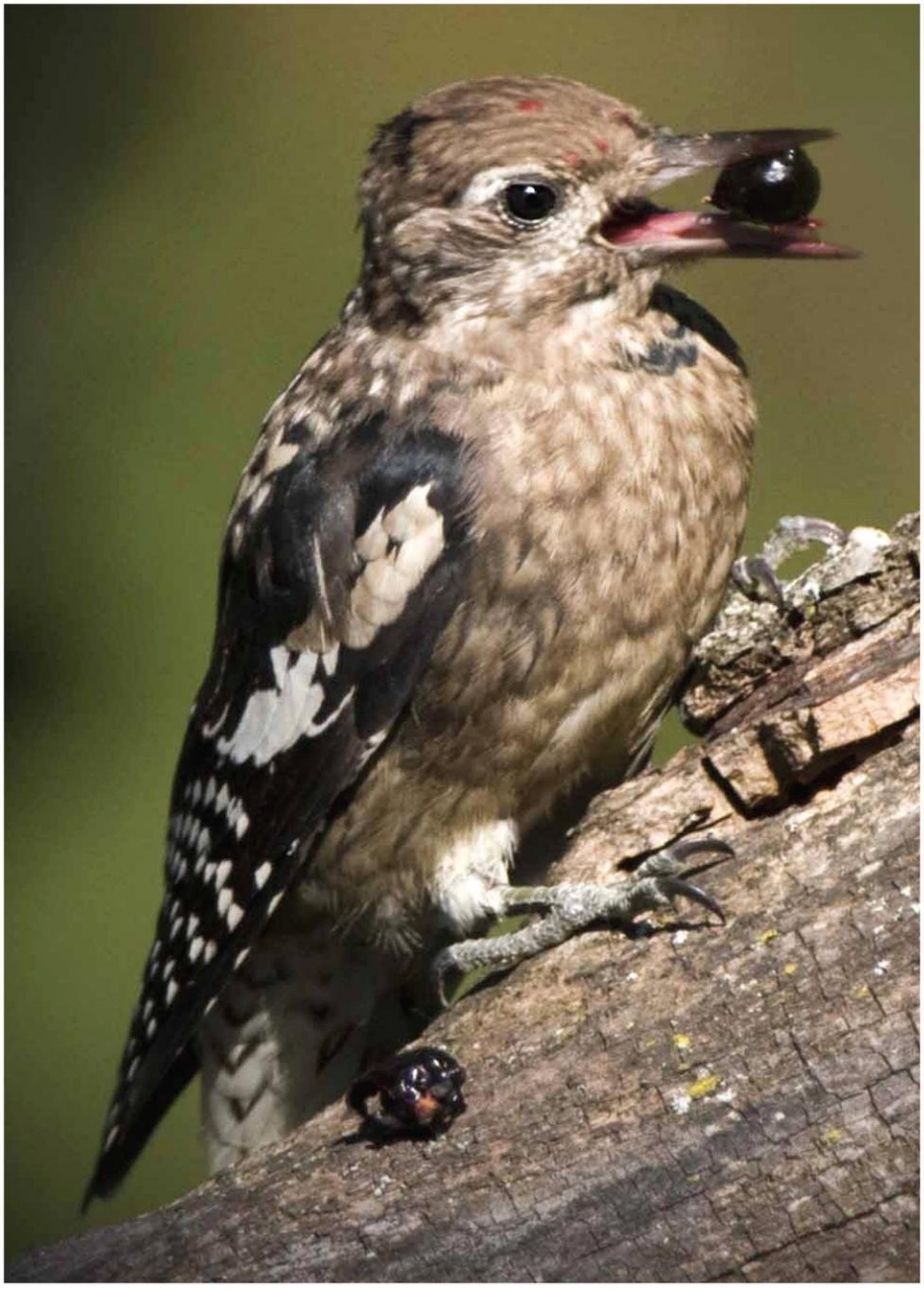
Golden-winged Warbler—Early season finds of this northern nester came from the counties of Burnett (Hoekstra), Clark (Lund), and Florence (Kavanagh). The first find of migrants was 16 August in Juneau County (Knoll) followed by 20–21 August in Rock County (Cullum) and 25–26 August in Milwaukee County (Bontly and Zehner). The last dates were 23 September at the Schlitz Audubon Center in Milwaukee County (Bontly and Finney) and 28 September at Yellowstone Lake SP in Lafayette County (Nechvatal). The high count was 12 on 23 August in Rusk County (Ray Majesty) followed by five on 5 August in Florence County (Kavanagh). For the fall season, the total of 12 is second only to 13 set on 16 September 1992 in Monroe County by Dennis Kuecherer.

Blue-winged Warbler—The northern limit of fall reports extended (west to east) through the counties of Polk, Dunn, Clark, Marathon, and Kewaunee. The last dates were 13 September in the counties of Dane, Lafayette, and St. Croix and 14 September in the counties of Clark (Lund) and Grant (Thiele). The high count was five on 11 August at Willow River SP in St. Croix County (Bill and Daniel Beeke) followed by three from a number of locations.

Black-and-white Warbler—The last dates were 8 October in Milwaukee County (Wood), 10 October in Milwaukee County (McCaw), and 20 October in Milwaukee County (Wanger). The high count was eight on 13 September in Chippewa County (Pendergast) and eight on 15 September in Milwaukee County (Ambrose) followed by seven on 16 September in Ozaukee County (Wood) and seven on 18 September in Ozaukee County (Strelka).

Prothonotary Warbler—There were six fall reports. Those were: 8 August in Polk County with four birds (Fitzpatrick); 8–9 August in Outagamie County (Petznick) and 16 August in Columbia County with three birds (Paulios); 27 August in Columbia County with two birds (Paulios); 1 September in Grant County with one bird (Thiele), and 23 September at the Bong SRA in Kenosha County with one bird (N. Paulson).

Tennessee Warbler—Reported on 3 August from the possible nesting counties of Ashland (Anich) and Door (S. Peterson). Early dates for likely migrants were 3 August in Chippewa County (Steger), 9 August in Monroe County



Juvenile Yellow-bellied Sapsucker (*Sphyrapicus varius*) Caught Holding a Berry in September – David Franzen.

(Mountan), and 14 August in Milwaukee County (Bontly and Zehner). The last dates were 22 October at Anderson Lake in Milwaukee County (Natural Areas Staff) and 24 October at Forest Beach in Ozaukee County (Beikle). The high count was 40 on 27 August in Rock County (Cullum) followed by 35 on 2 September in Bayfield County (Brady) and 35 on 4 September from Portage County (Kozak and Zinda).

Orange-crowned Warbler—First reported on 2 September from Crex Meadows SWA in Burnett County (Maercklein). The next find was not until 15 September in the counties of Bayfield (Brady) and Douglas (Pendergast). The last October dates were 28 October in the counties of Dane (Evanson), Grant (McKay), and Outagamie (L. Miller) and 31 October in Manitowoc County (Trick). These were followed by a find on 8 November at the Urban Ecology Center in Milwaukee County (Tim Vargo). The high count was six on 22 September in Bayfield County (Brady) followed by five on 6 October in Dunn County (P. Campbell) and five on 16 October in Ozaukee County (Beilke and W. Mueller).

Nashville Warbler—The last dates were 20 October from a number of locations and 21 October in La Crosse County (Stark). The high count was 25 on 2 September in Bayfield County (Brady) followed by 20 on 28 August in Bayfield County (Brady).

Connecticut Warbler—Reported from seven counties, which compares to 10 in 2011, nine in 2012, and eight in 2013. The only early August find for this nesting species was 7–9 August at the Moquah Barrens in Bayfield County (T. Cramer and Daley). The last dates were 21 September in Douglas County (Malcolm) and 22 September in Dane County (Thiessen). All finds were of single birds.

Mourning Warbler—Early season reports for this rather widespread nester came from the counties of Bayfield, Douglas, Clark, Forest, Milwaukee, and Vilas. The last dates were 24 September in Polk County (Maercklein) and 24–25 September at Harrington Beach SP in Ozaukee County (Brennan). The high count was five on 9 August in Bayfield County (Brady).

Kentucky Warbler—Single birds were found on 29 August at Nelson Dewey SP in Grant County (Thiele) and 7 September at Eagle Valley in Grant County (Thiele).

Common Yellowthroat—The last October dates were 21 October in St. Francis, Milwaukee County (Wanger) and 22 October at the Schlitz Audubon Center in Milwaukee County (Zehner). These were followed by 2 November at Cat Island in Brown County (Swelstad). The high count was 30 on 21 September in Waukesha County (Hahn) followed by 26 on 11 September in Dane County (Hannah) and 25 on 24 August in Jefferson County (Stutz).

Hooded Warbler—Reported from seven counties, which compares to six in 2013. The great majority of reports were from Andrea Szymczak in Waukesha County. The only early season finds for this nesting species came from the counties of Milwaukee and Waukesha (both by Szymczak). The Hooded Warblers in Milwaukee were earlier confirmed as breeding at Whitnall Park by Szymczak. This warbler remained in both Milwaukee and Waukesha Counties until 29 September (Szymczak) with the last date 5 October in the Southern Kettle Moraine SF of Waukesha County (Szymczak). The high counts were 10 on 2 August in Waukesha County (Szymczak) and 10 on 14 September in Jefferson County (Szymczak).

American Redstart—The last October date was 19 October at Concordia University in Ozaukee County (Huf) and at Forest Beach in Ozaukee County (Brennan). These were followed by 14 November at Harrington Beach SP in Ozaukee County (Brennan). The high count was 32 on 16 September at Harrington Beach in Ozaukee County (Brennan) followed by 30 on 2 September in Bayfield County (Brady) and 27 on 6 September in Bayfield County (Brady).

