

Bird Communities Along the Shores of Bone Lake, Polk County, WI

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Introduction

The ecological landscape of Northern Wisconsin is a mosaic of unique intersections, an uncertainty of tension between the cool boreal forests of the far north and the hot, arid influence of the Great Plains. This tension zone brings tremendous biological diversity to Polk County, and it places Bone Lake squarely in the middle of a landscape rich in natural history. Many species exist here at the northern and southern extents of their natural ranges. The result is seen in Polk County's biological communities being punctuated by neighborly associations that are the exception rather than the rule. It is not commonplace in North America to hear a yodeling loon and a crowing pheasant from the same vantage, yet, for those of us here, it is part of our usual morning chorus. In our region, Blue-winged Warblers meddle with a precious population of Golden-winged Warblers in an intersection of north and south. The Blue-winged Warblers are not merely a competitor. The species are so closely related and so recently diverged that Blue-wings threaten the Golden-wings by hybridizing with them, pushing the Golden-winged Warbler closer to the brink of extinction by producing a dazzling array of unique and colorful offspring, living works of genetic sabotage.

The forests here are similarly influenced by north and south, and the intersection of white pine and red oak creates havens for Yellow-throated Vireos and Scarlet Tanagers. Our forests here are dominated by sugar maple, American basswood, white pine, and red maple. In lowlands, we find black ash, red maple, tamarack and yellow birch. Some wetlands produce willow, while, more commonly, others produce alder. The characteristics of the forests play an important role in the bird communities present, and those avian assemblages are as much dependent upon the physical structures of the habitat as on the species of trees and shrubs present.

Perhaps the most common birds within the landscape of Wisconsin's northern forests, Red-eyed Vireos and Ovenbirds are to Wisconsin's forests what the endless and distant stars are to the Milky Way galaxy. In Northern Mesic Forest stands, two or three individuals of each species may be detected on each and every fifty-meter standardized bird survey, forming a continuous constellation of territories spreading from the St. Croix River to Lake Michigan, from the northern reaches of Bayfield County to the wooded river bluffs of La Crosse. Such abundance of insect-eating, tropical birds is testimony to the importance of functioning ecosystems at the landscape level. It should serve to remind us of our own importance in maintaining a high standard of quality in our surroundings as we lend to the rich continuity in the web of life.

This paper is a scientific report, but it is also a treasure map. May it serve as a tool for education and inspiration. Enjoy the birds!

--*Brian M. Collins*

Table of Contents

Page	Content
4	Bone Lake’s Habitats: An Overview
7	Methodology: Standardized Point Count Bird Surveys
8	Study Area Map with Survey Waypoints
9	Understanding Bird Surveys—Some Basic Principles
10	Bone Lake Bird Communities—A Brief Overview
12	Bone Lake’s Species of Conservation Concern
18	Understanding Bird Communities: Habitat and Niche Perspectives
19	Residential Woodlot
22	Second Growth Deciduous Forest
23	Tamarack/Alder Lowland and Northern Sedge Meadow
25	Conclusions and Recommendations
29	Data Summaries/Appendices
34	Data Summary: Bone Lake’s Overall Bird Community
36	Raw Data



Bone Lake's Habitats: An Overview

Bone Lake is a biologically diverse, valuable mosaic of high quality terrestrial and aquatic habitats. Extremely bird-rich, 85 species of birds were detected from May 28 to June 7, 2011 in a shoreline survey of the entire lake. An average of just over 31 individual birds were detected from each ten-minute watercraft bird survey for a total of 1707 individuals on 54 survey points. Surveys of Northern Mesic Forest habitats in other parts of Wisconsin average just over 20 birds per survey, and the bird-rich trout stream habitats of Northern Wisconsin average between 28 and 32 birds per survey. Bone Lake's size, habitat complexity, citizen stewardship, and landscape ecology lend to its exceptional biological diversity.

Bone Lake's areas of residential development are often beneficial to a variety of wildlife species in that large trees remain healthy and standing. Significant verge vegetation and buffer plantings prevent damage to the quality of the lake. Areas of verge vegetation and the quality, age, and continuous canopies of older trees are of great importance to many forest species of birds and birds of thickets and edges. Many acres of second growth mixed deciduous forests, free of residential development, provide additional habitats required by more sensitive species. An exceptional example of northern lowland habitats occurs in the northwestern section of Bone Lake and includes wet northern sedge meadow, alder swamp, and tamarack swamp. These wetland habitats contribute tremendously to the occurrence of unique and rare bird species on Bone Lake. Mature white pine and Eastern cottonwood trees are of great importance to nesting and roosting Bald Eagles and are key to the abundance of Bald Eagles enjoyed by Bone Lake residents and visitors. Bone Lake residents clearly take pride in the quality of the lake's terrestrial habitats and the birds that rely on them.

For the purpose of study, habitats are broadly classified, though enough information has been gathered to analyze some of the structural characteristics of the habitats at a finer resolution. The major classifications include Residential Woodlot, Second Growth Deciduous Forest, Tamarack Lowland, and Transitional Habitats/Thickets.

The majority of survey sites (36 of 54, 67% of area surveyed) occurred in "**Residential Woodlot.**" Residential Woodlot refers to habitats that have a home, cabin, or other living structure, some degree of mowing, landscaping, or other continuous human effect on the habitat, and the presence of large trees with sufficient numbers or biological mass to create arboreal habitats.



Figure 1: An example of a habitat classified as “Residential Woodlot”

Second Growth Deciduous Forests were the second most common habitat surveyed (13 of 54 survey sites, 24% of area surveyed). **“Second Growth Deciduous Forest”** refers to sites that have a majority of trees less than 80 years of age, a continuous area of forest with minimal human disturbance (no buildings, roads, etc.), and a continuous canopy of large trees.



Figure 2: An example of a habitat classified as “Second Growth Deciduous Forest”

Transitional habitats, including lowland thickets and hard edge transitions between residential habitats and wilder habitats were present at 3 of 54 survey sites (5.5% of area surveyed). None of these habitats were the same, though all were early succession habitats with young trees, weedy and shrubby thickets, and signs of recent disturbance.



Figure 3: An example of a habitat classified as “Transitional Habitat”

Tamarack Lowland sites (2 of 54 survey sites, 3.5% of area surveyed) were representative of a large, contiguous block of high-quality wetland habitat. This area is owned by the Wisconsin Department of Natural Resources. Tamarack Lowland sites were characterized by a base of sedges, bur reeds, cattails, and other marshy, emergent plants. Further in from the emergent edge and following a classic line of lake succession, a large patch of alders formed the shrub layer. Younger tamaracks contributed to the shrub layer, and an overstory of tamarack formed an isolated canopy. In the analysis of this habitat, a third site was included from further south on Bone Lake.



Figure 4: An example of a habitat classified as “Tamarack Lowland”

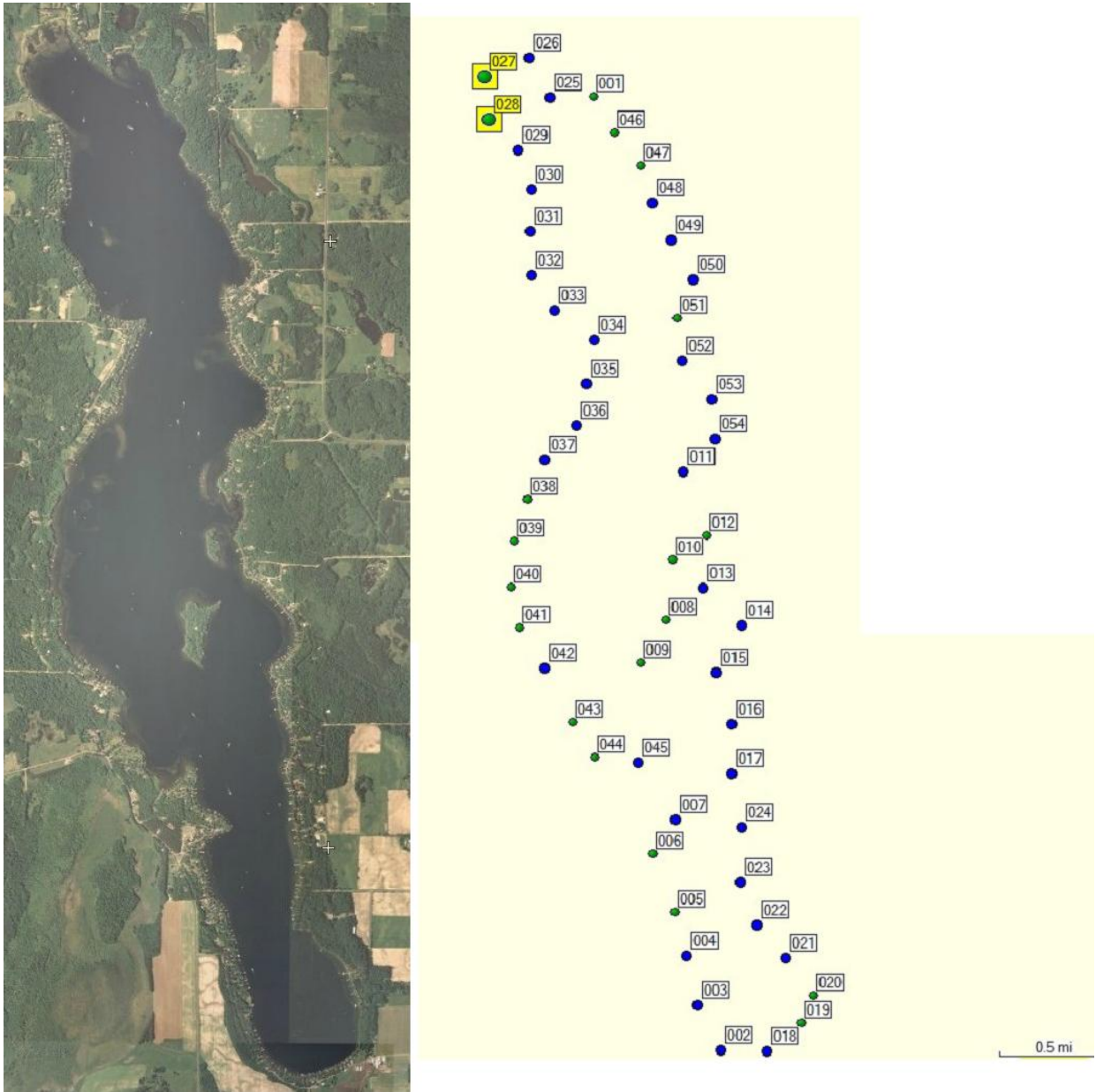


Figure 5: Point Count Locations on Bone Lake

Blue markers indicate Residential Woodlot habitats. Small green markers indicate 2nd Growth Forest and grown-over, wild areas. Large green markers highlighted in yellow indicate the Tamarack Lowland and Northern Sedge Meadow. Waypoints 008, 009, and 010 are survey points located along the shores of the Bone Lake islands.

Understanding Bird Surveys—Some Basic Principles

Since point count surveys are accomplished through passive observation, it is likely that some species are over-represented and others are under-represented. A large sample size tends to minimize sampling error, though some species, especially those with shy habits or thin voices (resulting in a lesser detection distance) are chronically under-sampled. An example of an under-surveyed bird is the Ruby-throated Hummingbird. With 54 surveys, the majority occurring in two habitats (Residential Woodlot and Second Growth Forest), a very good mathematical picture of the overall bird community emerges. From this data, it becomes important to make inferences regarding habitat use and bird community associations.

The picture of a bird community is often painted with respect to how important each species is in defining the overall community. Abundance of a bird species reflects a myriad of information including the availability of suitable habitat, the availability of other important resources, the territoriality of a particular species and its home range requirement, and that species' dominance in the overall community. This relationship is often illustrated using **Relative Abundance**, a term that describes each species by stating its percent contribution to the overall community. This percent is derived by dividing the total number of Individuals of ONE species by the total number of Individuals of ALL species. For example, the relative abundance of Baltimore Orioles in Residential Woodlots within a 50-meter detection radius is 4.84%, rounded to 5%. This is derived by dividing the 31 Baltimore Orioles detected on all surveys in this habitat by the 640 birds of all species detected in this habitat ($31/640 = 0.0484$).

Since point counts are standardized, a picture of relative bird density can be derived by dividing the number of birds detected by the number of surveys conducted. This **“Birds per Count”** or **frequency of occurrence** can be used to compare breeding densities of birds in a variety of ways, whether analyzing between habitats in one study area such as Bone Lake, or in comparing the study area to similar habitats in other parts of a state or ecological region. Similar to Relative Abundance, an understanding of density can contribute to an understanding of the area's diversity and the ecological contribution of a particular species. While the highest bird densities on Bone Lake, excluding rafts of Canada Geese, occur in the swallows (Barn Swallow with 1.8 birds per survey), certain forested regions of Wisconsin may have as many as 4 Red-eyed Vireos per survey. Some floodplain forests along major rivers have had as many as 6 American Redstarts per count. Understanding this, we can see that Bone Lake's forested habitats are not quite so ideal for these tropical insectivores with American Redstart at only 1 per count and Red-eyed Vireo occurring at 0.92 per count. Continuing the analysis, we see that American Redstarts are nearly absent from Residential Woodlots with only 0.13 per count, a nearly 8-fold reduction in breeding density. Red-eyed Vireos, also somewhat impacted by residential development and clearing of forest understory, are reduced to 0.69 per count.

Bone Lake Bird Communities—A Brief Overview

Bird communities associated **with Residential Woodlot** were composed largely of edge and generalist species, though most of these species have one or more important niche requirements that are accommodated by human landscape alterations. A total of 66 species were detected within the 50-meter radii in this habitat classification, partly due to the number of niches provided for but also due to the vast area covered by this habitat. While Barn Swallow and Tree Swallow were more common over water, the Baltimore Oriole was the most abundant bird detected within the forested portions of the Residential Woodlot habitats. Bird niches common to Bone Lake's residential woodlot habitats included obligate cavity nesting birds, insect-eating birds of mature forest, and aerial insectivores that thrive in areas with open, orchard-like subcanopy and understory. Birds common to spruce plantings and other ornamental/landscaping trees and shrubs were also very important in the bird community associated with residential woodlots. Obligate cavity nesting species such as nuthatches, chickadees, woodpeckers, wrens, martins, and the Great Crested Flycatcher depend upon standing dead trees, dead branches on live trees, and nest boxes provided by bird enthusiasts. Insect and fruit eating birds of the upper canopy were strongly represented by the Baltimore Oriole. Red-eyed Vireos were abundant, and Yellow-throated Vireos and Pine Warblers were fairly common. Aerial insectivores, birds that take insects on the wing, often thrive where insect-rich environments such as lakes and rivers intersect forests with open, cathedral-like subcanopy and understory layers. In this environment, birds are able to perch high above the ground and sally out towards insect prey with an abundance of open airspace. Eastern Wood Pewees, American Redstarts, and Eastern Phoebes are examples of the aerial insectivores common to Bone Lake. While pewees and redstarts build nests in trees, the Eastern Phoebe is a cliff-nesting species that has adjusted nesting habits to utilize roof overhangs and downspouts wherever human habitation provides the opportunity. Common Grackles and Chipping Sparrows were abundant and ranked high in the bird community, most likely owing to their use of ornamental conifers such as spruce and cedar as nesting substrate. Red-headed Woodpeckers were detected frequently along the southwest shore, and their presence correlates to open environments with evenly spaced, mature shade trees.

Bird communities associated with the **Second Growth Deciduous Forest** were similar to those of the residential woodlots in that the most abundant species of birds were typically generalist birds of fragment and edge habitats. This is in large part due to landscape level influences and makes sense when one considers that the forests here are highly fragmented and that the residential woodlots were largely carved from this second growth forest as well. Similar to the Residential Woodlot habitats, Baltimore Orioles were the most abundant bird of the Second Growth Forest. Residential Woodlot and Second Growth Forest shared a total of ten common species of birds occurring at 2% or greater of the total bird community. While most birds that could be found in second growth forest were also present in residential woodlots, a few more sensitive species that were present in undisturbed forest were absent from Residential Woodlots. Forest species that were absent from residential development included Great Horned Owl, Blue-gray Gnatcatcher,

Least Flycatcher, Ovenbird, Rose-breasted Grosbeak, Scarlet Tanager, Veery, and a Wisconsin Threatened Species, the Red-shouldered Hawk. Further, Second Growth Forest habitats had a greater density of Eastern Wood Pewee, American Redstart, Yellow Warbler and Yellow-throated Vireo than adjacent areas of residential development, all four of which are long-distance migratory birds and three of which rely on quality forest, often near water. Baltimore Orioles, Red-eyed Vireos, Yellow Warblers, and Common Yellowthroats, all insectivorous birds, were abundant, with each species present at greater than 3% of the total community. This assemblage of birds represents insect control at the canopy, subcanopy, and brushy understory levels of the forest. Patrolling the open subcanopy as aerial insectivores, American Redstarts were present at nearly 6% of the total bird community, and Eastern Wood Pewee were present at just over 2% of the total bird community.

Bird communities associated with the **Lowland Tamarack** sites were vastly different from those of other habitats and were most important in their support of the Golden-winged Warbler and Red-shouldered Hawk. Common associates to the Golden-winged Warbler in Wisconsin's lowland alder thickets, the Veery, Yellow Warbler, Swamp Sparrow, Common Yellowthroat, and Rose-breasted Grosbeak were also present in the Bone Lake habitat. Lowland alder and tamarack bird communities reflect a variety of birds that nest in wetland edges, marshy thickets, and shrub wetlands, most of which are insectivorous and many of which are tropical species. Great Blue Herons and Green Herons utilized this site extensively, and a pair of Sandhill Cranes showed tantalizing evidence of a strong pair bond, strong site fidelity and probable breeding. Red-shouldered Hawks were detected outside of the 50 meter radius, but close enough to indicate they were deliberately using this habitat. In two bird surveys associated with the main alder/tamarack lowland (Waypoints 27 and 28) and in an adjacent, fringe alder habitat site, a total of three bird surveys resulted in 33 species of birds. A pair of Common Loons remained in this area of the lake throughout the survey period.



Bone Lake's Species of Conservation Concern

Bone Lake's spectacular bird diversity, with a minimum of 85 bird species detected, does support a few species that are recognized as Threatened or of Special Concern at the State and/or Federal level. A number of species are also soon to be listed and have been recognized by the International Union for the Conservation of Nature (IUCN) as "Near Threatened." Most of the remaining species are protected by the International Migratory Bird Treaty Act as well as state and federal law. In addition to the rare, uncommon, or high profile species of birds living on Bone Lake, many common species here are long-distance migrants and spend as many 7 months per year wintering in the tropical Americas, presenting us with an International responsibility and opportunity in bird conservation.

Bald Eagle



In the wake of DDT, Bald Eagles suffered a precipitous decline through the second half of the 20th Century. This once critically endangered species has seen a tremendous recovery both in population numbers and population health over the last three decades. Since the late 1980s, Bald Eagles have become increasingly common and more tolerant of human activities. They are now a common sight on Bone Lake. Currently, the Bald Eagle has been de-listed (2007) from the Endangered Species Act but is still federally protected as a migratory bird and under the Eagle Act. The Wisconsin status of the Bald Eagle is that of a Special Concern species. Bald Eagles are currently monitored for environmental chemicals in Wisconsin, and nearly 80,000 chemical compounds, many from industry, are readily detected in eagle blood. Threats to Bald Eagle health include fishing tackle and fragments of lead bullets ingested by eagles when feeding on animal carcasses and gut piles. Use of nontoxic tackle and nontoxic ammunition (lead-free) would be beneficial to Bald Eagle health.

Bone Lake's contribution to the success of the Bald Eagle includes an abundance of large pine and cottonwood trees, used as roosts, fishing perches, and nest trees. The quality of the lake, including clean water, a diverse fishery and a fish-supporting, diverse, native aquatic plant community is also a key to the Bald Eagle's presence on Bone Lake.

Red-shouldered Hawk



Red-shouldered Hawks are of high conservation priority, having state status as a Threatened Species. Red-shouldered Hawks are present on Bone Lake, though their overall life histories are tied in with the greater, forested landscape ecology to include the surrounding areas of Polk County. Larger tracts of forested land surrounding Bone Lake could play an important role in the future of this species. Large tracts of forested wetlands, especially those with a greater diversity of hardwood tree species, are favored by Red-shouldered Hawks. With its numerous wild rivers, wetlands, forested lands, back bays, and small lakes, Polk County supports a healthy population of this medium-sized buteo hawk.

Red-shouldered Hawks may be identified by their repetitive call, a nasal, piercing, and loud “keee-awww, keee-awwww, keee-awwww.” The call is clear, not raspy, and it carries a very long way through the forest. In the spring, Red-shouldered Hawks perform aerial mating displays, and the loud and clear call notes are given from the open air, often far above the forest canopy. Positive identification by call alone can be tricky, since Blue Jays are expert mimics. When soaring, Red-shouldered Hawks have distinctive “window” marks on the primary flight feathers, allowing sunlight to penetrate the soaring bird’s wings. Strong black-and-white barring on the tail feathers is similar to that of the smaller Broad-winged Hawk. Of course, the Red-shouldered Hawk does indeed have reddish shoulders that complement a rusty belly and breast in the adult bird. Red-shouldered Hawk sightings are of interest, and sightings can be reported to the Wisconsin DNR using a Rare Animal Report form.

http://www.dnr.state.wi.us/org/land/er/forms/rare_animal_report.asp

Trumpeter Swan



Trumpeter Swans were observed using Bone Lake for loafing and social gatherings on two occasions during the bird survey period. Trumpeter Swans are listed by the Wisconsin DNR as a species of Special Concern, having only recently risen above an Endangered or Threatened status. In 1910, there were only about 75 Trumpeter Swans remaining in the wild in all of North America, and the species was still being introduced to Wisconsin into the 1990s. A survivor of market hunting in the late 19th Century, Wisconsin's Trumpeter Swan population is thriving, the result of legal protection, reintroduction efforts, and an abundance of favorable habitat. But lead poisoning is still a common problem, owing at least in part to lead fishing sinkers ingested while swans are gathering gizzard gravel. Use of non-toxic fishing sinkers on Bone Lake would be beneficial to Trumpeter Swans.

Swan populations are tracked using neck collars and leg bands, and swans with collars can be reported to the Trumpeter Swan Society (<http://www.trumpeterswansociety.org/>) or the Wisconsin DNR. Many of those swans banded by the Wisconsin DNR have yellow bands with black letters and numbers (examples: P 38, 86K, 00C, 50J).



Swan 68K, Wisconsin-banded

Common Loon



The Common Loon is a sensitive species, and, despite an average population growth of around 1% per year in Wisconsin, the Common Loon exhibits many characteristics that put it at risk over the long term. Common Loons are long-lived birds with a low reproductive success. Approximately 30% of adult loon pairs are successful in producing an average of just one chick per year, and chick survival rates are low enough that loon reproduction is barely a step ahead of population maintenance.

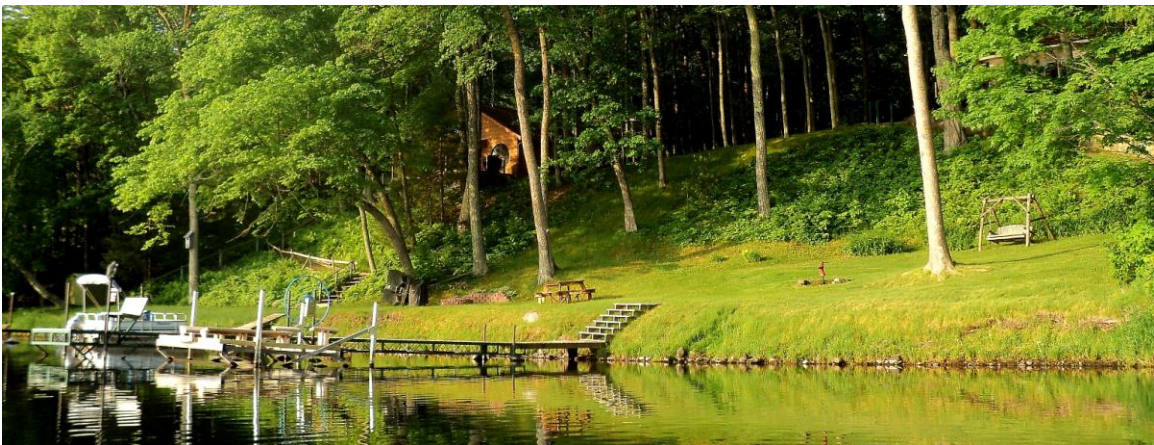
Loons require undeveloped landscapes including pristine back bays, isolated islands, and a minimum of boat traffic in nursery areas where chicks are reared. Because loons feed high on the food web as a top predator, they are sensitive to chemical pollutants such as methyl mercury that may accumulate in toxic levels through biomagnification. In recent years, much attention has been given to lead poisoning in loons. Efforts to replace lead fishing tackle and lead sinkers with non-toxic alternatives are an important step in loon conservation, as loons pick up lead from the bottom of the lake when seeking gizzard gravel. Loon studies have shown that loons are sensitive to boat traffic and recreational power-boating, and some studies cite instances in which loon nests have been swamped by boat wakes. Behavioral studies paired with blood chemistry studies in eastern North America have shown that reproductive stress in loons is associated with increasing mercury levels in lake food webs. The mercury is the result of impurities in the coal burned by those power plants providing a vast percent of our electricity. Bacteria convert inorganic mercury fall-out to methyl mercury in aquatic ecosystems, a soluble, toxic form that incorporates into body tissues and accumulates through the levels of the food chain. As loons are sensitive to the many environmental changes associated with an industrial nation, their survival may depend upon the utmost respect being paid to their need for space and solitude in raising strong young.