Cape May Warbler—The only July report for this northern nester was 27 July in Florence County (Kavanagh). The only early August find was 9 August in Bayfield County (Brady). This bird was thought by Brady to be a migrant. The first sightings of migrants beyond northern nesting counties were 14 August in Marinette County (Swelstad) and 20 August in Brown County (Sonneland and Swelstad). The last dates were 19 October at Kohler-Andre SP in Sheboygan County (Szymczak) and 24 October at Wind Point in Racine County (Hertz). The high count was eight on 27 September in Milwaukee County (Coulter and the Kents) followed by six on 21 September in Ozaukee County (Schaefer and Szymczak).

Cerulean Warbler—There were five August reports. Those reports were 9 August at Wyalusing SP in Grant County (Bucci), 14 August at the Jim Marrari residence in Walworth County, 27 August at Eagle Valley in Grant County (Thiele), 28 August at Wyalusing SP in Grant County (Azar and Hoch), and 29–30 August at Nelson Dewey SP in Grant County (Thiele). All finds were of one or two birds.

Northern Parula—There were no early season reports of this northern nester. The first fall find was 23 August in Florence County (Kavanagh). The first finds of migrants beyond possible nesting counties were 31 August in Barron County (Prestby), 3–6 September at the Schlitz Audubon Center in Milwaukee County (Bontly, Wanger, and Zehner), 4 September at Eagle Valley in Grant County (Thiele), and 5 September at Pheasant Branch in Dane County (Bonk, Lindemer, and McDowell). The last dates were 8 October in Milwaukee County (Tessen) and 17–18 October at Harrington Beach SP in Ozaukee County (Brennan). The high count was three on 13 September in the counties of Brown (Prestby) and Dane (McDowell) and three on 1 October in Milwaukee County (Wood).

Magnolia Warbler—The first fall finds of this northern nester were 8 August in Oconto County (Woodcock) and 9 August in Bayfield County (Brady). Beyond this, the first migrants were 15 August in Dunn County (Koch), 20 August in Marinette County (J. Campbell), and 21 August in Rock County (Cullum). The last dates were 13 October at the Schlitz Audubon Center in Milwaukee County (Bontly and Zehner) and 20 October at the Lion's Den in Ozaukee County (Dolan). The high count was 15 on 6 September in Bayfield County (Brady) followed by 13 on 11 September in Ozaukee County (E. Brown and Maertz) and 12 on 7 September in Racine County (Willard).

Bay-breasted Warbler—The first date was 26 August at Pheasant Branch in Dane County (McDowell) followed by finds on 27 August in Bayfield County (Brady) and two other locations in Dane County (Heikkinen and P. Senner). The last dates were 7 October at Havenwoods SF in Milwaukee County (Wood) and at the Riveredge Nature Center in Ozaukee County (Beck and Borgmann) and 11 October at Harrington Beach in Ozaukee County (Sommer and Szymczak). The high count was eight on the dates of 13 September in Portage County (Zinda), 15 September in Rock County (Cullum), and 19 September in Grant County (McKay).

Blackburnian Warbler—Found near the start of the season in the counties of Burnett (Hoekstra), Douglas (the LaValleys), and Vilas (T. Nowak). The first migrants were 22 August in Rock County (Cullum), 23 August in Brown County (Swelstad), and 26 August in Dane County (McDowell). The last September date was 30 September in the counties of Dane (Heikkinen), Door (the Lukes), and Waukesha (the Kents). This was followed by 7 October at Olin Park in Dane County (P. Senner). The high count was nine on 7 September in Kenosha County (Willard) followed by six on 27 August in Rock County (Cullum) and five on 2 September in Ozaukee County (Brennan).

Yellow Warbler—October departure dates were 5 October in La Crosse County (M. Paulson) and 6 October at Harrington Beach in Ozaukee County (Brennan). The only double digit counts were 12 on 1 August at Lakewood in Oconto County (Mooren) and 16 on 3 August at the Horicon Marsh of Dodge County (E. Kasper).

Chestnut-sided Warbler—The last dates were 7 October in the counties of Milwaukee (Bontly, Finney, and Scheiman) and Ozaukee (Brennan) followed by 16 October at Harrington Beach SP in Ozaukee County (Brennan). The high count was 12 on 27 August at Pheasant Branch in Dane County (McDowell) followed by 10 on 5 August in Vilas County (T. Nowak) and 13 September in Dane County (McDowell).

Blackpoll Warbler—The first fall date was 17 August in Racine County (Pugh) not to be followed until 25 August at the Schlitz Audubon Center in Milwaukee County (Zehner). The last dates were 14 October in Ozaukee County (Brennan), 15 October in Milwaukee County (Wood), and 19 October at Kohler-Andre SP in Sheboygan County (Szymczak). The high count was 30 on 11 September at Point au Sauble in Brown County (Prestby) followed by 26 on 13 September in Brown County (Loss) and 25 on 27 September in Milwaukee County (Coulter and the Kents).

Black-throated Blue Warbler—There were no early season reports of this northern nester. The first find was 15 August in Dunn County, which would be a migrant (Koch), followed by 28 August in Vilas County (Frank). Other early migrants were 2 September at two locations in Dane County (McDowell and S. Peterson), 2 September in Ozaukee County (Brennan), and 3 September in Milwaukee County (many birders). The last dates were 11 October at Harrington Beach SP in Ozaukee County (Szymczak), 11 October at Wind Point in Racine County (Jacoby), and 12 October at Kohler-Andre SP in Sheboygan County (Szymczak). The high count was four on 26 September at Harrington Beach SP in Ozaukee County (Brennan) followed by three on 23 September along the Root River Parkway in Racine County (Howe).

Palm Warbler—The only early season find of this northern nester was from Iron County (David). The first reports of migrants were 26 August in Wood County (Strelka) and 28 August in

Door County (Walzer). The last dates were 30 October at the Schlitz Audubon Center in Milwaukee (Bontly, Finney, and Zehner) and 31 October at Forest Beach in Ozaukee County (W. Mueller). The high count was 120 on 12 October at Forest Beach in Ozaukee County (Sommer) followed by 100 on 5 October at the Lion's Den in Ozaukee County (D. Baumann) and 100 on 5 October at Bender Park in Milwaukee County (Lubahn and Wanger).

Pine Warbler—Early season reports of this nesting species came from the counties of Iron (David), Monroe (Fissel and Otto), Vilas (M. Anderson and E. Stone), and Waukesha (Szymczak). The Southern Kettle Moraine SF of Waukesha County is an outlier nesting area, quite distant for any other nesting location. The first likely migrant was found 9 August at Wyalusing SP in Grant County (Bucci). The last dates were 13 October in Taylor County (Peche) and 19 October at Virmond Park in Ozaukee County (Huf). The high count was four on 5 September in Polk County (Maercklein).

Yellow-rumped Warbler—Early season reports came from the counties of Bayfield (Daley), Chippewa (Steger), Door (Stutz), and Vilas (Draper and Nowak). These four counties compare to nine in 2013. The first migrant was 2 August in Milwaukee County (Lubahn), followed by 4 August in Winnebago County (Ziebell) and 30 August in Outagamie County (R. Mueller). The last dates were 18 November in the counties of Dane (Henrikson) and Sauk (A. Holschbach) and 22 November in Waukesha County (Szymczak). The high count was 500 on 23 September at Wisconsin Point in Douglas County (Epstein) followed by 439 on 28 September in Bayfield County (Brady) and 407 on 22 September in Bayfield County (Brady).

Yellow-throated Warbler*—One bird was heard and seen on 9 August at Wyalusing SP in Grant County (Bucci).

Prairie Warbler*—There were two reports. One was 12–13 September at the mouth of the Fox River in Green Bay, Brown County (first by Scott Loss) while the second was 13 September at Wind Point in Racine County (Curt Jacoby).

Black-throated Green Warbler—Found near the start of the season in the nesting counties of Bayfield, Door, Douglas, Florence, Forest, Iron, Vilas, and Waukesha. As with a number of species, the Kettle Moraine SF in Waukesha County is an outlier nesting area for the Black-throated Green Warbler (Szymczak). The first migrants beyond nesting counties were 12 August in Green County (Sterbling) and 16 August in Grant County (Simpson). The last dates were 13 October at Harrington Beach SP in Ozaukee County (Brennan) and 19 October at Forest Beach in Ozaukee County (Schaefer). The high count was 12 on 30 August in Oneida County (Brezinski) followed by seven on 19 September at Nelson Dewey SP in Grant County (McKay).

Canada Warbler—The only early season report of this nesting species came from Oconto County (Jeff Yunke). The first migrants beyond nesting counties were found 13 August in Racine County (Kennedy), 14 August in Rock County (Cullum), and 15 August in Ozaukee County (Dolan). The last September date was 17 September at the Schlitz Audubon Center in Milwaukee County (Wanger) followed by a find on 7 October at Bluegill Bay Park in Marathon County (Sabatke). The only count greater than two was four on 5 September in Dane County (Binder).

Wilson's Warbler—The first fall date was 17 August in Racine County (Pugh) followed by 22 August in Marathon County (Berrigan). There were two October departure dates. Those were 4 October in Manitowoc County (Sontag) and 9 October in Milwaukee County (Huf). The high count was four on 30 August in Outagamie County (R. Mueller) and four on 2 September in Bayfield County (Brady).

Yellow-breasted Chat—There were two fall reports. The first was 18 August at Forest Beach in Ozaukee County (W. Mueller) with the second on 25 September at Wind Point in Racine County (Jacoby).

Eastern Towhee—The last October bird was 29 October in Dane County (Cooper). This was followed by two finds in late November. Those two were 28 November at a feeder in Monroe County (Kaberle) and 29 November at a feeder in Dane County (Treves). The high count was 13 on 25 September at Eagle Valley in Grant County (McKay) and 13 on 10 October at Spring Green in Sauk County (A. Holschbach).

American Tree Sparrow—The first fall date was 21 September in Winnebago County (Ziebell) followed by 5 October in Forest County (M. Gray) and 9 October in Ashland County (Anich). The high count was 135 on 22 November in St. Croix County (Persico) followed by 95 on 13 November in Dane County (Bridge) and 75 on 27 November in Dane County (McDowell).

Chipping Sparrow—The last fall dates were 26 November in the counties of Columbia (Wentz) and Ozaukee (Fields) followed by 27 No-

vember at two locations in Dane County (Bonk and Jorgensen). A few individuals were then found into the winter season. The high count was 58 on 25 September at Spring Green in Sauk County (A. Holschbach) followed by 55 on 23 September in Florence County (Kavanagh) and 48 on 30 September at Spring Green in Sauk County (A. Holschbach).

Clay-colored Sparrow—The last dates were 15 October at Veterans Park in Milwaukee County (Wood) and 17 October at Wind Point in Racine County (Wenzel). The high count was 15 on 13 September at McMillan Marsh in Marathon County (Pendergast) followed by 12 on 11 August at the Buena Vista Marsh in Portage County (A. Gilbert) and 12 on 13 August at the Leola Marsh SWA in Adams County (A. Gilbert).

Field Sparrow—The last dates were until 28 October at the Madison Arboretum in Dane County (Henrikson), until 29 October at Pheasant Branch in Dane County (Bailey and McDowell), and 30 October at Stricker's Pond in Dane County (Bailey). The high count was 50 on 5 September in Richland County (Waldsmith) followed by 25 on 31 August in Dane County (J. White) and 18 on 14 September in Rock County (Haycraft and Yoerger). For the fall season the total of 50 is second only to 100 set on 22 September 1990 in Walworth County by Patricia Parsons.

Vesper Sparrow—The last October dates were 16 October in Sauk County (A. Holschbach) and 18 October in Iowa County (Nechvatal). These were followed by a find on 4 November at the Hook Lake SWA in Dane County (Thiessen). The high count was eight on 29 September at Spring Green in Sauk County (Bridge) followed by seven from a number of locations.

Lark Sparrow—Early season reports came from Portage County (Kozak) and from Sauk Prairie and Spring Green in Sauk County (a number of birders). The only other report was of a single bird on 10 September in Douglas County (Nienhaus). The high count was four on 5 August at Spring Green in Sauk County. (Shealer).

Savannah Sparrow—The last fall dates were 26 November at Forest Beach in Ozaukee County (Fields) and 27 November at Port Washington in Ozaukee County (Frank). The high count was 21 on 27 September at Bender Park in Milwaukee County (Lubahn) followed by 18 on 9 October at Avon Bottoms in Rock County (Boone).

Grasshopper Sparrow—There were early season reports from the counties of Columbia (Doverspike), Dane (Thiessen), Manitowoc (Murkowski), and Sauk (Shealer). The last dates were 13 September at the Schurch-Thomson Prairie in Iowa County (Hottman) and 23 September at the Bong SRA in Kenosha County (N. Paulson). The high count was five on 5 August at the Spring Green Preserve in Sauk County (Shealer).

Henslow's Sparrow—Reported from nine counties, which compares to 14 in 2013 and 10 in 2012. Early season reports came from the counties of Dane, Dodge, Iowa, La Crosse, Monroe, and Sauk. There were consistent reports from Yellowstone SP in Lafayette County from 26 September through 19 October with the state high count of six on 16 October (Nechvatal). Other late dates were 20 October at the Horicon Marsh in Dodge County (Clark) and 20 October from Mineral Point in Iowa County (Kivikoski).

Le Conte's Sparrow—The only August find came on 15 August in Ashland County (Brady). Views of single migrants then came from the counties of Brown, Marathon, Milwaukee, and Polk. The last dates were 18 October at Ken Euers Wetland in Brown County (Schaefer and Szymczak) and 19 October at Sheridan Park in Milwaukee County (Lubahn).

Nelson's Sparrow—Reported from four counties, which compares to 11 in 2013. The only September finds came in the period 25–30 September from the Evansville SWA in Rock County (Hottman, Pope, and Thiessen). The last dates were 14 October at Pheasant Branch in Dane County (Bridge) and 16 October at the Brooklyn SWA in Dane County (Thiessen). The high count was five on 11 October at Lake Barney in Dane County (S. Miller).

Fox Sparrow—The first fall date was 18 September in Bayfield County (Brady) followed by 21 September in Douglas County (Tessen). Numbers of Fox Sparrows then remained into the winter season. The high count was 30 on 21 and 25 October at Pheasant Branch in Dane County (McDowell) followed by 26 on 12 October in St. Croix County (Persico).

Song Sparrow—This sparrow was found throughout the period and into the winter. The high count was 75 on 2 October at Nine Springs in Dane County (Hannah) followed by 51 on 13 October in Waukesha County (Hahn) and 46 on 9 October in Rock County (Boone).

Lincoln's Sparrow—The only early season report of this nesting species was from Iron County (David). Migrants south of nesting counties were first noticed on 6 September in the counties of Columbia (Wentz), Dane (M. Anderson), Door (Dadisman), and Kewaunee (Sinkula). This sparrow then appeared in numerous other counties on 7–8 September. The last October dates were 23 October at Sheridan Park in Milwaukee County (Lubahn) and 24 October at the Bong SRA in Kenosha County (Wood). These were followed by a find on 3 November at Pheasant Branch in Dane County (Jeffers). The high count was 12 on 26 September at Pheasant Branch in Dane County (Bailey) followed by 10 from a number of locations.

Swamp Sparrow—This sparrow was found throughout the fall and then into the winter. The high count was 70 on 13 October at the Paradise Valley SWA in Waukesha County (Hahn) followed by 60 on 12 October at Cat Island in Brown County (Prestby and Walton), and 43 at Nine Springs in Dane County (Hannah).

White-throated Sparrow—The first fall migrants beyond nesting areas were 4 September in Racine County (Pugh) and 6 September in Milwaukee County (the Schlitz Audubon Center, Zehner). These were followed by finds on 7 September in the counties of Brown (Prestby), Milwaukee (Lake Park, Mooney), Ozaukee (the Lion's Den, Frank), and Ozaukee (Forest Beach, Beilke). The high count was 323 on 4 October at Wisconsin Point in Douglas County (Svingen) followed by 135 on 5 October at Willow River SP in St. Croix County (Persico) and, 110 on 12 October at Willow River SP (Persico).

Harris's Sparrow—Reported from 12 counties, which compares to 10 in 2013 and 18 in 2012. The first fall find was 19 September in Douglas County (Watson) followed by other Douglas County finds in the period 21–23 September. The one other county with a September Harris's was Polk on 22 September (Maercklein). The only November report was in the period 15–26 November of one bird at the feeder of Laura Wentz in Columbia County. All counts were of one or two birds.

White-crowned Sparrow—The first fall date was 31 August in Door County (the Lukes) followed by 11 September in Douglas County (Brady) and 15 September in Ozaukee County (Brennan). As usual, numbers of White-crowned remained into the winter season. The only total of better than 100 was 150–180 over the period of 4–6 October in the yard of Melody Walsh on Washington Island in Door County. Nearest to this was 47 on 10 October at Bender Park in Milwaukee County (Lubahn). The total of 180 is record high for the fall season. The record had been 120 set on 18 October 2011 in Ozaukee County by William Mueller.

Dark-eyed Junco—The only August report of this northern nester was for 28 August in Vilas County (David and Herzberg). The next date, with even nesting counties included, was not until 10 September in Bayfield County (Ouren). The first migrant date was 11 September in Ozaukee County (Cutright and Sher) followed by 16 September in counties of Milwaukee (K. Brown) and Rock (Cullum). The high count was 136 on 4 October at Wisconsin Point in Douglas County (Svingen) followed by 113 on 24 October in Grant County (McKay).

Summer Tanager—There was one report, that being of a single bird on 2 November in Dane County (Elizabeth Baker).

Scarlet Tanager— October departure dates were 2 October at Riverside Park in Milwaukee County (Casper, Vargo, and Vokoun), 3 October at the Jana Lind residence in Eau Claire County, 4 October in La Crosse County (Stark), and 5 October at Yellowstone Lake SP in Lafayette County (Nechvatal). The high count was five on 4 September in Portage County (Kozak and Zinda) and five on 9 September in Waukesha County (Szymczak).

Western Tanager*—Documented with photographs on 21 November at Lodi in Dane County by Kendra Tutsch. There is only one other November record for this tanager, which was 1–6 November 2011 in Lincoln County by Dan Belter. There is also an over-wintering record that extends from 29 January to 30 April 1993 in Milwaukee County by Vera Karon.

Northern Cardinal—The high count was 60 on 24 October in Grant County (McKay) followed by 35 on 20 September in Grant County (McKay) and 24 on 10 November in Dane County (Conley). The only fall total higher than 60 is 87 set on 30 September 2007 in Iowa County by Aaron Holschbach.

Rose-breasted Grosbeak— The last fall dates were 15 October at Bayside in Milwaukee County (Bontly), 16 October at Yellowstone Lake SP in Lafayette County (Nechvatal), 16 October at Lake Park in Milwaukee County (Wanger), and 17 October at Bradford Beach in Milwaukee County (Petherick). The high count was 27 on 4 August in Clark County (Lund) followed by 26 on 3 August in Vernon County (Forchione), 25

on 7 September in Iowa County (A. Holschbach), and 20 on 13 August in Oconto County (Merritt).

Blue Grosbeak*—Sightings of the male Blue Grosbeak that had been found throughout the summer season at the Spring Green Preserve in Sauk County continued up to 26 August (with the last report by Lindemer). This was followed by a find on 5 October at the Cedar Grove Research Center in Sheboygan County by Tom Meyer. These were but the third and fourth fall finds for this grosbeak. The 26 August date surpassed the former record departure date set on 23 August 1970 in Richland County by Janice Jensen. The 5 October date was then record late by more than a month.

Indigo Bunting—The last dates were 11 October in Dane County (Lindemer) and 13 October in Marinette County (Hurst). The high count was 12 on 5 August at Pheasant Branch in Dane County (Winesett) followed by 11 on 1 August in Waukesha County (Gustafson) and 10 on 31 August in Barron County (Prestby).

Dickcissel—Reported from 11 counties, which compares to 17 in 2013 and 19 in 2012. The last date was 14 August at the Brooklyn SWA in Dane County (Hottman) and 14 August at the Schurch-Thompson Prairie in Iowa County (Evanson). The high count was 10 on 6 August at the Schurch-Thompson Prairie in Iowa County (Hottman) followed by seven on 4 August at the Brooklyn SWA in Dane County (Thiessen).