For more information, visit the Sigurd Olson Institute's Loon watch:
<http://www.northland.edu/sigurd-olson-environmental-institute-loon-watch.htm>

Red-headed Woodpecker



The Red-headed Woodpecker is currently one of the most rapidly declining bird species in North America, and the cause of their disappearance is somewhat of a conservation mystery. The International Union for the Conservation of Nature lists it as a “Near Threatened” species. Open oak savannah and mature, open forested areas with diverse hardwoods are likely the habitats that will preserve this species into the future. Red-headed Woodpeckers require tree cavities for nesting, using dead and standing tree stumps of large size and larger dead branches on live trees. They forage on acorns in the early autumn, stripping the acorns from the upper branches of oaks. Areas of evenly spaced, mature trees present in Bone Lake’s residential areas, especially those of the southwest shore, are particularly inviting to Red-headed Woodpeckers. Because Red-headed Woodpeckers are relatively common on Bone Lake, residents may be inspired to continue maintaining open woodlots with mature trees and may also wish to leave a few larger dead trees standing.



Open areas with evenly spaced, large shade trees may be beneficial to populations of Red-headed Woodpeckers.

Golden-winged Warbler



Currently, about 25% of the world's population of Golden-winged Warblers nests in northern Wisconsin, and, due to important population declines, strong consideration is being given to this species for Threatened status. Golden-winged warblers are truly tropical birds, and they are highly sought and enjoyed by birdwatchers from around the globe, as often in their tropical homes as in the Great Lakes region. Reasons for the decline of this species are, in large part, related to landscape ecology and changes in land use practices in recent decades. Golden-winged Warblers are birds of habitat mosaics, requiring a blend of mature forest and open, disturbed sites. Prime habitat in Northern Wisconsin occurs in a variety of situations. In sand barrens, Golden-winged Warblers thrive with logging practices where patches of clear-cut and subsequent brushy, weedy growth intersects mature forest. In lowland areas and near lakes and rivers, Golden-winged Warblers seem to be correlated well with alders, especially where patches of young aspen occupy dry sites nearby. Only three Golden-winged Warblers were detected on Bone Lake during the survey period, and all were present in the large wetland to the Northwest on properties owned by the Wisconsin DNR, singing from alders and young tamarack. This region of Bone Lake represents nearly optimum habitat for this species of conservation concern.

Further Reading:

<http://www.partnersinflight.org/>

Understanding Bird Communities: Habitat and Niche Perspectives

Before beginning this discussion, it is important to understand that the presence or absence of a particular bird species is a valuable indication of the quality and type of habitat present. This is because habitat has a close relationship to niche, where niche is the “way of life” or “ecological role” of an organism. As the landscape provides a variety of physical structures and environmental conditions as well as food resources, it provides opportunities for a variety of species of birds. Even the amount of space between trees, the age of the trees of a forest, the height of the trees, and their proximity to water can have an effect on which species may live there. The size of a parcel of forest may also play a role, and some species are remarkably sensitive to roads, paths and other disturbances and fragmentations of forest land. Since each bird has adapted to a particular niche, scientists may use habitat as a predictor of bird species composition and may also make inferences about habitat by analyzing which bird species are present. In short, the birds of Bone Lake reveal a great deal about the habitats available and the potential conservation strengths in this flourishing bird community.

Neotropical Migrant Landbirds

A variety of Wisconsin’s birds are, in a way, “borrowed” for a few months from other nations, as they arrive to us in May from the tropical forest of the Caribbean, Central America, and South America. In another sense, they are also “borrowed” from us, as “our birds” use Wisconsin to do 100% of their reproduction. The survival of these bird species is dependent upon Wisconsin’s habitats providing the right ingredients for a successful reproductive season. It is also dependent upon a corridor of safe havens for migrating birds stretching from here to the tropics, and, of course, the tropical nations’ having habitats that provide for successful and safe overwintering. The idea of birds “flying south” for winter is vastly oversimplified. In reality, the future of our Neotropical migrant birds is a species-by-species, population-by-population jigsaw puzzle of national boundaries, habitat preservation concepts, and private landowner and public agency cooperation. Our shared birds are affected by our economic decisions in all of the Americas, and our net impact on the birds hinges not only on Wisconsin’s land management decisions but also, as an example, on where a Wisconsin resident buys tropical coffee, chocolate, and bananas. A vast number of Wisconsin’s breeding birds are “birds without borders,” an international conservation priority.

While conducting surveys on Bone Lake, a few species demonstrated the role of Bone Lake’s forests as a migratory corridor. Tropical birds heading further north into boreal forests of Canada lingered into early June in small migratory flocks, mainly using larger trees near the water’s edge. Birds observed using Bone Lake as a migratory corridor during the survey period included Blackpoll Warbler, Bay-breasted Warbler, Magnolia Warbler, and Tennessee Warbler.

While many bird species using Bone Lake migrate to the southern United States in winter, truly Neotropical birds breeding in Bone Lake's forested habitats included the following (*in taxonomic order*):

<i>Chimney Swift</i>	<i>Golden-winged Warbler</i>
<i>Ruby-throated Hummingbird</i>	<i>Nashville Warbler</i>
<i>Eastern Kingbird</i>	<i>Black-and-white Warbler</i>
<i>Great Crested Flycatcher</i>	<i>Chestnut-sided Warbler</i>
<i>Eastern Wood Pewee</i>	<i>Yellow Warbler</i>
<i>Least Flycatcher</i>	<i>Ovenbird</i>
<i>Alder Flycatcher</i>	<i>American Redstart</i>
<i>Purple Martin</i>	<i>Rose-breasted Grosbeak</i>
<i>Barn Swallow</i>	<i>Indigo Bunting</i>
<i>Veery</i>	<i>Bobolink</i>
<i>Yellow-throated Vireo</i>	<i>Baltimore Oriole</i>
<i>Red-eyed Vireo</i>	<i>Scarlet Tanager</i>
<i>Warbling Vireo</i>	

Bone Lake's Aquatic Birds

Water birds of greatest conservation interest are Common Loons, of which a total of 7 birds were estimated to be living on Bone Lake in 2011, though no evidence of breeding was observed during the survey period. Other water birds included Double-crested Cormorant, Hooded Merganser, Mallard, Wood Duck, Trumpeter Swan, Canada Goose, Great Blue Heron, Green Heron, Spotted Sandpiper, and Belted Kingfisher. Canada geese were present largely due to the availability of mowed grass for grazing, and some geese were observed to have bred successfully at Bone Lake. Trumpeter Swans and Mallards were present as loafing birds, using Bone Lake's open water for its safety, and both species were likely able to find suitable habitat for feeding as well. Wood Duck and Hooded Merganser, both tree-nesting species that use cavities, were present due to the abundance of suitable nesting habitat. Fish-eating species of birds benefiting from Bone Lake's rich fishery included Common Loon, Double-crested Cormorant, Hooded Merganser, Great Blue Heron, Green Heron, and Belted Kingfisher. While not necessarily considered to be aquatic birds, swallows were the most abundant of all small birds using Bone Lake. Barn Swallow, Tree Swallow, and Purple Martin were all very common, and Northern Rough-winged Swallows were present. These birds were detected most often while aerial foraging over open water.

Residential Woodlot Habitats

Residential Woodlot surveys included all surveys that occurred where a house or cabin existed within 50 meters of the point and/or significant alteration to the landscape had

occurred through human activity. Residential woodlots on Bone Lake are often characterized by a number of mature shade trees, a relative lack of shrub layer corresponding to a mowed lawn or landscaping, and some degree of natural, wild vegetation either on the lakeshore or at the margins of the lot.

In total, 78 species of birds were observed while conducting point counts in Residential Woodlot habitats. Bird diversity within the Bone Lake residential areas was rich, as was overall bird density. A total of 66 species were observed within the 50 meter radii of the 36 counts completed in these habitats. An average of 18 individual birds were detected on land and water within 50 meters of the observer on each count.

The most abundant species were Barn Swallow (11%) and Tree Swallow (5%), though these birds were mostly detected over water and using structures immediately adjacent to the wood lots. Purple Martins, also very abundant (4%), were similar to other swallows in their use of adjacent structures and open water. The most abundant bird using the forested portions of the woodlot habitats was the Baltimore Oriole (5%). Other birds occurring with greater than 2% of the total community included Chipping Sparrow, American Robin, Common Grackle, Red-eyed Vireo, Cedar Waxwing, Eastern Phoebe, House Wren, Song Sparrow, American Crow, Black-capped Chickadee, Blue Jay, American Goldfinch, Great Crested Flycatcher, Red-winged Blackbird, and White-breasted Nuthatch.

Residential Woodlot habitats were important to Red-bellied Woodpeckers and Pine Warblers, and these two species did not occur in any other habitats. Great Crested Flycatchers, though present in other habitats, were much more common in Residential Woodlots, as were Bald Eagles. Old, mature pine trees and cottonwood trees lend greatly to the presence of all four of these bird species.

Some of the species detected while monitoring Residential Woodlots were observed feeding over open water of the lake, while others were using the open water for safety or were merely observed flying overhead in a transient manner (as opposed to active aerial foraging over water). Great Blue Herons and Green Herons actively fed on fish and other aquatic animals in the lake using shoreline adjacent to these habitats. Bald Eagles were difficult to estimate, but at least ten individual birds regularly use Bone Lake, including at least four adults and six immature eagles. 8 of these birds were observed in close association with residential woodlots. Canada Geese appeared to be thriving in areas where large, mowed lawns occur, and goslings were observed during the survey period.

Barn Swallows, Tree Swallows, and Purple Martins were very abundant, owing in part to the rich insect diversity that grows from Bone Lake and also due to the abundance of nesting structures, including nest boxes and nest gourds for Purple Martins and Tree Swallows and boat lifts, pontoons, and boat ports utilized for nesting by resident Barn Swallows.

Small songbirds (passerines), woodpeckers, and other typically arboreal birds were abundant in the Residential Woodlot habitats. Most of these species were representative

of edge habitats and are common to suburbs, orchards, farmsteads, and other relatively disturbed sites with a few mature trees. Interestingly, the species composition of the songbird community reveals a great deal about the habitat structure of the shoreline around Bone Lake, painting a picture of the habitat.

Baltimore Orioles, though somewhat of a generalist, require tall canopy trees with weeping branches which they utilize for their hanging, sac-like nests. Orioles are opportunistic in dietary choice, feeding on fruits and insects, including a variety of caterpillars. While feeding stations are appealing to orioles, it is the presence of open, mature forest that is essential to their existence on Bone Lake's shores. Baltimore Orioles were present on nearly every Residential Woodlot count (.86 per count) and occupied approximately 5% of the overall bird community, the third most abundant bird of the 66 species detected and the most common of all birds directly using the woodlot habitat.

Yellow-throated Vireos were present on Bone Lake. Typical of this species, they occupied large territories in the vicinity of mature oak and pine stands and were far less abundant than their common associate and close relative, the Red-eyed Vireo. Though this species of vireo was less densely populated in Residential Woodlot than in Second Growth Forest, mature trees were diverse and common enough to provide suitable habitat for Yellow-throated Vireos.

Red-headed Woodpeckers were quite common along the southwest shore of Bone Lake. A total of 4 Red-headed Woodpeckers were detected while conducting point counts, and their presence was noted between counts as well. Residential developments that maintain mature trees, allow dead standing wood to remain, and maintain openings between large trees are likely to be providing suitable habitat for this species. Bone Lake residents have a tremendous opportunity to contribute to the conservation of this species and may also decide to study habitat use by this bird further. Red-headed Woodpecker sightings and annual data may be compiled and sent to the Cornell Labs of Ornithology by way of www.ebird.org

Obligate Cavity Nesters

Great Crested Flycatchers were more abundant in Residential Woodlots than other habitats (2% of community) and were detected in a 50-meter count radius on 36% of surveys. Red-bellied Woodpeckers were only detected in Residential Woodlots (1.5% abundance, 0.28 per count), and Red-headed Woodpeckers were more abundant in Residential Woodlots than other habitats. These species are dependent upon natural tree cavities. While tree structure and presence or absence of natural tree cavities was not studied or observed during the bird surveys, it is likely that residential woodlot habitats provide many natural tree cavities and suitable trees with standing dead wood. Black-capped Chickadees and White-breasted nuthatches occurred, each at 2% of the total bird community, in residential woodlot habitats. There is little doubt that nest boxes were important in the abundance of House Wrens (3% abundance, 0.52 per count) and Tree Swallows (5% abundance, 0.89 per count).

Species Supported by Decorative Conifer Plantings

The use of spruce trees, cedar trees, yew bushes and other conifers in decorative plantings is of benefit to a few species of birds that use the dense cover of conifer boughs in nesting. Chipping Sparrows, nesting from near ground level in yew bushes to higher up in the boughs of *Arbor vitae* and spruce, were the 4th most abundant bird to be detected in the Residential Woodlot habitats and the 2nd most abundant bird observed using the forested portions of this habitat (4% abundance, 0.78 per count). American Robins and, perhaps less desired by residents, the beneficial generalist Common Grackle appeared to benefit from plantings as well, each with a relative abundance of 4% and a frequency of 0.75 per survey. Northern Cardinals and Mourning Doves were also likely to be benefiting from decorative conifer plantings.

Aerial Insectivores

The presence of houses, sheds, and garages with roof overhangs and down-spouts blends well with an open landscape and good insect productivity to provide an excellent opportunity for successful breeding by the Eastern Phoebe. Eastern Phoebes were an important aerial insectivore with a relative abundance of 3% and a frequency of 0.55 birds per survey. Other aerial insectivores include the obligate cavity-nesting Great Crested Flycatcher and Tree Swallow, and the forest canopy-nesting Eastern Wood Pewee. Taking advantage of the transition between open water and open woodlot, Cedar Waxwings are quite common (3.5%, 0.64 per count). The orchard-loving Cedar Waxwing is a fruit-eating bird that is very adept at catching insects on the wing and, at times, puts considerable effort into occupying the aerial insectivore niche.

An important forest aerial insectivore, American Redstarts were nearly absent from Residential Woodlots with only 0.13 per count, a nearly 8-fold reduction in breeding density from undisturbed forests on Bone Lake. Similarly, Eastern Wood Pewees were much less common in Residential Woodlot habitats than in undisturbed forest (0.11 per count compared to 0.38 per count).

Second Growth Deciduous Forest

Bone Lake's second growth forest plots were typical of regional bird communities occupying similar habitat. Three common representatives of this community throughout the Great Lakes, Red-eyed Vireo, Ovenbird, and Eastern Wood Pewee, were present on Bone Lake with relative abundance of 5.5%, 0.4%, and 2.3%, respectively. Overall representation by these species was less than expected. This could be due in part to their overall role being quieted by Bone Lake's exceptional bird diversity. It is also due in part to weak representation by populations of Ovenbird, a forest species that is completely absent from Residential Woodlot properties and requires large forest tracts with a ground cover of leaf litter.

Species occupying greater than 2% of the bird community in Bone Lake's second growth forests included Baltimore Oriole (7.3%), Tree Swallow (6.9%), Yellow Warbler (6.9%), American Redstart (5.9%), Red-eyed Vireo (5.5%), Song Sparrow (4.6%), Common

Yellowthroat (3.2%), Black-capped Chickadee (2.7%), Common Grackle (2.7%), Eastern Kingbird (2.7%), American Goldfinch (2.3%), Blue Jay (2.3%), Eastern Wood Pewee (2.3%), and Red-winged Blackbird (2.3%). This community points to a relatively young, fragmented forest with abundant edge thickets, a fairly dense subcanopy, and some larger, mature trees. As trees age and standing dead wood becomes more common, benefits to obligate cavity-nesting birds will increase. Over time, the structure of the bird community can be expected to change, reflecting the changes in the forest habitat as trees age and natural forest succession moves along.

Baltimore Orioles were the most abundant bird of the Second Growth Forest (7% with 1.2 birds per survey), a fact that reflects upon the similarities in canopy age and structure between forest parcels and residential parcels. By contrast, Second Growth Forest habitats had a greater density of Eastern Wood Pewee, American Redstart, Yellow Warbler and Yellow-throated Vireo than adjacent areas of residential development. Forest species that were absent from residential development and present in Bone Lake's forested tracts included Great Horned Owl, Blue-gray Gnatcatcher, Least Flycatcher, Ovenbird, Rose-breasted Grosbeak, Scarlet Tanager, Veery, and Red-shouldered Hawk. Continued conservation of these species will depend upon preservation and growth of current undisturbed/undeveloped parcels of woodland. Efforts to maintain continuous acreage of forest and concurrent efforts to minimize fragmentation by roads, trails, buildings, and clearings can be considered as an important step in long-term conservation efforts. Property owners adjacent to undeveloped forest parcels may wish to begin reforestation efforts at the edges of their lots, perhaps planting hardwood species such as white oak and replenishing understory species such as dogwood, *Viburnum*, or winterberry. These efforts to preserve and expand acreage of woodland would benefit sensitive forest bird species, including state threatened Red-shouldered Hawks, as well as other area-sensitive forest raptors that may not have detected during bird surveys (Broad-winged Hawk, Cooper's Hawk, Barred Owl). A few other unique forest birds such as Hooded Mergansers and Pileated Woodpeckers, and a variety of Neotropical migrant songbirds would benefit from forest preservation or expansion.

Tamarack and Northern Sedge Meadow/Alder Lowland

Sample size for this habitat was small, due to the small amount of area occupied along the shores of Bone Lake. As a result, relative abundance and frequency measures are not as meaningful. An overall picture of the bird communities occupying Wisconsin DNR-owned wetland and a very small fragment of similar habitat further south reflected what is expected for alder-dominated wetlands in northern Wisconsin, including the presence of Golden-winged Warblers.

Great Blue Herons were strongly represented at 8% of the total community. These herons were not breeding here, but off-site feeding locations are very important to the success of heron nesting colonies. Because herons will fly as far as 15 miles to find food

during the nesting season, Bone Lake's high quality access to frogs, fish, and other aquatic life plays a necessary role in the reproductive portion of the heron's life cycle.

Aside from swallows and martins feeding over the open water, the most abundant species using this wetland for breeding purposes were Red-winged Blackbird (9%), Yellow Warbler (8%), Alder Flycatcher (5%), Common Yellowthroat (5%), Common Raven (4%), Veery (4%), and Warbling Vireo (4%). This habitat was also significant in supporting Golden-winged Warbler, Green Heron, Rose-breasted Grosbeak, and Red-shouldered Hawk.

Of interest, a pair of Merlins (a species of bird-eating, forest falcon) was detected near the boat landing and recorded on Survey Waypoint #1. It is likely that the presence of this exciting forest raptor is more closely associated with the Wisconsin DNR property and the forested wetland further away from the shoreline. Merlins often nest in abandoned crow's nests, usually in boreal forest settings with spruce, fir and tamarack.

The presence of Sandhill Crane pairs and Golden-winged Warbler pairs indicates that this property represents an intact and sizeable example of Northern Sedge Meadow and alder/tamarack dominated swampland. Increasing participation by nearby landowners in providing wild shoreline may increase the overall effectiveness in this wetland's production of important birds each summer.

Maintaining the wild character of nearby land may encourage Common Loons to nest, since many aspects of this habitat appear favorable for nesting and chick rearing. The lake association may wish to discuss the possibility a no wake zone to discourage boating activities that would be disruptive to sensitive species in the vicinity of this property. It is reported that boat wakes are dangerous to floating loon nests on natural vegetation, and keeping a distance buffer between high speed, powered recreation and sensitive species may increase the likelihood that nesting and chick rearing will occur for a variety of species.

Transitional Habitat Margins

Bone Lake's properties create a mosaic of habitat differences, some subtle and some sharply defined. Transitional habitats were often incorporated within the greater landscape picture and defined within the major classifications of Residential Woodlot, Second Growth Forest, or Tamarack/Alder/Northern Sedge Meadow Wetland. On three occasions, survey points fell on habitats that could not be classified readily into any of those categories. Transitional habitat margins were associated with weedy thickets and early, pioneering succession.

Common birds of weedy thickets, stream-side thickets, young forests and wetland transitions dominated these communities and included Tree Swallow, Barn Swallow, Baltimore Oriole, Red-winged Blackbird, Common Grackle, Red-eyed Vireo, Yellow Warbler, American Robin, Common Yellowthroat, and Song Sparrow. Two obligate

cavity-nesting birds, the Tree Swallow and Great Crested Flycatcher were important in these habitats.

Conclusions and Recommendations

With an astonishing 85 species of birds detected, the biological diversity of Bone Lake's bird communities has not been fully described. Numerous conservation opportunities have become apparent, and many conservation goals can be reached simply by maintaining the current quality of Bone Lake's habitats. Residential woodlots, in maintaining old trees and in allowing standing dead wood to remain, play an important role in sustaining populations of Red-headed Woodpeckers, a species of conservation concern. These habitats also support Bald Eagles as well as Red-bellied Woodpeckers and Great Crested Flycatchers. Large parcels of second growth forests play an important role in the conservation of a Threatened Species, the Red-shouldered Hawk. Forest species such as Least Flycatcher, Ovenbird, Rose-breasted Grosbeak, Scarlet Tanager, and Veery are sustained by keeping larger blocks of forest habitats intact. In the lake's northwestern corner a spectacular tamarack lowland supports Common Loons, Sandhill Cranes, and a species of immediate conservation urgency, the Golden-winged Warbler. While this wetland habitat is a property owned by the Wisconsin DNR, Bone Lake's residents are able to contribute to the value of this property's habitat to birds at the landscape level.

Three high-profile bird species, the Bald Eagle, Trumpeter Swan and Common Loon, are potentially threatened by lead sinkers. These three species are icons of the north woods' lake country and are a source of tremendous pride and inspiration for Bone Lake's residents and visitors. Bone Lake's residents have an opportunity to promote the use of nontoxic fishing equipment by promoting alternative metal sinkers at boat landings through the use of information kiosks. Bone Lake's residents may also choose to lead by example, switching to non-toxic tackle. Both Common Loon and Trumpeter Swan pick up the lead directly as they forage to pick up grit and gravel for their gizzards. While much of the lead ingested by eagles is through lead bullet fragments in the remains of deer gut piles, eagles are also affected by fishing line breakage and similar litter. X-ray analysis of young eagles shows that lead fishing tackle is frequently ingested by eagles when the lost tackle remains attached to the fish being consumed by the eagle. A lead jig provides a toxic dose of lead.

<http://www.replacelead.com/project.shtml>

<http://fishing-leagues.com/images/loonxray750.jpg>

<http://www.peregrinefund.org/subsites/conference-lead/PDF/0119%20Neumann.pdf>

Nest boxes are readily utilized by a variety of species. Currently, the use of nest gourds, martin houses, bluebird houses and other nest boxes appears to be very successful in

attracting birds and enhancing reproductive success of species that use these structures. Purple Martin populations are thriving on Bone Lake. Tree Swallows, House Wrens, Eastern Bluebirds, Black-capped Chickadees, and a variety of other cavity-nesting species are very abundant here. Service learning and conservation have the potential to meet on the shores of Bone Lake if a nest box program is launched through a school or service organization. For example, neighboring Unity High School has a graduation requirement of 40 hours' community involvement for each student. The prospect of building nest boxes of the correct dimensions and specifications is good for birds, satisfies student graduation requirements and fosters an appreciation for Bone Lake and the power of local conservation efforts.

http://ssl.watchablewildlife.org/store/index.php?main_page=product_info&cPath=2&products_id=30

Slipping quietly away from our skies, the Chimney Swift has recently been recognized as a bird in peril. The reason is likely a shift in human civilization patterns. Before European settlement, Chimney Swifts nested and roosted in large, hollowed out, standing dead wood. The use of fireplaces corresponded to the historical clearing of the nation's forests, and Chimney Swifts were able to survive deforestation by switching to chimneys. Today, as fewer homes and businesses have uncapped chimneys, we are also living in a world with fewer old trees and fewer standing dead trees of suitable size. Chimney swifts are losing their habitats. Fortunately, a number of communities are now erecting roosting and nesting structures for this important insect-eating bird. Chimney Swifts are present on Bone Lake, and two opportunities exist for their conservation—a nesting structure project and a citizen science Chimney Swift census. The census is a lot of fun, and it involves gathering together below a chimney that is being used by the swifts and counting them as they go to roost at sunset. It is a great social gathering, and the information gathered is valuable. A couple of hundred swifts roost in a single chimney in downtown St. Croix Falls, and many evenings in the early summer find a gathering of friends with binoculars in hand, ready to census the swifts.

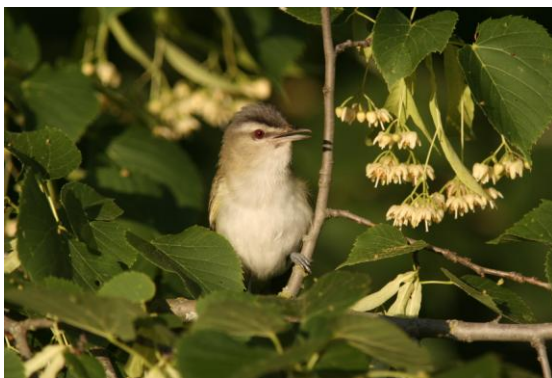
<http://www.chimneyswifts.org/>

Opportunities for citizen science monitoring, natural history appreciation, and a gathering of community around directed conservation efforts abound at Bone Lake. Much of what can be done at Bone Lake, fortunately, is to keep things as they are. Bone Lake is still a biologically rich location that is integral to the surrounding landscape ecology. Protection of remaining parcels of intact forest should be a priority, and citizens have the opportunity to dissipate the negative effects of fragmentation by planting shrubs and allowing natural forest vegetation to return at the edges of their property lots. Improving natural shoreline vegetation is as beneficial to bird communities as it is to maintaining water quality and preventing algal blooms. Reducing reliance on fertilizers and increasing the size of shoreline vegetation buffers is an important part of long-term bird conservation.