Bobolink—October departure dates were 2 October in Dane County (Hannah) and 5 October in Sauk County (A. Holschbach). The high count was 110 on 24 August in Monroe County (Epstein) followed by 86 on 2 September in Rock County (Cullum) and 45 on 15 August in Ozaukee County (W. Mueller).

Red-winged Blackbird—The high count was 19,351 on 24 October in Grant County (McKay) followed by 11,700 on 13 November in Brown County (Swelstad).

Eastern Meadowlark—The last dates were 21 November in Polk County (Maercklein) and 25 November in Ozaukee County (W. Mueller). The high count was 30 on 2 September in Iowa County (Nechvatal) followed by 21 on 5 October in Ozaukee County (Schaefer) and 19 on 24 September in Ozaukee County (W. Mueller).

Western Meadowlark—There were five fall reports, each of them of single birds. Those reports were 14 August in Iowa County (Evanson), 1 September in Lafayette County (Nechvatal), 22 September in Wood County (Benson), 25–26 September in Dunn County (Geraghty), and 1 October in Lafayette County (Nechvatal). Unusual was a lack of reports from the Buena Vista Marsh of Portage County.

Yellow-headed Blackbird—Reported from 12 counties, which compares to 12 in 2013 and 10 in 2012. Early season reports came from the counties of Dodge, Dunn, Fond du Lac, Jefferson, Outagamie, St. Croix, and Winnebago. The great majority of reports came from the Horicon Marsh of Dodge and Fond du Lac Counties. The last dates were 13 September at the DM Ponds in Dane County (Lindemer) and 14 September at the Zeloski Marsh in Jefferson County (Stutz). The high count was 25 on 21 August from the Horicon Marsh of Dodge County (Schiffman) followed by 15 on 13 August from the Fond du Lac County side of Horicon Marsh (Malcolm) and 15 on 8 August from the Zeloski Marsh of Jefferson County (Stutz).

Rusty Blackbird—The first fall date was 21 September in Bayfield County (Brady) and at Wisconsin Point in Douglas County (Bridge and Prestby). This was followed by finds on 22 September in the counties of Forest (Bridge), Milwaukee (Bontly and Zehner), Monroe (Epstein), Ozaukee (Brennan), and Racine (Goldberg). The last fall dates were 18 November in Dane County (McDowell), 18 November in Washington County (Curnutt), and 22 November at Wisconsin Point in Douglas County (Keyel). The high count was 400 on 24 October at Potosi Point in Grant County (McKay) followed by 310 on 19 October in Bayfield County (Brady).

Brewer's Blackbird—The first fall finds were 1 August in Douglas County (the LaValleys), 8 August in the counties of Portage (Hurlburt) and St. Croix (Mortimer) followed by 9 August in the counties of Adams (Evanson), Brown (Collison), and Racine (Wanger). The last date was 1 November in the counties of Milwaukee (Mooney and Wanger) and Winnebago (King and Malcolm). The high count was 500 on 21 September in Marathon County (Belter) followed by 164 on 6 September in Racine County (D. Johnson) and 160 on 30 September in Sauk County (A. Holschbach).

Common Grackle—The high count was 3,000 on 7 October in Dane County (Thiessen) followed by 2,071 on 24 October in Grant County (McKay).

Brown-headed Cowbird—The only far northern report was from Douglas County on 20 August (Keyel). Other than that, the range of fall

finds extended as far north as the counties of St. Croix, Taylor, Lincoln, and Oconto. The high count was 3,038 on 24 October in Grant County (McKay) followed by 900 on 28 October in Grant County (McKay) and 450 on 9 September at the DM Ponds in Dane County (Lindemer). The total of 3,038 is record high for the fall season. The high had been 2,700 set on 13 October 1992 in Dodge County by Bob Domagalski.

Orchard Oriole—Reported from nine counties, which compares to 13 in 2013 and 15 in 2012. The most northern of these counties were Monroe and Outagamie. The last dates were 27 August in Outagamie County (Ward) and 28 August at Forest Beach in Ozaukee County (W. Mueller). The high counts were: three on 3 August at Pheasant Branch in Dane County (McDowell), three on 16 August in Fox Point, Milwaukee County (Petherick), and three on 23 August at Pheasant Branch in Dane County (Cullum).

Baltimore Oriole—The last dates were 11 September in Ozaukee County (Cutright and Sher), 12 September in Dane County (P. Senner), and 14 September in Dane County (M. Anderson). The high count was 20 on 13 August in Oconto County (Merritt) followed by 16 on 23 August in Brown County (Swelstad) and 15 on 17 August in Clark County (Lund).

Pine Grosbeak—This was another weak fall for the Pine Grosbeak with but two reports. Those two were three birds on 11 November in Bayfield County (Seeger) and 15 birds on 19 November in Ashland County (Brady).

House Finch—The high count was 50 on 25 September in Dane County (Evanson) followed by 40 on 1 September in Jefferson County (Stutz) and 40 on 15 October in Dane County (Evanson).

Purple Finch—This nesting species was found near the start of the season in 10 northern counties, which is a match for the number of such counties in 2013. The first finds of migrants safely below their nesting range were 2 September in Dane County (Dischler), 5 September in Rock County (Cullum), 6 September in Winnebago County (Uslabar), and 8 September in Marquette County (Doverspike). The high count was 180 on 19 October at Forest Beach in Ozaukee County (Schaefer) followed by 27 on 19 October in Bayfield County (Brady) and 24 on 16 August in Ashland County (Dick Verch). The total of 180 is the highest fall count since 300 on 27 October in Oconto County by Jerry and Karen Smith.

Red Crossbill—After a weak fall in 2013, in which there were but two reports of Red Crossbills, this crossbill was found in eight counties in 2014. Northern counties were Ashland, Bayfield, Clark, Forest, and Vilas. There were also reports of single birds over the period 4–6 September at Forest Beach in Ozaukee County (D. Baumann, Brennan, and Sommer), a single bird on 9 October at Cross Plains in Dane County (A. Holschbach), and a single bird on 29 November at Eagle Valley in Grant County (McKay). The first fall find was 8 August in the yard of Ryan Brady in Bayfield County with follow-up finds on 27 and 31 August. The only other August report was 27 August in Ashland County (Anich). The high count was six on 28 November from the yard of Brady in Bayfield County.

White-winged Crossbill—After a poor showing of just one bird in the fall of 2013, this crossbill continued to show low numbers in 2014 with but three reports. Those three were 23 October in Ashland County with four birds (Anich), 2 November in Forest County with five birds (Belter and Hurlburt), and 7 November in Brown County with one bird (Prestby).

Common Redpoll—In the fall of 2013 there were no reports of redpolls. This was the first absence since the fall of 2002. Redpoll numbers returned to normal or even better than average this fall. There were reports from 26 counties with finds as far south as the counties of Adams, Dane, Iowa, Ozaukee, Richland, and Waukesha. The first fall find was of 35 birds on 20 October at Wisconsin Point in Douglas County (Nienhaus). The high count was 200 on 22 November at Wisconsin Point in Douglas County (Keyel) followed by 120 on 9 November in Polk County (B. Collins) and 55 on 30 November in Bayfield County (Brady).

Hoary Redpoll*—There was one documented report of one bird. That was 30 November in the City of Ashland, Ashland County (Anich).

Pine Siskin—The only early season report was a documented bird at the residence of Jim Marrari in Walworth County. The only other August finds were 12 August at the Brady residence in Bayfield County and 28 August in Vilas County (Frank). The high count was 200 on 10 October at Forest Beach in Ozaukee County (Schaefer) followed by 190 on 24 November in Clark County (Lund).

American Goldfinch—The high count was 275 on 5 October at the Lake Petite Prairie in Walworth County (Smallwood) followed by 209 on 21 September at Eagle Valley in Grant County

(McKay) and 200 on 14 September in Dane County (Paulios).

European Goldfinch—Although this species is not a valid species, it is helpful to keep track of its appearance as it might someday become valid. The one report this fall was of two birds on 6 August at the Johnson Park Golf Course in Racine County (Pugh).

Evening Grosbeak—In the fall of 2013 this grosbeak had its worst showing since 1981, with reports from but three counties and a high of four individuals. This fall there were reports from 10 counties. These counties were confined to the northern third of the state with the most southern reaches entering Eau Claire, Taylor, Portage, and Brown Counties. Until the last week of October there were but three reports. Those three were 28 August in Forest County of five birds (Frank), 22 September in Forest County of 12 birds (Bridge), and 26 September in Forest County of one bird (Duchek). In the period 20–29 November Ryan Brady was regularly reporting 40+ grosbeaks at his feeder in Bayfield County with a high of 55 on 29 November. Outside of the Brady feeder the high count was 40 from different locations in Forest County in late November (Ward and Gray).

House Sparrow—The high count was 282 on 20 September in Grant County (McKay) followed by 200 on 30 November in Iowa County (Kivikoski).

Contributors

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Glaucous Gull (*Larus hyperboreus*) Resting on a Beach in Milwaukee County in November, 2014 —Jim Edlhuber.

"By the Wayside"—Fall 2014

Pacific Loon

19 November 2014, Milwaukee County

Somewhat bulkier than nearby mergansers (Common and Red-breasted both present), but not as huge as a Common Loon would appear in comparison. Sharply pointed bill held level. Head rounded, without flat crown of Common Loon. Crown, nape, and back very dark black without any light markings; dark color consistent throughout. Eye hidden in black crown, with no white arcs or other marks apparent. Dark nape came forward on neck much further than on Red-throated Loon (about 2/3 black and 1/3 white when seen in profile), with clean, sharp demarcation between black nape and white throat (demarcation line was essentially straight along throat edge, with slight point extending out from edge when it reached the breast). No jagged edge to black nape or indentation that would be seen in a Common Loon's collar markings. Solid black crown extended below eye to bill line. Lower half of face, throat, and breast clean white. Unable to get a good enough look at chin to determine if dark chinstrap was present or not. Several good views of head shape and neck at various angles confirmed initial impression of rounded head and clean, relatively straight, uninterrupted demarcation between black nape and white throat.—Jym Mooney, City of Milwaukee, Milwaukee County

Western Sandpiper

14 September 2014, Bradford Beach, Milwaukee County

This bird was smaller than the many Sanderlings and the single Baird's sandpiper that was in the flock. It appeared to be a small juvenile male Western Sandpiper. I did not seem to be any larger than nearby Semipalmated Sandpipers, and it appeared to be somewhat more streamlined and slimmer than the Semipalmateds. The solid black bill was long and slightly downturned with a sharp tip. The bill was on the short side, but it was longer than the bills of the three Semipalmated Sandpipers in the flock.