Other recommendations follow through reiteration of the recommendations from previous sections of this report:

Forest species that were absent from residential development and present in Bone Lake's forested tracts included Great Horned Owl, Blue-gray Gnatcatcher, Least Flycatcher, Ovenbird, Rose-breasted Grosbeak, Scarlet Tanager, Veery, and Red-shouldered Hawk. Continued conservation of these species will depend upon preservation and growth of current undisturbed/undeveloped parcels of woodland. Efforts to maintain continuous acreage of forest and concurrent efforts to minimize fragmentation by roads, trails, buildings, and clearings can be considered as an important step in long-term conservation efforts. Property owners adjacent to undeveloped forest parcels may wish to begin reforestation efforts at the edges of their lots, perhaps planting hardwood species such as white oak and replenishing understory species such as dogwood, Viburnum, or winterberry. These efforts to preserve and expand acreage of woodland would benefit sensitive forest bird species, including state Threatened Red-shouldered Hawks, other area-sensitive forest raptors that may not have detected during bird surveys (Broad-winged Hawk, Cooper's Hawk, Barred Owl). A few other unique forest birds such as Hooded Mergansers and Pileated Woodpeckers, and a variety of Neotropical migrant songbirds would benefit from forest preservation or expansion.

Important conservation priorities for the Wisconsin DNR parcel of tamarack forest lowland and sedge meadow point to maintaining the wild character of nearby land so that Common Loons will be encouraged to nest. Further, Sandhill Crane pairs and Golden-winged Warbler pairs indicate that this property represents an intact and sizeable example of Northern Sedge Meadow and alder/tamarack dominated swampland. Increasing participation by nearby landowners in providing wild shoreline may increase the overall effectiveness in this wetland's production of important birds each summer. Further, the lake district may wish to discuss a no wake zone to discourage boating activities that would be disruptive to sensitive species in the vicinity of this property. It is reported that boat wakes are dangerous to floating loon nests on natural vegetation, and keeping a distance buffer between high speed, random recreation and sensitive species may increase the likelihood that nesting and chick rearing will occur.



Red-eyed Vireo in basswood



Pine Warbler in white pine



Baltimore Oriole demonstrating niche



Young Rose-breasted Grosbeak



House Wren at nesting box

APPENDICES: Bird Survey Summarized Results and Condensed Raw Data

TABLE 1: Bird Detections within 50 Meter radii in Residential Woodlot—Species Relative Abundance

Species	Total	Percent	Per Survey
Barn Swallow	70	10.9375	1.944444444
Tree Swallow	32	5	0.888888889
Baltimore Oriole	31	4.84375	0.861111111
Chipping Sparrow	28	4.375	0.777777778
American Robin	27	4.21875	0.75
Common Grackle	27	4.21875	0.75
Purple Martin	25	3.90625	0.694444444
Red-eyed Vireo	25	3.90625	0.694444444
Cedar Waxwing	23	3.59375	0.638888889
Eastern Phoebe	20	3.125	0.555555556
House Wren	19	2.96875	0.527777778
Song Sparrow	17	2.65625	0.472222222
American Crow	16	2.5	0.444444444
Black-capped Chickadee	16	2.5	0.444444444
Blue Jay	16	2.5	0.444444444
American Goldfinch	14	2.1875	0.388888889
Great Crested Flycatcher	13	2.03125	0.361111111
Red-winged Blackbird	13	2.03125	0.361111111
White-breasted Nuthatch	13	2.03125	0.361111111
Canada Goose	10	1.5625	0.277777778
Red-bellied Woodpecker	10	1.5625	0.277777778
Chimney Swift	9	1.40625	0.25
Pine Warbler	9	1.40625	0.25
Bald Eagle	8	1.25	0.222222222
Downy Woodpecker	8	1.25	0.222222222
European Starling	8	1.25	0.222222222
Green Heron	8	1.25	0.222222222
Trumpeter Swan	8	1.25	0.222222222
Brown-headed Cowbird	7	1.09375	0.194444444
Eastern Bluebird	7	1.09375	0.194444444
Mourning Dove	7	1.09375	0.194444444
Spotted Sandpiper	7	1.09375	0.194444444
Warbling Vireo	7	1.09375	0.194444444
Yellow Warbler	6	0.9375	0.166666667
Alder Flycatcher	5	0.78125	0.138888889
American Redstart	5	0.78125	0.138888889
Belted Kingfisher	4	0.625	0.111111111

Common Loon	4	0.625	0.111111111
Eastern Kingbird	4	0.625	0.111111111
Eastern Wood Pewee	4	0.625	0.111111111
Northern Cardinal	4	0.625	0.111111111
Rock Pigeon	4	0.625	0.111111111
Gray Catbird	3	0.46875	0.083333333
Hairy Woodpecker	3	0.46875	0.083333333
Mallard	3	0.46875	0.083333333
Northern Rough-winged Swallow	3	0.46875	0.083333333
Ruby-throated Hummingbird	3	0.46875	0.083333333
Yellow-bellied Sapsucker	3	0.46875	0.083333333
Yellow-throated Vireo	3	0.46875	0.083333333
Black-and-white Warbler	2	0.3125	0.055555556
Common Yellowthroat	2	0.3125	0.055555556
Hooded Merganser	2	0.3125	0.055555556
Red-headed Woodpecker	2	0.3125	0.055555556
Bay-breasted Warbler (migrant)	1	0.15625	0.027777778
Chestnut-sided Warbler	1	0.15625	0.027777778
Double Crested Cormorant	1	0.15625	0.027777778
Great Blue Heron	1	0.15625	0.027777778
House Finch	1	0.15625	0.027777778
House Sparrow	1	0.15625	0.027777778
Indigo Bunting	1	0.15625	0.027777778
Magnolia Warbler (migrant)	1	0.15625	0.027777778
Nashville Warbler	1	0.15625	0.027777778
Northern Flicker	1	0.15625	0.027777778
Pileated Woodpecker	1	0.15625	0.027777778
Purple Finch	1	0.15625	0.027777778
Wood Duck	1	0.15625	0.027777778

Total Species <50 M	66
Total Individuals <50M	640
Total Counts	36
Individuals per Count <50M	17.77778

TABLE 2: Bird Detections within 50 Meter radii in Lowland Tamarack/Alder Habitats—Species Relative Abundance

SPECIES	Total	Percent	Per Survey
Red-winged Blackbird	8	9.411765	2.66666667
Barn Swallow	7	8.235294	2.33333333
Great Blue Heron	7	8.235294	2.33333333
Yellow Warbler	7	8.235294	2.33333333
Tree Swallow	5	5.882353	1.66666667
Alder Flycatcher	4	4.705882	1.33333333
Common Yellowthroat	4	4.705882	1.33333333
Common Raven	3	3.529412	1
Veery	3	3.529412	1
Warbling Vireo	3	3.529412	1
American Redstart	2	2.352941	0.66666667
Baltimore Oriole	2	2.352941	0.66666667
Common Grackle	2	2.352941	0.66666667
Golden-winged Warbler	2	2.352941	0.66666667
Great Crested Flycatcher	2	2.352941	0.66666667
Green Heron	2	2.352941	0.66666667
Mourning Dove	2	2.352941	0.66666667
Red-eyed Vireo	2	2.352941	0.66666667
Sandhill Crane	2	2.352941	0.66666667
Song Sparrow	2	2.352941	0.66666667
Swamp Sparrow	2	2.352941	0.66666667
American Goldfinch	1	1.176471	0.33333333
Brown-headed Cowbird	1	1.176471	0.33333333
Cedar Waxwing	1	1.176471	0.33333333
Eastern Bluebird	1	1.176471	0.33333333
Eastern Kingbird	1	1.176471	0.33333333
Hairy Woodpecker	1	1.176471	0.33333333
Hooded Merganser	1	1.176471	0.33333333
House Wren	1	1.176471	0.33333333
Purple Martin	1	1.176471	0.33333333
Red-shouldered Hawk	1	1.176471	0.33333333
Rose-breasted Grosbeak	1	1.176471	0.33333333
White-breasted Nuthatch	1	1.176471	0.33333333
Total Species <50 m	33		
Total Individuals <50m	85		
Total Counts	3		
Individuals per Count <50m	28.333		

**TABLE 3: Bird Detections within 50 Meter radii in 2nd Growth Deciduous Forest—
Species Relative Abundance**

SPECIES	Total	Percent	Per Survey
Baltimore Oriole	16	7.339449541	1.23076923
Tree Swallow	15	6.880733945	1.15384615
Yellow Warbler	15	6.880733945	1.15384615
American Redstart	13	5.963302752	1
Purple Martin	13	5.963302752	1
Red-eyed Vireo	12	5.504587156	0.92307692
Song Sparrow	10	4.587155963	0.76923077
Common Yellowthroat	7	3.211009174	0.53846154
Black-capped Chickadee	6	2.752293578	0.46153846
Common Grackle	6	2.752293578	0.46153846
Eastern Kingbird	6	2.752293578	0.46153846
American Goldfinch	5	2.293577982	0.38461538
Blue Jay	5	2.293577982	0.38461538
Eastern Wood Pewee	5	2.293577982	0.38461538
Red-winged Blackbird	5	2.293577982	0.38461538
Barn Swallow	4	1.834862385	0.30769231
Eastern Phoebe	4	1.834862385	0.30769231
European Starling	4	1.834862385	0.30769231
American Crow	3	1.376146789	0.23076923
Brown-headed Cowbird	3	1.376146789	0.23076923
Gray Catbird	3	1.376146789	0.23076923
Great Blue Heron	3	1.376146789	0.23076923
Great Crested Flycatcher	3	1.376146789	0.23076923
Northern Flicker	3	1.376146789	0.23076923
Warbling Vireo	3	1.376146789	0.23076923
Yellow-throated Vireo	3	1.376146789	0.23076923
Alder Flycatcher	2	0.917431193	0.15384615
American Robin	2	0.917431193	0.15384615
Bald Eagle (adult)	2	0.917431193	0.15384615
Canada Goose	2	0.917431193	0.15384615
Cedar Waxwing	2	0.917431193	0.15384615
Chipping Sparrow	2	0.917431193	0.15384615
Great Horned Owl	2	0.917431193	0.15384615
Hairy Woodpecker	2	0.917431193	0.15384615
House Wren	2	0.917431193	0.15384615
Mallard	2	0.917431193	0.15384615
Northern Cardinal	2	0.917431193	0.15384615

Ruby-throated Hummingbird	2	0.917431193	0.15384615
White-breasted Nuthatch	2	0.917431193	0.15384615
Yellow-bellied Sapsucker	2	0.917431193	0.15384615
Belted Kingfisher	1	0.458715596	0.07692308
Black-and-white Warbler	1	0.458715596	0.07692308
Blue-gray Gnatcatcher	1	0.458715596	0.07692308
Downy Woodpecker	1	0.458715596	0.07692308
Green Heron	1	0.458715596	0.07692308
Hooded Merganser	1	0.458715596	0.07692308
Indigo Bunting	1	0.458715596	0.07692308
Least Flycatcher	1	0.458715596	0.07692308
Northern Rough-winged Swallow	1	0.458715596	0.07692308
Ovenbird	1	0.458715596	0.07692308
Red-headed Woodpecker	1	0.458715596	0.07692308
Red-shouldered Hawk	1	0.458715596	0.07692308
Rose-breasted Grosbeak	1	0.458715596	0.07692308
Scarlet Tanager	1	0.458715596	0.07692308
Veery	1	0.458715596	0.07692308

Total Species < 50 m	55
Individuals <50m	218
Counts	13
Individuals per Count	16.76923

TABLE 4: A Complete Picture of Bone Lake's Bird Community

SPECIES	Total	Percent	Per Survey
Canada Goose	108	6.326889	2
Barn Swallow	99	5.799649	1.83333333
American Crow	92	5.389572	1.7037037
Baltimore Oriole	85	4.979496	1.57407407
Tree Swallow	73	4.276508	1.35185185
Red-eyed Vireo	70	4.100762	1.2962963
Song Sparrow	61	3.573521	1.12962963
House Wren	55	3.222027	1.01851852
Yellow Warbler	54	3.163445	1
American Robin	52	3.04628	0.96296296
Blue Jay	50	2.929115	0.92592593
Purple Martin	49	2.870533	0.90740741
Chipping Sparrow	46	2.694786	0.85185185
Great Crested Flycatcher	42	2.460457	0.77777778
Common Grackle	39	2.28471	0.72222222
Red-winged Blackbird	37	2.167545	0.68518519
Black-capped Chickadee	36	2.108963	0.66666667
Eastern Phoebe	36	2.108963	0.66666667
Red-bellied Woodpecker	34	1.991798	0.62962963
Mourning Dove	30	1.757469	0.55555556
American Goldfinch	27	1.581722	0.5
American Redstart	27	1.581722	0.5
Cedar Waxwing	27	1.581722	0.5
Common Yellowthroat	27	1.581722	0.5
Warbling Vireo	25	1.464558	0.46296296
White-breasted Nuthatch	23	1.347393	0.42592593
Great Blue Heron	18	1.054482	0.33333333
Bald Eagle	16	0.937317	0.2962963
European Starling	16	0.937317	0.2962963
Green Heron	16	0.937317	0.2962963
Mallard	16	0.937317	0.2962963
Brown-headed Cowbird	15	0.878735	0.27777778
Eastern Kingbird	15	0.878735	0.27777778
Eastern Wood Pewee	15	0.878735	0.27777778
Alder Flycatcher	13	0.76157	0.24074074
Pine Warbler	13	0.76157	0.24074074
Yellow-throated Vireo	13	0.76157	0.24074074
Northern Cardinal	12	0.702988	0.22222222
Chimney Swift	11	0.644405	0.2037037
Downy Woodpecker	11	0.644405	0.2037037