Since all the scapulars, except the upper two rows, were crisply edged with white, and the edgings of the upper two rows of scapulars were brilliant and distinct Rufous in color, this was a juvenile. The mantle had a Rufous tint, and at the right angle through the scope, the auriculars had a hint of rufous. The lores had a thin dark stripe, the face had a white supercilium, and at most angles the auriculars appeared as a pale brown.

The underparts, including most of the breast and throat were a clean white. Without optics, this bird could be picked out from among the somewhat dingier Semipalmated Sandpipers by its overall paleness and brighter white areas.

There was some fairly crisp dark streaking on the sides of the breast just

below the shoulder area. The crown was gray with dark brown spots. The wingtips did not extend past the tail. The legs were long and black, but it was difficult to compare leg length with the Semipalmated because both species stayed on the wet, unstable algae mat. —Thomas Wood, Menomonee Falls, Waukesha County

Western Sandpiper

8 September 2014, Ore Dock Base, Ashland County

I first noticed the bird at maybe 200 yards out. It was larger than a Least Sandpiper and smaller than a Spotted Sandpiper. Compared to a Semipalmated Sandpiper it had a longer downcurved bill and a noticeable bright red stripe on the scapular. Black legs. It then walked away from me and was hard to confirm anything more, but gradually worked its way back along the wall until it was literally within 10 feet of myself and Ryan Brady. Here we could better see bill shape and see that in fact there was quite a bit of red on the cap and back. Overall, it was a longer bird than a Semipalmated Sandpiper.—Nick Anich, City of Ashland, Ashland County

Red Phalarope

3 October 2014, Cat Island, Brown County

When scanning the bay on a point count, I noticed a small white bird out a long ways (almost 150m) with a group of Ruddy Ducks. After watching its behavior of spinning and picking at the water, I knew it was a phalarope. Although it was too far away to tell anything more, I could tell by the shorter shape of the bird and shorter bill that this was a "non-Wilson's" phalarope which was my suspicion for this time of year. Thankfully, the bird took off and flew at me, eventually landing on the edge of the fresh dredge spoils this time only about 50m from me. Now I could start to make out field marks: a thick black mask on the face that covered the eye from the forehead to about halfway between the eye and back of the neck, a noticeably thick bill—reminiscent of the nearby Sanderlings, white from the throat down to the belly, and a light gray coloring on the top half of the bird covering the wings and back and continuing up the back of the neck. The gray on the back was darker at the edges of the gray and white and this dark gray got even darker up the neck, forming a crown that almost looked black at a distance (but lighter if seen in different light), something I have noticed in transitional-plumaged Red Phalaropes in the past. I saw it fly a couple times where it showed dark gray almost black underwings with a prominent wingstripe (again, like a Sanderling) and underwings that were white with gray restricted to the edges.—Tom Prestby, Green Bay, Brown County

Pomarine Jaeger

27 September 2014, Wisconsin Point, Douglas County

Viewed with scopes from the beach at parking lot #3 from about 08:30 until about 14:00, and in view much of that time at distances over 400m to closer than 50m. We concluded at the time this bird was a dark juvenile Pomarine Jaeger, and photos later confirmed this, in my opinion.

Central pair of rectrices (R1) ex-

tended beyond the rest of the tail about 1 cm and were blunt, rounded (shaped like a thumb tip); this was noted repeatedly in the field and confirmed in several photos.

Outer primaries at rest were solid dark blackish brown, lacking any hint of pale fringes that characterize juvenile Parasitics.

At least as big in dimensions (wing span, length) as Ring-billed Gulls but bulkier, heavier. Flight was powerful and gull like; wings seemed broad at base. Seen several times in close proximity to adult Parasitic and was notably larger and bulkier.

Behavior: the Ring-billed Gulls were frightened of this bird. It typically rested offshore several hundred meters and periodically would fly, often beachward. Virtually as soon as it left the water, dozens to hundreds of Ring-billed Gulls even hundreds of meters away would immediately take flight. We witnessed this dozens of times. Two adult Parasitics that periodically passed near the gulls did not elicit this mass panic reaction, although the Parasitic Jaegers did chase Ring-billed Gulls. Several times we saw the Pomarine attack a Ring-billed Gull from above, striking it and physically driving the gull into the water.

Both upper and lower tail coverts were strongly, distinctly barred (dark brown and tan dorsally, creamy and dark brown ventrally).

Although we looked for the underwing "double flash" in the field, it was not evident. However, photos confirm that it was present (paler bases of the ventral primary coverts). In some photos the double flash is evident, less so in others. Ventral secondary coverts were paler than body.

Overall coloration was dark brown to gray brown, lacking cinnamon buff feather edges; nape was a bit paler brown, face was dark brown right to the bill margin. Bill was distinctly two-toned, blackish from just anterior to nostril to tip, pale proximally.—Bruce Fall, Minneapolis, Minnesota

Long-tailed Jaeger

17 September 2014, Wisconsin Point, Douglas County

Adult bird. Light build for Jaeger, flat belly slightly rounded at the sternum. Long, narrow wings, extremely long, pointed central tail feathers that extended about 8-10 inches from the outer tail feathers. Well-defined black cap restricted to the base of the bill, yellowish buff on cheeks and part of throat. No breast band, clean white on underparts that extended 3/4's the length of belly. The bird's wings, back and tail were completely dark except for 2 white primary shafts in the wings. Underwings completely dark with no white flash. Short, black bill that was stubbier than the other Jaegers displayed. Bird was dwarfed in size when it was flying next to the Pomarine Jaeger that was also present.—Rob Pendergast, Plover, Portage County

California Gull

19 October 2014, Wisconsin Point, Douglas County

First-cycle individual well-studied for extended periods of time flying, sitting on water, and standing on beach . . . Size clearly smaller than first-cycle Herring Gull, but also larger than average Ring-billed Gull; size also smaller than first-cycle Thayer's Gull when side-by-side. Long-winged appearance best ap-

preciated when bird standing on beach. Long, pencil-shaped, pinkish bill with distinct black tip; black more extensive on lower mandible than on upper mandible. Irides dark. Head and neck brown, with face sometimes looking darker in certain light. Brownish plumage overall, with scapulars showing grayish-brown tones. Upper secondary greater wing-coverts pale-fringed but otherwise dark brown, except for a few internal lighter brown bars. Folded primaries dark brown (blackish) with absolutely no pale edging. Breast, breast-sides, and flank chocolate brown, similar in shade to upperparts. In flight, dark brown secondary bar parallel to dark brown upper secondary greater coverts created a "double dark bar" on the upper wing; the bird also lacked an obvious pale inner primary panel that is typical of the same age Herring Gull. Rump and upper tail-coverts strikingly pale compared to rest of upperparts in flight, due to sparse brown barring on rump and tail-coverts. Blackish tail contrasts strongly with pale rump/upper tail-coverts. Behaviorally, this bird was quite aggressive towards Ring-billed and Herrings gulls when we threw some bread to coax it closer for photos. Frequently delivered a loud, deep, hoarse-sounding call that will hopefully be audible on video. This species is Casual in the Western Great Lakes. –Peder Svingen, Duluth, Minnesota

Anna's Hummingbird

16 November 2014, Botanical Gardens at University of Wisconsin-Madison, Dane County

Hummingbird with a mostly green body but an obvious red throat, crown, and face that flashed a fiery red in the right light, with some highlights of pink, gold and lavender. The bill was straight and shorter than that of a Ruby-throated Hummingbird. The tail was longish as seen from the extension of the tail below the body, and the tail feathers were edged with gray. –Chuck Heikkinen, Madison, Dane County

Western Wood-Pewee

9 October 2014, Forest Beach Migratory Preserve, Ozaukee County

We (Stephanie Beilke, William Mueller, Calvin Brennen [Brennan heard vocalization]) trapped and banded a Western Wood-Pewee (contopus sordidulus) at Forest Beach Migratory Preserve in Ozaukee County, WI, on October 9th, 2014, at 8:00 am.

The longest primary minus the longest secondary was 20.9 millimeters. The longest rectrix minus the undertail coverts was approximately 25 mm. The second measurement minus the first equals 4.1 mm, suggesting Western Wood-Pewee, according to the standard banding resources, Pyle, P. (The Identification Guide to North American Birds—1997).

Wing chord 78mm

Tail 59 mm

Body mass 14.2 grams

Lower mandible was mostly dark, with yellow proximally. Also, grayer plumaged overall than Eastern, particularly showing less contrast between the face and side of the neck, giving the whole head a more uniformly gray appearance.

Vocalizations heard prior to capture were diagnostic: burry inflected call pee-rr, tonal quality suggestive of Eastern Phoebe but heavier and more abrupt, also a rolling tremulous peeping call. (Calvin Brennen) –William

Mueller, City of Milwaukee, Milwaukee County

Blue Grosbeak

3 August 2014, Spring Green Nature Conservancy Preserve, Sauk County

The grosbeak was singing from a bare branch and was mostly facing away from me. It did turn its head frequently so I was able to get looks at most of the plumage.