Eastern Bluebird	11	0.644405	0.2037037
Northern Flicker	10	0.585823	0.18518519
Sandhill Crane	10	0.585823	0.18518519
Gray Catbird	9	0.527241	0.16666667
Pileated Woodpecker	9	0.527241	0.16666667
Veery	9	0.527241	0.16666667
Common Loon	8	0.468658	0.14814815
Trumpeter Swan	8	0.468658	0.14814815
Yellow-bellied Sapsucker	8	0.468658	0.14814815
Common Raven	7	0.410076	0.12962963
Hairy Woodpecker	7	0.410076	0.12962963
Hooded Merganser	7	0.410076	0.12962963
Spotted Sandpiper	7	0.410076	0.12962963
Belted Kingfisher	6	0.351494	0.11111111
Ovenbird	6	0.351494	0.11111111
Ring-necked Pheasant	6	0.351494	0.11111111
Red-headed Woodpecker	5	0.292912	0.09259259
Rock Pigeon	5	0.292912	0.09259259
Ruby-throated Hummingbird	5	0.292912	0.09259259
Black-and-white Warbler	4	0.234329	0.07407407
Chestnut-sided Warbler	4	0.234329	0.07407407
Indigo Bunting	4	0.234329	0.07407407
Northern Rough-winged Swallow	4	0.234329	0.07407407
Rose-breasted Grosbeak	4	0.234329	0.07407407
Swamp Sparrow	4	0.234329	0.07407407
Wild Turkey	4	0.234329	0.07407407
Blackpoll Warbler (migrant)	3	0.175747	0.05555556
Golden-winged Warbler	3	0.175747	0.05555556
Red-shouldered Hawk	3	0.175747	0.05555556
Tennessee Warbler (migrant)	3	0.175747	0.05555556
Great Horned Owl	2	0.117165	0.03703704
Least Flycatcher	2	0.117165	0.03703704
Magnolia Warbler (migrant)	2	0.117165	0.03703704
Merlin	2	0.117165	0.03703704
Scarlet Tanager	2	0.117165	0.03703704
Bay-breasted Warbler (migrant)	1	0.058582	0.01851852
Blue-gray Gnatcatcher	1	0.058582	0.01851852
Bobolink	1	0.058582	0.01851852
Double Crested Cormorant	1	0.058582	0.01851852
House Finch	1	0.058582	0.01851852
House Sparrow	1	0.058582	0.01851852
Nashville Warbler	1	0.058582	0.01851852
Purple Finch	1	0.058582	0.01851852

Ruffed Grouse	1	0.058582	0.01851852
Wood Duck	1	0.058582	0.01851852

Total Individuals All Distance	1707
Total Species	85
Total Surveys	54
Individuals per Survey All Distances	31.61111

TABLE 5: Bone Lake Condensed Raw Data

DATE	TIME	LAT	LONG	SPECIES	Qty <50M	Qty >50M	
5/28/2011	0:00	7:34:50	45.50135	-92.38079	American Crow	1	2
5/28/2011	0:00	7:34:50	45.50135	-92.38079	Bald Eagle (adult)	1	
5/28/2011	0:00	7:34:50	45.50135	-92.38079	Baltimore Oriole	1	1
5/28/2011	0:00	7:34:50	45.50135	-92.38079	Black-capped Chickadee	1	
5/28/2011	0:00	7:34:50	45.50135	-92.38079	Cedar Waxwing	1	
5/28/2011	0:00	7:34:50	45.50135	-92.38079	Common Grackle	1	
5/28/2011	0:00	7:34:50	45.50135	-92.38079	Common Loon	1	
5/28/2011	0:00	7:34:50	45.50135	-92.38079	Great Crested Flycatcher	1	
5/28/2011	0:00	7:34:50	45.50135	-92.38079	Indigo Bunting	1	
5/28/2011	0:00	7:34:50	45.50135	-92.38079	Magnolia Warbler (migrant)	1	1
5/28/2011	0:00	7:34:50	45.50135	-92.38079	Mallard	1	
5/28/2011	0:00	7:34:50	45.50135	-92.38079	Northern Cardinal	1	
5/28/2011	0:00	7:34:50	45.50135	-92.38079	Pileated Woodpecker	1	
5/28/2011	0:00	7:34:50	45.50135	-92.38079	Yellow Warbler	1	
5/28/2011	0:00	7:34:50	45.50135	-92.38079	Yellow-bellied Sapsucker	1	
5/28/2011	0:00	7:34:50	45.50135	-92.38079	Chipping Sparrow	2	
5/28/2011	0:00	7:34:50	45.50135	-92.38079	Red-eyed Vireo	2	
5/28/2011	0:00	7:34:50	45.50135	-92.38079	Red-headed Woodpecker	2	1
5/28/2011	0:00	7:34:50	45.50135	-92.38079	Barn Swallow	3	
5/28/2011	0:00	7:34:50	45.50135	-92.38079	Chimney Swift	3	
5/28/2011	0:00	7:34:50	45.50135	-92.38079	Tree Swallow	3	
5/28/2011	0:00	7:34:50	45.50135	-92.38079	Spotted Sandpiper	6	
5/28/2011	0:00	7:34:50	45.50135	-92.38079	Blue Jay		1
5/28/2011	0:00	7:34:50	45.50135	-92.38079	Canada Goose		1
5/28/2011	0:00	7:34:50	45.50135	-92.38079	Red-shouldered Hawk		1
5/28/2011	0:00	7:34:50	45.50135	-92.38079	Ring-necked Pheasant		1
5/28/2011	0:00	7:34:50	45.50135	-92.38079	White-breasted Nuthatch		1
5/28/2011	0:00	8:08:39	45.50428	-92.38301	American Robin	1	
5/28/2011	0:00	8:08:39	45.50428	-92.38301	Baltimore Oriole	1	1
5/28/2011	0:00	8:08:39	45.50428	-92.38301	Black-capped Chickadee	1	1
5/28/2011	0:00	8:08:39	45.50428	-92.38301	Blue Jay	1	
5/28/2011	0:00	8:08:39	45.50428	-92.38301	Chipping Sparrow	1	
5/28/2011	0:00	8:08:39	45.50428	-92.38301	Common Grackle	1	
5/28/2011	0:00	8:08:39	45.50428	-92.38301	Double Crested Cormorant	1	
5/28/2011	0:00	8:08:39	45.50428	-92.38301	Downy Woodpecker	1	
5/28/2011	0:00	8:08:39	45.50428	-92.38301	Eastern Bluebird	1	
5/28/2011	0:00	8:08:39	45.50428	-92.38301	Eastern Kingbird	1	
5/28/2011	0:00	8:08:39	45.50428	-92.38301	Eastern Phoebe	1	
5/28/2011	0:00	8:08:39	45.50428	-92.38301	Northern Rough-winged Swallow	1	
5/28/2011	0:00	8:08:39	45.50428	-92.38301	Pine Warbler	1	
5/28/2011	0:00	8:08:39	45.50428	-92.38301	Purple Finch	1	
5/28/2011	0:00	8:08:39	45.50428	-92.38301	Red-bellied Woodpecker	1	

5/28/2011 0:00	8:08:39	45.50428	-92.38301	White-breasted Nuthatch	1	1
5/28/2011 0:00	8:08:39	45.50428	-92.38301	Yellow-bellied Sapsucker	1	
5/28/2011 0:00	8:08:39	45.50428	-92.38301	Yellow-throated Vireo	1	
5/28/2011 0:00	8:08:39	45.50428	-92.38301	Eastern Wood Pewee	2	1
5/28/2011 0:00	8:08:39	45.50428	-92.38301	Red-eyed Vireo	2	
5/28/2011 0:00	8:08:39	45.50428	-92.38301	Barn Swallow	4	3
5/28/2011 0:00	8:08:39	45.50428	-92.38301	American Crow		2
5/28/2011 0:00	8:08:39	45.50428	-92.38301	Canada Goose		2
5/28/2011 0:00	8:08:39	45.50428	-92.38301	Red-headed Woodpecker		1
5/28/2011 0:00	8:34:17	45.50756	-92.384	American Robin	1	
5/28/2011 0:00	8:34:17	45.50756	-92.384	Bald Eagle (adult)	1	
5/28/2011 0:00	8:34:17	45.50756	-92.384	Baltimore Oriole	1	
5/28/2011 0:00	8:34:17	45.50756	-92.384	Brown-headed Cowbird	1	
5/28/2011 0:00	8:34:17	45.50756	-92.384	Common Grackle	1	
5/28/2011 0:00	8:34:17	45.50756	-92.384	Eastern Bluebird	1	
5/28/2011 0:00	8:34:17	45.50756	-92.384	European Starling	1	1
5/28/2011 0:00	8:34:17	45.50756	-92.384	Great Crested Flycatcher	1	
5/28/2011 0:00	8:34:17	45.50756	-92.384	House Wren	1	1
5/28/2011 0:00	8:34:17	45.50756	-92.384	Pine Warbler	1	
5/28/2011 0:00	8:34:17	45.50756	-92.384	Red-eyed Vireo	1	1
5/28/2011 0:00	8:34:17	45.50756	-92.384	Yellow Warbler	1	
5/28/2011 0:00	8:34:17	45.50756	-92.384	Chipping Sparrow	2	2
5/28/2011 0:00	8:34:17	45.50756	-92.384	Tree Swallow	2	
5/28/2011 0:00	8:34:17	45.50756	-92.384	American Goldfinch	3	1
5/28/2011 0:00	8:34:17	45.50756	-92.384	Blue Jay	4	
5/28/2011 0:00	8:34:17	45.50756	-92.384	American Crow		2
5/28/2011 0:00	8:34:17	45.50756	-92.384	Northern Flicker		1
5/28/2011 0:00	8:53:03	45.51048	-92.38504	American Crow	1	2
5/28/2011 0:00	8:53:03	45.51048	-92.38504	European Starling	1	
5/28/2011 0:00	8:53:03	45.51048	-92.38504	Gray Catbird	1	
5/28/2011 0:00	8:53:03	45.51048	-92.38504	Northern Cardinal	1	1
5/28/2011 0:00	8:53:03	45.51048	-92.38504	Spotted Sandpiper	1	
5/28/2011 0:00	8:53:03	45.51048	-92.38504	White-breasted Nuthatch	1	
5/28/2011 0:00	8:53:03	45.51048	-92.38504	Yellow-bellied Sapsucker	1	
5/28/2011 0:00	8:53:03	45.51048	-92.38504	Chipping Sparrow	2	2
5/28/2011 0:00	8:53:03	45.51048	-92.38504	Barn Swallow	3	
5/28/2011 0:00	8:53:03	45.51048	-92.38504	American Goldfinch		1
5/28/2011 0:00	8:53:03	45.51048	-92.38504	American Robin		2
5/28/2011 0:00	8:53:03	45.51048	-92.38504	Blue Jay		3
5/28/2011 0:00	8:53:03	45.51048	-92.38504	Brown-headed Cowbird		1
5/28/2011 0:00	8:53:03	45.51048	-92.38504	Eastern Bluebird		2
5/28/2011 0:00	8:53:03	45.51048	-92.38504	Great Crested Flycatcher		1
5/28/2011 0:00	8:53:03	45.51048	-92.38504	Red-bellied Woodpecker		1
5/28/2011 0:00	8:53:03	45.51048	-92.38504	Red-eyed Vireo		1
5/28/2011 0:00	8:53:03	45.51048	-92.38504	Red-winged Blackbird		1
5/28/2011 0:00	9:13:48	45.51426	-92.38711	Baltimore Oriole	2	1
5/28/2011 0:00	9:13:48	45.51426	-92.38711	Red-winged Blackbird	1	
5/28/2011 0:00	9:13:48	45.51426	-92.38711	Northern Flicker	1	1

5/28/2011 0:00	9:13:48	45.51426	-92.38711	Yellow Warbler	1	1
5/28/2011 0:00	9:13:48	45.51426	-92.38711	Black-capped Chickadee	1	
5/28/2011 0:00	9:13:48	45.51426	-92.38711	Red-eyed Vireo	1	1
5/28/2011 0:00	9:13:48	45.51426	-92.38711	Eastern Kingbird	1	
5/28/2011 0:00	9:13:48	45.51426	-92.38711	Common Grackle	1	
5/28/2011 0:00	9:13:48	45.51426	-92.38711	Blackpoll Warbler (migrant)	2	
5/28/2011 0:00	9:13:48	45.51426	-92.38711	Barn Swallow	9	1
5/28/2011 0:00	9:13:48	45.51426	-92.38711	American Robin	2	
5/28/2011 0:00	9:13:48	45.51426	-92.38711	Song Sparrow		1
5/28/2011 0:00	9:13:48	45.51426	-92.38711	Mourning Dove		1
5/28/2011 0:00	9:13:48	45.51426	-92.38711	Chipping Sparrow		1
5/28/2011 0:00	9:13:48	45.51426	-92.38711	Blue Jay		1
5/28/2011 0:00	9:13:48	45.51426	-92.38711	Pileated Woodpecker		1
5/28/2011 0:00	9:31:09	45.51655	-92.38507	Baltimore Oriole	1	1
5/28/2011 0:00	9:31:09	45.51655	-92.38507	Bay-breasted Warbler (migrant)	1	
5/28/2011 0:00	9:31:09	45.51655	-92.38507	Blue Jay	2	1
5/28/2011 0:00	9:31:09	45.51655	-92.38507	Purple Martin	1	
5/28/2011 0:00	9:31:09	45.51655	-92.38507	Tree Swallow	1	
5/28/2011 0:00	9:31:09	45.51655	-92.38507	Barn Swallow	1	
5/28/2011 0:00	9:31:09	45.51655	-92.38507	American Robin	1	
5/28/2011 0:00	9:31:09	45.51655	-92.38507	Black-capped Chickadee	1	
5/28/2011 0:00	9:31:09	45.51655	-92.38507	American Goldfinch	1	3
5/28/2011 0:00	9:31:09	45.51655	-92.38507	Chipping Sparrow		1
5/28/2011 0:00	9:31:09	45.51655	-92.38507	Yellow Warbler		1
5/28/2011 0:00	9:31:09	45.51655	-92.38507	Northern Cardinal		1
5/28/2011 0:00	9:31:09	45.51655	-92.38507	Sandhill Crane		2
5/28/2011 0:00	6:25:40 AM	45.56413	-92.39327	Belted Kingfisher	1	
5/28/2011 0:00	6:25:40 AM	45.56413	-92.39327	Purple Martin	3	
5/28/2011 0:00	6:25:40 AM	45.56413	-92.39327	Tree Swallow	15	
5/28/2011 0:00	6:25:40 AM	45.56413	-92.39327	Barn Swallow	1	
5/28/2011 0:00	6:25:40 AM	45.56413	-92.39327	Gray Catbird	1	
5/28/2011 0:00	6:25:40 AM	45.56413	-92.39327	Song Sparrow	1	1
5/28/2011 0:00	6:25:40 AM	45.56413	-92.39327	Common Yellowthroat	2	
5/28/2011 0:00	6:25:40 AM	45.56413	-92.39327	Great Crested Flycatcher	1	1
5/28/2011 0:00	6:25:40 AM	45.56413	-92.39327	American Crow	1	2
5/28/2011 0:00	6:25:40 AM	45.56413	-92.39327	Red-eyed Vireo	1	1
5/28/2011 0:00	6:25:40 AM	45.56413	-92.39327	Hooded Merganser	3	
5/28/2011 0:00	6:25:40 AM	45.56413	-92.39327	Mallard	3	
5/28/2011 0:00	6:25:40 AM	45.56413	-92.39327	Canada Goose	1	2
5/28/2011 0:00	6:25:40 AM	45.56413	-92.39327	Merlin		2
5/28/2011 0:00	6:25:40 AM	45.56413	-92.39327	Bobolink		1
5/28/2011 0:00	6:25:40 AM	45.56413	-92.39327	Common Grackle		1
5/28/2011 0:00	6:25:40 AM	45.56413	-92.39327	American Robin		1
5/28/2011 0:00	6:25:40 AM	45.56413	-92.39327	Baltimore Oriole		1
5/28/2011 0:00	6:25:40 AM	45.56413	-92.39327	Black-capped Chickadee		1
5/28/2011 0:00	6:25:40 AM	45.56413	-92.39327	Eastern Kingbird		2
5/28/2011 0:00	6:25:40 AM	45.56413	-92.39327	Sandhill Crane		2
5/28/2011 0:00	6:25:40 AM	45.56413	-92.39327	Pileated Woodpecker		1

5/28/2011 0:00	6:25:40 AM	45.56413	-92.39327	Warbling Vireo		1
5/28/2011 0:00	6:25:40 AM	45.56413	-92.39327	Chipping Sparrow		1
5/28/2011 0:00	6:25:40 AM	45.56413	-92.39327	Blue Jay		2
5/28/2011 0:00	6:25:40 AM	45.56413	-92.39327	Red-winged Blackbird		1
5/28/2011 0:00	6:25:40 AM	45.56413	-92.39327	Common Raven		1
5/28/2011 0:00	6:25:40 AM	45.56413	-92.39327	Bald Eagle (imm)		3
5/29/2011 0:00	5:33:23 AM	45.5297	-92.38651	Tree Swallow	3	
5/29/2011 0:00	5:33:23 AM	45.5297	-92.38651	Eastern Kingbird	3	
5/29/2011 0:00	5:33:23 AM	45.5297	-92.38651	Purple Martin	1	
5/29/2011 0:00	5:33:23 AM	45.5297	-92.38651	Yellow Warbler	2	1
5/29/2011 0:00	5:33:23 AM	45.5297	-92.38651	American Redstart	2	1
5/29/2011 0:00	5:33:23 AM	45.5297	-92.38651	Baltimore Oriole	2	1
5/29/2011 0:00	5:33:23 AM	45.5297	-92.38651	Warbling Vireo	2	
5/29/2011 0:00	5:33:23 AM	45.5297	-92.38651	Song Sparrow	1	2
5/29/2011 0:00	5:33:23 AM	45.5297	-92.38651	Yellow-throated Vireo	1	
5/29/2011 0:00	5:33:23 AM	45.5297	-92.38651	Brown-headed Cowbird	1	
5/29/2011 0:00	5:33:23 AM	45.5297	-92.38651	European Starling	2	
5/29/2011 0:00	5:33:23 AM	45.5297	-92.38651	American Crow		2
5/29/2011 0:00	5:33:23 AM	45.5297	-92.38651	Blue Jay		1
5/29/2011 0:00	5:33:23 AM	45.5297	-92.38651	Northern Cardinal		1
5/29/2011 0:00	5:33:23 AM	45.5297	-92.38651	Red-headed Woodpecker		1
5/29/2011 0:00	5:33:23 AM	45.5297	-92.38651	Great Blue Heron		1
5/29/2011 0:00	5:33:23 AM	45.5297	-92.38651	Canada Goose		1
5/29/2011 0:00	5:33:23 AM	45.5297	-92.38651	Downy Woodpecker		1
5/29/2011 0:00	5:33:23 AM	45.5297	-92.38651	White-breasted Nuthatch		1
5/29/2011 0:00	5:55:37 AM	45.52685	-92.38826	Warbling Vireo	1	
5/29/2011 0:00	5:55:37 AM	45.52685	-92.38826	Eastern Kingbird	1	
5/29/2011 0:00	5:55:37 AM	45.52685	-92.38826	American Redstart	2	
5/29/2011 0:00	5:55:37 AM	45.52685	-92.38826	Yellow Warbler	2	1
5/29/2011 0:00	5:55:37 AM	45.52685	-92.38826	Northern Flicker	1	1
5/29/2011 0:00	5:55:37 AM	45.52685	-92.38826	Common Grackle	1	
5/29/2011 0:00	5:55:37 AM	45.52685	-92.38826	Blue Jay	1	
5/29/2011 0:00	5:55:37 AM	45.52685	-92.38826	Baltimore Oriole	2	2
5/29/2011 0:00	5:55:37 AM	45.52685	-92.38826	Yellow-throated Vireo	1	
5/29/2011 0:00	5:55:37 AM	45.52685	-92.38826	Tree Swallow	3	1
5/29/2011 0:00	5:55:37 AM	45.52685	-92.38826	Red-eyed Vireo	1	
5/29/2011 0:00	5:55:37 AM	45.52685	-92.38826	Great Blue Heron	1	
5/29/2011 0:00	5:55:37 AM	45.52685	-92.38826	Song Sparrow		1
5/29/2011 0:00	5:55:37 AM	45.52685	-92.38826	Red-bellied Woodpecker		3
5/29/2011 0:00	5:55:37 AM	45.52685	-92.38826	Green Heron		1
5/29/2011 0:00	5:55:37 AM	45.52685	-92.38826	Mallard		2
5/29/2011 0:00	5:55:37 AM	45.52685	-92.38826	Pileated Woodpecker		1
5/29/2011 0:00	5:55:37 AM	45.52685	-92.38826	American Crow		1
5/29/2011 0:00	5:55:37 AM	45.52685	-92.38826	Ring-necked Pheasant		1
5/29/2011 0:00	5:55:37 AM	45.52685	-92.38826	Sandhill Crane		2
5/29/2011 0:00	5:55:37 AM	45.52685	-92.38826	Mourning Dove		1
5/29/2011 0:00	6:21:50 AM	45.53367	-92.38589	Red-winged Blackbird	2	
5/29/2011 0:00	6:21:50 AM	45.53367	-92.38589	Bald Eagle (adult)	1	

5/29/2011 0:00	6:21:50 AM	45.53367	-92.38589	Gray Catbird	2	
5/29/2011 0:00	6:21:50 AM	45.53367	-92.38589	Yellow Warbler	4	
5/29/2011 0:00	6:21:50 AM	45.53367	-92.38589	Alder Flycatcher	2	
5/29/2011 0:00	6:21:50 AM	45.53367	-92.38589	Song Sparrow	2	
5/29/2011 0:00	6:21:50 AM	45.53367	-92.38589	Red-eyed Vireo	1	
5/29/2011 0:00	6:21:50 AM	45.53367	-92.38589	American Redstart	3	
5/29/2011 0:00	6:21:50 AM	45.53367	-92.38589	Baltimore Oriole	1	
5/29/2011 0:00	6:21:50 AM	45.53367	-92.38589	Common Yellowthroat	1	2
5/29/2011 0:00	6:21:50 AM	45.53367	-92.38589	Ruby-throated Hummingbird	1	
5/29/2011 0:00	6:21:50 AM	45.53367	-92.38589	Eastern Kingbird	1	
5/29/2011 0:00	6:21:50 AM	45.53367	-92.38589	Tree Swallow	3	
5/29/2011 0:00	6:21:50 AM	45.53367	-92.38589	Green Heron	1	
5/29/2011 0:00	6:21:50 AM	45.53367	-92.38589	Common Grackle	1	
5/29/2011 0:00	6:21:50 AM	45.53367	-92.38589	American Crow		2
5/29/2011 0:00	6:21:50 AM	45.53367	-92.38589	Pileated Woodpecker		1
5/29/2011 0:00	6:21:50 AM	45.53367	-92.38589	Blackpoll Warbler (migrant)		1
5/29/2011 0:00	6:21:50 AM	45.53367	-92.38589	Common Loon		2
5/29/2011 0:00	6:21:50 AM	45.53367	-92.38589	Blue Jay		1
5/29/2011 0:00	6:21:50 AM	45.53367	-92.38589	Bald Eagle (imm)		1
5/29/2011 0:00	6:47:46 AM	45.53942	-92.38498	Downy Woodpecker	1	
5/29/2011 0:00	6:47:46 AM	45.53942	-92.38498	Eastern Phoebe	1	2
5/29/2011 0:00	6:47:46 AM	45.53942	-92.38498	Baltimore Oriole	1	1
5/29/2011 0:00	6:47:46 AM	45.53942	-92.38498	Red-eyed Vireo	1	1
5/29/2011 0:00	6:47:46 AM	45.53942	-92.38498	House Wren	1	2
5/29/2011 0:00	6:47:46 AM	45.53942	-92.38498	Barn Swallow	2	
5/29/2011 0:00	6:47:46 AM	45.53942	-92.38498	Northern Rough-winged Swallow	1	
5/29/2011 0:00	6:47:46 AM	45.53942	-92.38498	Green Heron		2
5/29/2011 0:00	6:47:46 AM	45.53942	-92.38498	American Robin		1
5/29/2011 0:00	6:47:46 AM	45.53942	-92.38498	Mourning Dove		1
5/29/2011 0:00	6:47:46 AM	45.53942	-92.38498	American Crow		3
5/29/2011 0:00	6:47:46 AM	45.53942	-92.38498	Red-bellied Woodpecker		2
5/29/2011 0:00	6:47:46 AM	45.53942	-92.38498	Common Grackle		1
5/29/2011 0:00	6:47:46 AM	45.53942	-92.38498	Brown-headed Cowbird		1
5/29/2011 0:00	6:47:46 AM	45.53942	-92.38498	Bald Eagle		1
5/29/2011 0:00	6:47:46 AM	45.53942	-92.38498	Yellow-bellied Sapsucker		1
5/29/2011 0:00	6:47:46 AM	45.53942	-92.38498	Canada Goose		5
5/29/2011 0:00	7:14:07 AM	45.53523	-92.38266	Eastern Phoebe	1	
5/29/2011 0:00	7:14:07 AM	45.53523	-92.38266	Least Flycatcher	1	
5/29/2011 0:00	7:14:07 AM	45.53523	-92.38266	Hairy Woodpecker	1	
5/29/2011 0:00	7:14:07 AM	45.53523	-92.38266	Eastern Wood Pewee	1	1
5/29/2011 0:00	7:14:07 AM	45.53523	-92.38266	Red-eyed Vireo	3	4
5/29/2011 0:00	7:14:07 AM	45.53523	-92.38266	Blue Jay	1	
5/29/2011 0:00	7:14:07 AM	45.53523	-92.38266	Baltimore Oriole	1	
5/29/2011 0:00	7:14:07 AM	45.53523	-92.38266	Blue-gray Gnatcatcher	1	
5/29/2011 0:00	7:14:07 AM	45.53523	-92.38266	American Redstart	2	
5/29/2011 0:00	7:14:07 AM	45.53523	-92.38266	Black-capped Chickadee	1	
5/29/2011 0:00	7:14:07 AM	45.53523	-92.38266	American Crow	1	1
5/29/2011 0:00	7:14:07 AM	45.53523	-92.38266	White-breasted Nuthatch	1	