The head and nape were dark blue, and the lores were black, blending with the black eye. The head was somewhat crested at the rear and looked a bit messy, which could have been an effect from the wind or feather wear. The nape was dark blue and the mantle was nearly black, probably indicating feather wear. The primaries and tertials were black as was the upper surface of the tail. The median coverts were a bright chestnut color, and there was a touch of buff on one of the greater coverts. What little I could see of the breast and belly was blue. The rump and back were seen to be blue when the bird spread its wings, but there were a few streaks of gray on the back.

The bill was very large and silvery-blue. The legs were solid black.—Thomas Wood, Menomonee Falls, Waukesha County

Ruddy Turnstone (*Arenaria interpres*) Found on a Beach in Milwaukee County in September, 2014 – Jim Edlhuber.

Western Sandpiper (*Calidris mauri*) Discovered in Milwaukee County in September, 2014 – Jim Edlhuber.

WSO Records Committee Report: Fall 2014

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The WSO Records Committee reviewed 74 records of 37 species for the Fall 2014 season, accepting 62 of them (84%). The season highlights included two separate male Anna's Hummingbirds, Blue Grosbeak from two locations and four separate Rufous Hummingbirds. A third state record of Western Wood-Pewee was banded at Forest Beach Migratory Preserve.

Accepted Records

Table 1 provides a list of records accepted by the WSO Records Committee during the Fall 2014 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.

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.

Artic Tern—

Lot 1 Wisconsin Point, Douglas County, 15 September 2014 (1-4).

The observer reported seeing a flock of white terns flying over the lake. The flock was mostly Common Terns but they noted one tern to be different than the others. "It showed no dark wedge at the wings (like Commons)—was uniformly gray (overall lighter in appearance). While the head and bill appeared smaller than the Commons."

The observer acknowledged that distance was a problem to clearly pick out these field marks. The committee feels that there is not enough detail mentioned in the report to rule out Forster's Tern.

Barrow's Goldeneye—

Chambers Island, Door County, 28 May 2013 (3-2).

Pictures of a bird in flight were provided. The identification was primarily based upon a slightly crescent shape

Table 1. Fall 2014 Accepted Records

Species	Date	Observer	Location	County	Photo	Vote
Anna's Hummingbird	11/16	Chuck Heikkinen	Botany Garden - University Ave Madison	Dane	Yes	5 - 0
Anna's Hummingbird	11/16	William Holton	Botany Garden - University Ave Madison	Dane	Yes	5 - 0
Anna's Hummingbird	10/21	Kyle Lindemer	Swiss Valley Rd Prairie du Sac	Sauk	Yes	5 - 0
Anna's Hummingbird	10/21	Daryl Tessen	Swiss Valley Rd Prairie du Sac	Sauk		4 - 1
Artic Tern	9/15	Rob Pendergast	Lot 1 Wisconsin Point Superior	Douglas		4 - 1
Black-bellied Whistling Duck	5/24	Heikkinen & Unson	Dike Rd Horicon Marsh	Dodge	Yes	5 - 0
Blue Grosbeak	8/15	Kyle Lindemer	Spring Green Conservancy - Pearl Road	Sauk	Yes	5 - 0
Blue Grosbeak	8/26	Kyle Lindemer	Spring Green Conservancy - Pearl Road	Sauk	Yes	5 - 0
Blue Grosbeak	10/5	Tom Meyer	Cedar Grove Research Station	Sheboygan	Yes	5 - 0
Blue Grosbeak	8/3	Thomas Wood	Spring Green Conservancy - Pearl Road	Sauk		5 - 0
California Gull	10/19	Ted Keyel	Lot 1 Wisconsin Point Superior	Douglas	Yes	5 - 0
California Gull	10/19	Jan and Larry Kraemer	Lot 1 Wisconsin Point Superior	Douglas	Yes	5 - 0
California Gull	10/20	Clinton Nienhaus	Lot 1 Wisconsin Point Superior	Douglas		4 - 1
California Gull	10/19	Peder Svingen	Lot 1 Wisconsin Point Superior	Douglas	Yes	5 - 0
House Wren	11/18 thru 12/4	Dan Panetti	High Forest Dr Cedarburg	Ozaukee	Yes	5 - 0
House Wren	12/1	Dennis Gustafson	High Forest Dr Cedarburg	Ozaukee	Yes	5 - 0
King Rail	8/8	Kyle Lindemer	County V Pond	Dane	Yes	5 - 0
Little Gull	6/15	Adam Sinkula	Kewaunee Harbor	Kewaunee		4 - 1
Long-tailed Jaeger	9/17	Rob Pendergast	Lot 1 Wisconsin Point Superior	Douglas		5 - 0
Northern Hawk-Owl	11/29	Michael Gray	Hwy 45 Tigerton	Shawno	Yes	5 - 0
Pacific Loon	11/19	Jym Mooney	Milwaukee	Milwaukee		4 - 1
Pacific Loon	10/18 and 10/28	Daryl Tessen	Harrington Beach - end of Cnty D	Ozaukee		4 - 1
Parisitic Jaeger	9/20	John Dixon	Wind Point Racine	Racine		5 - 0
Parisitic Jaeger	9/19	Jym Mooney	Bradford Beach	Milwaukee	Yes	5 - 0
Parisitic Jaeger	9/9	Tom Prestby	Cat Island Wave Barrier Green Bay	Brown	Yes	5 - 0
Parisitic Jaeger	6/12	Sparky Stensaas	Wisconsin Point	Douglas	Yes	5 - 0
Pomarine Jaeger	9/27	Bruce Fall	Wisconsin Point	Douglas	Yes	5 - 0
Pomarine Jaeger	9/17	Rob Pendergast	Lot 1 Wisconsin Point Superior	Douglas		4 - 1
Red Phalarope	10/3	Tom Prestby	Cat Island Wave Barrier Green Bay	Brown		5 - 0
Red Phalarope	10/16	Jude Vickery	offshore from Racine	Racine		5 - 0
Red-throated Loon	7/9	Anne Geraghty	Lake Superior Port Wing	Bayfield	Yes	5 - 0
Ruff	8/10	Magill Weber	Hwy A and Hwy 51 pond	Dodge	Yes	4 - 1
Rufous Hummingbird	10/15 thru 10/23	Cynthia Bridge	Milwaukee Ave Fort Atkinson	Jefferson	Yes	5 - 0
Rufous Hummingbird	10/27	Cynthia Bridge	Thorson Rd Black Earth	Dane	Yes	5 - 0
Rufous Hummingbird	10/23	Jim Edlhuber	May Forest Rd Eagle	Waukesha	Yes	5 - 0
Rufous Hummingbird	10/24	Dennis Gustafson	May Forest Rd Eagle	Waukesha	Yes	5 - 0
Rufous Hummingbird	8/17	Elizabeth Herzmann	Keith St Mayville	Dodge	Yes	5 - 0
Rufous Hummingbird	10/17	Kyle Lindemer	Milwaukee Ave Fort Atkinson	Jefferson	Yes	5 - 0
Rufous Hummingbird	10/27	Kyle Lindemer	Thorson Rd Black Earth	Dane	Yes	5 - 0
Rufous Hummingbird (selasphorus)	8/20	Kerry Schloff	Hillside Cr Malone	Fond du Lac		5 - 0
Rufous Hummingbird	8/19	Daryl Tessen	Keith St Mayville	Dodge		4 - 1
Sabine's Gull	9/29	Nick Anich	Memorial Park Washburn	Bayfield		4 - 1
Sabine's Gull	9/18	Ryan Brady	Chequamegon Bay from Washburn	Bayfield		5 - 0
Sabine's Gull	9/17	Rob Pendergast	Lot 1 Wisconsin Point Superior	Douglas		5 - 0
Sabine's Gull	9/16 - 9/17	Daryl Tessen	Lot 1 Wisconsin Point Superior	Douglas		4 - 1
selasphorus Hummingbird	10/19	Thomas Wood	Milwaukee Ave Fort Atkinson	Jefferson		5 - 0
Swainson's Hawk	6/4	Robbye Johnson	Stone's Bridge	Douglas	Yes	5 - 0
Thayer's Gull	7/11	Amar Ayyash	Sheboygan	Sheboygan	Yes	5 - 0
Townsend's Solitaire	9/22	Jim Krakowski	Rainbow Flowage area	Oneida		5 - 0
Tricolored Heron	8/26	Michael Gray	Old Marsh Rd - Horicon Marsh	Dodge	Yes	5 - 0
Tricolored Heron	8/24	Daryl Tessen	Old Marsh Rd - Horicon Marsh	Dodge		4 - 1
Western Kingbird	8/26	Adam Sinkula	Woodside and Townline Rds	Kewaunee	Yes	5 - 0
Western Kingbird	9/8	Lori Widmann	Pine St McMillan township	Marathon	Yes	5 - 0
Western Sandpiper	9/8	Nick Anich	Oredock base	Ashland	Yes	5 - 0
Western Sandpiper	9/14	Jym Mooney	Bradford Beach	Milwaukee	Yes	5 - 0
Western Sandpiper	9/14	Thomas Wood	Bradford Beach	Milwaukee		5 - 0
Western Tanager	11/21	Kendra Tutsch	Fellows Rd Lodi	Dane	Yes	5 - 0
Western Wood-Pewee	10/19	William Mueller	Forest Beach Migratory Preserve	Ozaukee	Yes	5 - 0
Yellow-crowned Night-Heron	7/29 thru 8/1	Daniel Belter	Eau Claire River Rd	Marathon	Yes	5 - 0
Brant	11/23/2012	via Kevin Murpy	Pool 9 of the Mississippi River	Crawford	Yes	5 - 0
Laughing Gull	10/23	Cynthia Bridge	Johnson Creek Landfill ponds	Jefferson	Yes	5 - 0

white patch on the face of the bird. Committee members felt the white patch on the face was not completely molted in and believe the picture was of a young male Common Goldeneye molting into adult plumage giving the normally round facial patch a crescent shape.

Black-headed Grosbeak—

Delafield, Waukesha County, 21 September 2014 (0-5).

The bird seen on a feeder was described as "black and white banded wings, breast was salmon near the throat, fading to an orange-yellow near the legs. Black head, but had a light colored streak from beak across eye to back of head and another over crest of head. Dark legs and beak." They also noted that "Rose-breasted grosbeak - has stronger red on breast"

The committee feels that the description provided does not successfully eliminate first year male Rose-breasted Grosbeak, which has little to no rose coloration on the breast.

Blue Grosbeak—

Spring Green Conservancy—Pearl Rd, Sauk County, 16 August 2014 (0-5).

Pictures of a juvenile bird were provided. The bird picture, while very similar to Blue Grosbeak appears to be a juvenile Indigo Bunting. The pictures showed a slim bird with a relatively small bill, smaller than a Grosbeak's bill.

Cinnamon Teal—

Bay Beach Wildlife Sanctuary, Brown County, 12 August 2012 (2-3).

A picture of a duck in ellipse plumage was provided. The photo was very washed out and little detail could be seen. The duck appeared to be a Teal, but very little else could be determined.

Gryfalcon—

Town of Boaz, Richland County, 19 November 2014 (0-5).

The report is of a bird in flight described as "Appeared to be white. Wings were of distinct falcon-like shape; long and pointed. Wing tips were dark, appeared black. Smaller than a red tailed hawk, but larger than a crow."

Raptors can hold their wings at various angles making them appear more pointed and falcon-like at times. The report did not eliminate more common raptor species such as a male Northern Harrier.

Pomarine Jaeger—

Lot 1 Wisconsin Point, Douglas County, 17 September 2014 (1-4).

Two jaegers were seen in flight together out over Lake Superior. "The size contrast was stark—one large, other small." The observer noted several comparisons between the birds. The smaller bird was a Long-tailed Jaeger. "Differences, besides size, include white primary shafts (Pom) vs 1 primary shaft (L.T.). 2 underwing patches (Pom) vs 1 underwing patch (L.T.); short, muted tail feathers (Pom) vs the pointed tail feathers (L.T.); slower more neat wing beats (Pom) vs more rapid wing beats (L.T)."

The records committee accepted this as a record for the smaller Long-tailed Jaeger, but there was not discussion included as to why the larger bird was a Pomarine vs a Parasitic Jaeger.

Short-tailed Hawk—

Cedar Grove Research Station, Ozaukee County, 13 October 2014 (0-5).

The description provided was "Only a brief look at the UB (unidentified buteo) ca, 125' directly above us. All light underneath, wing, and breast with dark (black?) wing tips. Red shouldered size." After review field guides they added "I ruled out the other possibilities: red tailed, red shouldered, rough legged and Swainson's. As for ferruginous, I feel that the wings were not long enough, nor narrow enough."

Committee members found this an interesting possibility. For what would be a first state record we would need a more thorough discussion on how each species was "ruled out". Also there was no discussion eliminating Broad-winged Hawk as a possibility.

Smith's Longspur—

County DM & I ponds, Dane County, 26 October 2014 (0-5).

The report was of a bird that "appeared yellowish without binoculars. It was bathing in the shallows vigorously and offered extended viewing opportunities. Through binoculars it had long wings, a very dark stripe above the eye and a buffy yellow color underneath all the way back to the rump. The color was similar to Peterson's male Smith's Longspur, but the bird did not have the striking facial markings of male breeding plumage. The cheek patch was not outlined."

The description provided is too vague to pin to a specific species. To identify what should be a winter plumage Smith's we would need more detail description of the field marks that identify this as a Smith's should as a white shoulder patch and detailed tail description. Also a discussion on how the other longspurs and similar species where eliminated.

Tricolored Heron—

Old Marsh Rd—Horicon Marsh, Dodge County, 26 August 2014 (2-3).

The description submitted was "Small heron, about half to 2/3 the size of great blues seen. Shades of gray on the back, thin and snaky neck, definite white belly seen when it flew, light colored bill".

This very brief description fails to eliminate other similar species such as an immature Little Blue Heron.

White-winged Dove—

Hwy 18 near Fennimore, Grant County, 24 August 2014 (2-3).

The report description was "A dove, more stocky than mourning dove. A prominent white stripe along the wing was very visible as it flew south along Hwy 18. Bird did not have long tapered tail as a mourning dove would, and I could see white feathers along the trailing edge of the relatively squared off tail."

The committee would like a better description of the white stripe. This descriptions does not fully eliminate Eurasian-collared Dove or a dove with partial leucism.

Neotropic Cormorant—

Manitowoc lakefront, Manitowoc County, 30 September 2014 (0-5).

Picture were submitted of a cormorant that appeared to be very small in comparison to the nearby Herring Gulls. The identification of this bird appeared to be made entirely based upon the size of the bird.

Sanderlings (*Calidris alba*) in Milwaukee County Captured in a Disagreement in September, 2014 —Jim Edlhuber.

A Rare and Welcome Fall Visitor

Cynthia Bridge

On October 15, 2014 an adult female Rufous Hummingbird visited my yard in Fort Atkinson, for nine days. As an aspiring hummingbird bander the visit of this western hummingbird was quite exciting

In August 2013 when I began banding Ruby-throated Hummingbirds with Scott Weidensaul in Pennsylvania, I was inspired by the feeder set-ups at the busy Ruby-throated Hummingbird host yards. Thus upon returning home from my introduction to Ruby-throated Hummingbird banding, I reconfigured my nectar feeding scheme by adding many more feeders and more red to my small urban yard. I purchased a red dome baffle to hang above a feeder and the infamous red fountain everyone in Hummingbirds Anonymous raved about for attracting hummingbirds. I suspect the collection of salient red objects in the yard combined with some appealing small trees, shrubs and the large spruce caught the attention of my western visitor.

She showed up in the morning twilight on October 15th. By then my Ruby-throats had left much earlier in the month. I sighted her atop my dogwood. She would fly straight up a few feet, perch and repeat this action over and over. She came to the window feeder back to the dogwood and over to my Guara biennis where she perched on the dried Cupflower stalk. At this point her ID was unknown other than I knew she was a Rufous/Allen's hummingbird with Rufous being the more likely candidate. Unfortunately I had to scurry to work, so I quickly messaged my friend Jim Edlhuber, who accepted the task to visit my yard to obtain diagnostic tail spread shots. Jim successfully captured the R2 (rectrix 2) notch clinching the ID for Rufous Hummingbird. His diagnostic photos can be seen at his *Window to Wildlife* blog.

During the nine days the bird was present in the yard. I could always find her. She often perched in my Washington Hawthorn similar to what my Ruby-throated Hummingbirds did in the summer. When not in the hawthorn she could be found in the large spruce on a favorite perch or foraging for insects. She was quite vocal, so if not spotted immediately, I could walk my small yard, rouse her and easily find her by her voice. It was quite exciting and entertaining to have my own little rarity to relish for a nine day run.

Midway through her visit, on October 19, she was successfully banded by the currently permitted Wisconsin hummingbird bander, Mickey O'Connor. She departed my yard the morning of October 23rd after one last nectar feeding.

"My" hummingbird became somewhat famous when she was sighted on November 15th and recaptured by Susan Campbell on November 22 in New Bern, North Carolina at the home

of Jay and Betsy Figeuroa! That's at least 830 miles in 24 days! The bird was color-marked upon her recapture allowing the homeowners to track her while she visited their yard. The bander, Susan, initially thought the bird would remain in her new locale for the winter. However, she was reportedly last seen November 29, hopefully departing for other great adventures. It is quite impressive and rewarding that in only the second year of winter hummingbird banding in Wisconsin we already have a recapture! I encourage all who have these rare but regularly occurring western hummingbirds visit their yards to consider allowing "their' visitors to be banded. It's a safe minimally disruptive process that can contribute to our understanding of the migration and wintering habits of species such as Rufous and Anna's Hummingbirds.

Figure 1. Fort Atkinson Hummingbird Feeder Setup.

Figure 2. Rufous Hummingbird, After Hatch Year (AHY) Female

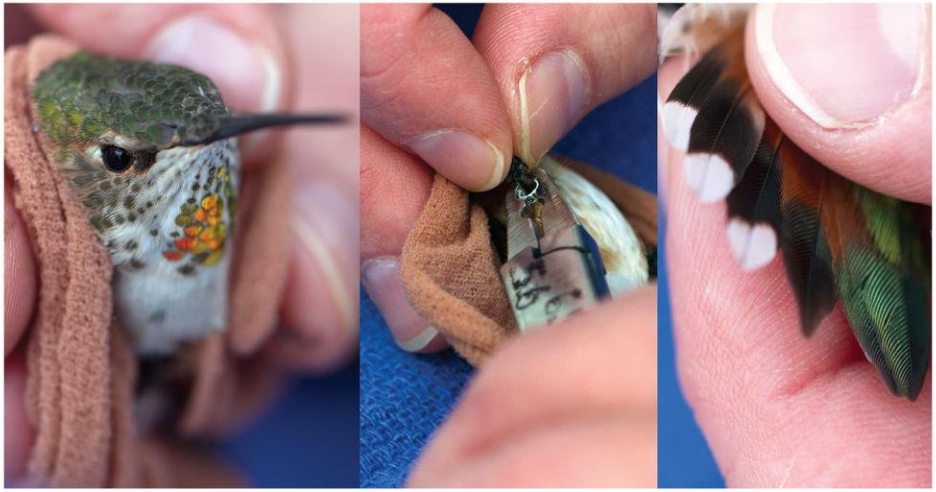

Figure 3. Rufous Hummingbird Banding Composite

Figure 4. Migration track of Fort Atkinson Rufous Hummingbird.

Black-and-White Warbler (*Mniotilta varia*) Pausing
While Searching for Food in September—David Franzen.

About the Artists

Jennifer Ambrose is an avid birder and the editor of Wisconsin Metro Audubon Society's newsletter *The Trumpeter*. She enjoys photographing birds, especially when they are caught in mating or territorial displays or taking baths. When she's not birding, she teaches composition and communication classes at Milwaukee area colleges.

Jim Edlhuber, a lifelong native of Wisconsin, has been photographing wildlife for over 20 years. He considers himself an avid photographer and is always trying to capture nature and wildlife through his lens. He is in several photography clubs and has won numerous awards for his work. In recent years, Jim has focused mostly on birding photography and finds it to be the most challenging. Jim features some his photography work online through his blog, windowtowildlife.com.

Laura Erickson has been birding in Wisconsin since 1976. She has written eight books about birds and since 1986 has been producing "For the Birds," a radio spot and podcast that airs on a few public radio stations in Northern Wisconsin. For five years in the mid-90s she edited the Spring Season reports in *The Passenger Pigeon*. WSO awarded her the Bronze Passenger Pigeon Award in 2007. She and Marie Read collaborated on a 2015 photo book, *Into the Nest*, about the private lives of birds. She lives with her husband on the wrong side of the state line, in Duluth, MN.

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.

Janet Flynn is best known for her watercolor paintings of Sandhill and Whooping cranes. She has had numerous exhibitions of her work at The International Crane Foundation in Baraboo, Wisconsin. Through The International Crane Foundation and var-

ious conservation groups she uses her art to help protect the wild creatures of Wisconsin and their habitat. She paints with watercolor, gouache, acrylic and other watermedia to create personal interpretations of her life in rural Wisconsin. "Life experience and observation are my teachers and the connection between art and nature my passion. I have always sought out nature and looked upon her with a loving artist's eye and understood that I was simply a part of life's delicate tapestry. I have learned that the ache in my heart at the call of the crane on its southward migration, the loneliness of the winter landscape and unbounded joy at the stirrings of spring are a result of a knowledge that the unraveling of nature's tapestry would in all certainty wash me away with all her lovely sounds, smells and wondrous sights. I simply wish to spend my earth journey wandering nature's paths and communicate through imagery the treasures I have found."

David Franzen and his wife June have lived in Phelps, Wisconsin since 1969. He worked for 34 years in the woods of northern Wisconsin, retired from the U.S. Forest Service in 2001 and from a private forestry consulting business in 2004. After retirement he took up bird photography with most of his work being shot within 100 yards of his house. His primary interest is in photographing bird behavior. He does not use blinds, but quietly waits in a chair for a bird to strike an interesting pose within close range. During 34 years of forestry work, he captured with the mind, many images that far surpass what he has captured with the camera. The most beautiful nature scene he ever viewed was encountered while trout fishing a small stream surrounded by maple forest that had sparse understory prior to spring leaf emergence. On that misty morning, a huge timber wolf glided over a hill across the stream and came toward him to stream's edge. When a wolf moves slowly, it kind of glides effortlessly, and this big guy was more like a spirit than a real animal. A real magical moment. David does occasional slide programs for local groups.

Sunil Gopalan moonlights as a nature photographer and birding enthusiast. His primary focus with wildlife photography is to capture nature in its raw form in the least intrusive manner possible. His other photography interests lie in macro and landscape imagery, as well as pictures of his family. He currently lives and works in the Madison area with his family and credits his wife Heidi for allowing this father to indulge in his passion. His work from Wisconsin and beyond can be viewed at: www.sunilsimages.com

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Shawn Miller is a very green amateur ornithologist and photographer from McFarland, Wisconsin. He had a casual upbringing in birding through his parents, but this great hobby really exploded over the last three years coinciding with 25+ trips to Arizona for work in his day job. The free time on those trips was dedicated to intense birding and photography skill development, and now Shawn really enjoys applying what he has learned back home in Wisconsin during all seasons.

Naomi Steinruck is a avid amateur nature photographer living in Oconomowoc. She has had a love for photography since a early age and over the years has developed a special interest in birds, butterflies and dragonflies. Her goal is to not only capture the best images she can, but to learn about her subjects as well. Her other interests include abstract, macro and astro photography.

Delia Unson got hooked on birding while participating in the first Breeding Bird Atlas of Wisconsin from 1996 to 2000. She enjoyed learning about the lives of the birds she watched—their migration to Wisconsin, courtship and nest building, chick hatching and raising, flight and food-gathering training and for most, their eventual migration to warmer climates for the winter. About 10 years ago, she added bird and other nature photography to the mix, which greatly increased her enjoyment in nature forays. Recently, she and her husband, Chuck Heikkinen, started co-editing *The Passenger Pigeon*.

This Fall Golden-Crowned Kinglet (*Regulus satrapa*) Paused Long Enough for David Franzen to Take a Portrait.

Blue-headed Vireo (*Vireo solitarius*) Observed in September (*Vireo solitarius*)—David Franzen.

Guidelines for Authors and Artists

Readers are encouraged to submit articles to be considered for publication in *The Passenger Pigeon*. It should be noted that all research articles will be submitted for peer review. Articles not presenting research will go through the traditional editorial process. The editors will do as much as possible to see that work is published, including offering suggestions for improvement when pertinent.

General articles should be sent via email to PassengerPigeon@WSOBirds.org and research-based articles should be sent directly to the Peer Review Editor, Scott Hull at Scott.Hull@Wisconsin.gov. If necessary, articles may be sent by surface mail to: Passenger Pigeon, 5018 Odana Rd, Madison, WI 53711.

Following are specific guidelines for submission:

1. The article should be relevant to birds in Wisconsin, and have not been previously published in a different journal.

2. The text must be in Word format, either Word for Windows or Word for Mac.

3. The text must be on pages separate from figures and tables.

4. Each figure and each table **must** be on a separate page.

Guidelines for Artists

All photos must be submitted as jpeg digital images in e-mail attachments to Michael Huebschen, the Assistant Editor for Art, at huebschenhuebschen@sbcglobal.net. They will be stored in secure digital files until recommended for a given quarterly issue of *The Passenger Pigeon*.

Most images chosen for *The Passenger Pigeon* will be printed in black & white on "fill pages" between articles. While many of the readers might like more color images throughout each issue, the costs of doing so are prohibitive. One image per issue will be selected as a color cover photo. Every effort will be made to use the best photos submitted by as many contributors as possible. Final selections will be made by the Editors—Chuck Heikkinen and Delia Unson.

Following are the criteria for submitted work:

1. Jpeg digital images of photos, drawings, paintings, sculptures, wood carvings, quilts or other artistic works featuring birds seen or photographed in Wisconsin should be sent as email attachments and should be in as large a size as possible, with resolution of at least 300 d.p.i. (1.2 megabytes for black-and-white and 1.5 megabytes for color). Lower resolution simply does not print well and pixel-dense images make the best candidates for printing since they often need to be cropped. All photos of birds submitted must have been taken in Wisconsin.

2. Please note: since the seasonal reports are for the year previous to the current issue, any photographs for a given issue should also be from the

same period. For example, photographs for the Winter, 2015 issue should have been taken on or between December 1, 2014 and February 28, 2015; photographs for Spring, 2016 should have been taken on or between March 1, 2015 and May 31, 2015; and so on.

3. All images submitted must be material not previously published in *The Passenger Pigeon.*

4. All images must include the bird species name and name of the artist. Date and location are also necessary in the case of photographs. Images of works other than photographs should have a title if one has been selected.

5. The most useful images are those in "portrait" format, rather than "landscape" format. A cropped photo 4″ horizontal by 5″ vertical is ideal for consideration for a cover photo. The "fill page" images are also best done in portrait format and might run as large as 4.75″ × 7″. The editors may do some additional cropping of images for publication.

6. Since no images will be returned, the submission must be high-resolution copy of the original. In most cases contributors will have cropped the images for the best effect. Cropping the images too tightly should be avoided since the editors may choose to do more cropping. All unused or unusable digital images will be destroyed after a certain time period.

7. It is the policy of Wisconsin Society for Ornithology not to offer monetary compensation to contributing artists for use of their images in *The Passenger Pigeon.* The Society is grateful for those who have contributed limited use of their images for publication in *The Passenger Pigeon* in the past and to those who will do so in the future.

8. When images have been selected and approved for each quarterly issue, a short biography from each contributing artist will be requested. It is tradition to publish those in the "About the Artists" pages of each issue.

An Autumn Ruby-throated Hummingbird (*Archilochus colubris*) Caught in the Act of Feeding – David Franzen.

Federal Duck Stamps = Big Win for Conservation

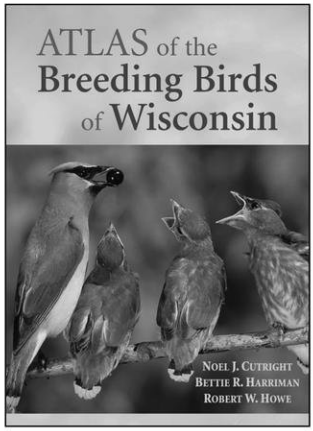
Ruddy Duck – image from the 2015-2016 federal Duck Stamp

Officially the Migratory Bird Hunting and Conservation Stamp, the federal Duck Stamp provides revenue to help acquire and protect wetlands within the National Wildlife Refuge System. Sales have raised more than $800 million since the program began in 1934, and they have helped acquire and protect more than six million acres of irreplaceable bird-friendly habitat.

Wisconsin refuges funded in part by sales of Duck Stamps include:

- Horicon National Wildlife Refuge
- Necedah National Wildlife Refuge
- Trempealeau National Wildlife Refuge
- Wisconsin Waterfowl Production Areas

For a form that includes price and ordering information, visit the Conservation section of the WSO website, www.wsobirds.org.



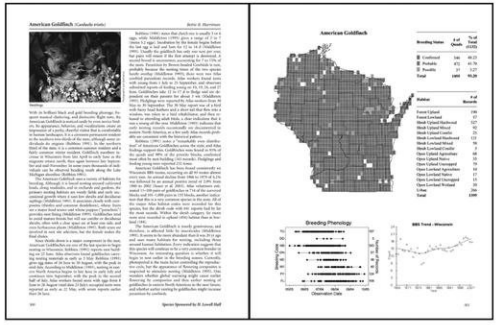
Atlas of the Breeding Birds of Wisconsin

- 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).

Price Reduced 50%! $26.50 plus shipping, handling, and sales tax

Harris's Sparrow (*Zonotrichia querula*) in Columbia County Observed Feeding in November, 2014 – Sunil Gopalan.

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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