5/29/2011 0:00	7:14:07 AM	45.53523	-92.38266	Mourning Dove		1
5/29/2011 0:00	7:14:07 AM	45.53523	-92.38266	Red-bellied Woodpecker		2
5/29/2011 0:00	7:14:07 AM	45.53523	-92.38266	Red-shouldered Hawk		1
5/29/2011 0:00	7:14:07 AM	45.53523	-92.38266	Scarlet Tanager		1
5/29/2011 0:00	7:45:06 AM	45.5318	-92.38305	Yellow Warbler	1	1
5/29/2011 0:00	7:45:06 AM	45.5318	-92.38305	Least Flycatcher	1	
5/29/2011 0:00	7:45:06 AM	45.5318	-92.38305	Baltimore Oriole	1	
5/29/2011 0:00	7:45:06 AM	45.5318	-92.38305	Red-eyed Vireo	1	1
5/29/2011 0:00	7:45:06 AM	45.5318	-92.38305	Alder Flycatcher	1	
5/29/2011 0:00	7:45:06 AM	45.5318	-92.38305	Eastern Bluebird	2	
5/29/2011 0:00	7:45:06 AM	45.5318	-92.38305	Song Sparrow	1	
5/29/2011 0:00	7:45:06 AM	45.5318	-92.38305	Black-capped Chickadee	1	
5/29/2011 0:00	7:45:06 AM	45.5318	-92.38305	Common Grackle	1	
5/29/2011 0:00	7:45:06 AM	45.5318	-92.38305	Purple Martin	1	
5/29/2011 0:00	7:45:06 AM	45.5318	-92.38305	American Goldfinch	1	
5/29/2011 0:00	7:45:06 AM	45.5318	-92.38305	House Wren	1	
5/29/2011 0:00	7:45:06 AM	45.5318	-92.38305	Barn Swallow	2	
5/29/2011 0:00	7:45:06 AM	45.5318	-92.38305	Northern Rough-winged Swallow	1	
5/29/2011 0:00	7:45:06 AM	45.5318	-92.38305	Mallard	1	
5/29/2011 0:00	7:45:06 AM	45.5318	-92.38305	Warbling Vireo		1
5/29/2011 0:00	7:45:06 AM	45.5318	-92.38305	Red-bellied Woodpecker		1
5/29/2011 0:00	7:45:06 AM	45.5318	-92.38305	Common Yellowthroat		1
5/29/2011 0:00	7:45:06 AM	45.5318	-92.38305	Yellow-throated Vireo		1
5/29/2011 0:00	7:45:06 AM	45.5318	-92.38305	Eastern Phoebe		1
5/29/2011 0:00	7:45:06 AM	45.5318	-92.38305	Ovenbird		1
5/29/2011 0:00	7:45:06 AM	45.5318	-92.38305	American Crow		1
5/29/2011 0:00	7:45:06 AM	45.5318	-92.38305	Pileated Woodpecker		1
5/29/2011 0:00	7:45:06 AM	45.5318	-92.38305	Canada Goose		65
5/29/2011 0:00	7:45:06 AM	45.5318	-92.38305	Baltimore Oriole		2
5/29/2011 0:00	8:02:44 AM	45.52928	-92.37951	Red-bellied Woodpecker	1	
5/29/2011 0:00	8:02:44 AM	45.52928	-92.37951	Downy Woodpecker	1	
5/29/2011 0:00	8:02:44 AM	45.52928	-92.37951	American Redstart	1	
5/29/2011 0:00	8:02:44 AM	45.52928	-92.37951	Blue Jay	1	1
5/29/2011 0:00	8:02:44 AM	45.52928	-92.37951	Red-eyed Vireo	2	
5/29/2011 0:00	8:02:44 AM	45.52928	-92.37951	Brown-headed Cowbird	1	
5/29/2011 0:00	8:02:44 AM	45.52928	-92.37951	Baltimore Oriole	1	1
5/29/2011 0:00	8:02:44 AM	45.52928	-92.37951	Chipping Sparrow	1	
5/29/2011 0:00	8:02:44 AM	45.52928	-92.37951	Red-winged Blackbird	2	
5/29/2011 0:00	8:02:44 AM	45.52928	-92.37951	Black-and-white Warbler	1	
5/29/2011 0:00	8:02:44 AM	45.52928	-92.37951	American Crow	1	1
5/29/2011 0:00	8:02:44 AM	45.52928	-92.37951	Eastern Phoebe	1	
5/29/2011 0:00	8:02:44 AM	45.52928	-92.37951	Tree Swallow	1	
5/29/2011 0:00	8:02:44 AM	45.52928	-92.37951	Barn Swallow	1	
5/29/2011 0:00	8:02:44 AM	45.52928	-92.37951	Cedar Waxwing		1
5/29/2011 0:00	8:02:44 AM	45.52928	-92.37951	White-breasted Nuthatch		1
5/29/2011 0:00	8:02:44 AM	45.52928	-92.37951	American Robin		1
5/29/2011 0:00	8:02:44 AM	45.52928	-92.37951	Scarlet Tanager		1
5/29/2011 0:00	8:02:44 AM	45.52928	-92.37951	Green Heron		1

5/29/2011 0:00	8:02:44 AM	45.52928	-92.37951	Black-capped Chickadee		1
5/29/2011 0:00	8:02:44 AM	45.52928	-92.37951	Yellow-throated Vireo		1
5/29/2011 0:00	8:02:44 AM	45.52928	-92.37951	Yellow-bellied Sapsucker		1
5/29/2011 0:00	8:02:44 AM	45.52928	-92.37951	Alder Flycatcher		1
5/29/2011 0:00	8:02:44 AM	45.52928	-92.37951	Canada Goose		16
5/29/2011 0:00	8:21:55 AM	45.52618	-92.38129	Alder Flycatcher	2	
5/29/2011 0:00	8:21:55 AM	45.52618	-92.38129	Tree Swallow	1	
5/29/2011 0:00	8:21:55 AM	45.52618	-92.38129	Barn Swallow	2	
5/29/2011 0:00	8:21:55 AM	45.52618	-92.38129	Chipping Sparrow	1	
5/29/2011 0:00	8:21:55 AM	45.52618	-92.38129	Red-bellied Woodpecker	1	
5/29/2011 0:00	8:21:55 AM	45.52618	-92.38129	Great Crested Flycatcher	1	
5/29/2011 0:00	8:21:55 AM	45.52618	-92.38129	American Redstart	1	1
5/29/2011 0:00	8:21:55 AM	45.52618	-92.38129	Baltimore Oriole	1	2
5/29/2011 0:00	8:21:55 AM	45.52618	-92.38129	Northern Flicker	1	
5/29/2011 0:00	8:21:55 AM	45.52618	-92.38129	Yellow Warbler	1	1
5/29/2011 0:00	8:21:55 AM	45.52618	-92.38129	Song Sparrow	1	
5/29/2011 0:00	8:21:55 AM	45.52618	-92.38129	Blue Jay		1
5/29/2011 0:00	8:21:55 AM	45.52618	-92.38129	House Wren		1
5/29/2011 0:00	8:21:55 AM	45.52618	-92.38129	Gray Catbird		1
5/29/2011 0:00	8:21:55 AM	45.52618	-92.38129	Mallard		1
5/29/2011 0:00	8:21:55 AM	45.52618	-92.38129	American Crow		1
5/29/2011 0:00	8:39:55 AM	45.52278	-92.37983	Baltimore Oriole	3	1
5/29/2011 0:00	8:39:55 AM	45.52278	-92.37983	Eastern Phoebe	1	
5/29/2011 0:00	8:39:55 AM	45.52278	-92.37983	Song Sparrow	2	1
5/29/2011 0:00	8:39:55 AM	45.52278	-92.37983	Cedar Waxwing	1	
5/29/2011 0:00	8:39:55 AM	45.52278	-92.37983	Black-capped Chickadee	1	1
5/29/2011 0:00	8:39:55 AM	45.52278	-92.37983	Chipping Sparrow	1	2
5/29/2011 0:00	8:39:55 AM	45.52278	-92.37983	Red-eyed Vireo	1	
5/29/2011 0:00	8:39:55 AM	45.52278	-92.37983	White-breasted Nuthatch	2	
5/29/2011 0:00	8:39:55 AM	45.52278	-92.37983	American Robin	1	
5/29/2011 0:00	8:39:55 AM	45.52278	-92.37983	House Wren	1	
5/29/2011 0:00	8:39:55 AM	45.52278	-92.37983	Barn Swallow	2	
5/29/2011 0:00	8:39:55 AM	45.52278	-92.37983	Mourning Dove		1
5/29/2011 0:00	8:39:55 AM	45.52278	-92.37983	Blue Jay		1
5/29/2011 0:00	8:39:55 AM	45.52278	-92.37983	Tennessee Warbler (migrant)		3
5/29/2011 0:00	8:39:55 AM	45.52278	-92.37983	Red-bellied Woodpecker		1
5/29/2011 0:00	8:39:55 AM	45.52278	-92.37983	Eastern Wood Pewee		1
5/29/2011 0:00	8:39:55 AM	45.52278	-92.37983	American Crow		1
5/29/2011 0:00	8:57:15 AM	45.51953	-92.3798	Eastern Phoebe	1	
5/29/2011 0:00	8:57:15 AM	45.51953	-92.3798	American Robin	1	
5/29/2011 0:00	8:57:15 AM	45.51953	-92.3798	Red-eyed Vireo	2	
5/29/2011 0:00	8:57:15 AM	45.51953	-92.3798	Alder Flycatcher	2	
5/29/2011 0:00	8:57:15 AM	45.51953	-92.3798	Northern Cardinal	1	1
5/29/2011 0:00	8:57:15 AM	45.51953	-92.3798	American Redstart	2	
5/29/2011 0:00	8:57:15 AM	45.51953	-92.3798	Barn Swallow	2	
5/29/2011 0:00	8:57:15 AM	45.51953	-92.3798	Brown-headed Cowbird		1
5/29/2011 0:00	8:57:15 AM	45.51953	-92.3798	Baltimore Oriole		3
5/29/2011 0:00	8:57:15 AM	45.51953	-92.3798	Indigo Bunting		1

5/29/2011 0:00	8:57:15 AM	45.51953	-92.3798	Gray Catbird		1
5/29/2011 0:00	8:57:15 AM	45.51953	-92.3798	American Crow		1
5/29/2011 0:00	8:57:15 AM	45.51953	-92.3798	Pine Warbler		1
5/29/2011 0:00	8:57:15 AM	45.51953	-92.3798	Great Crested Flycatcher		1
5/29/2011 0:00	8:57:15 AM	45.51953	-92.3798	Yellow-throated Vireo		1
5/29/2011 0:00	8:57:15 AM	45.51953	-92.3798	House Wren		1
5/29/2011 0:00	8:57:15 AM	45.51953	-92.3798	Tree Swallow		3
6/2/2011 0:00	5:33:02 AM	45.50128	-92.37646	Cedar Waxwing	1	
6/2/2011 0:00	5:33:02 AM	45.50128	-92.37646	Tree Swallow	3	
6/2/2011 0:00	5:33:02 AM	45.50128	-92.37646	Barn Swallow	2	
6/2/2011 0:00	5:33:02 AM	45.50128	-92.37646	Red-bellied Woodpecker	1	
6/2/2011 0:00	5:33:02 AM	45.50128	-92.37646	Baltimore Oriole	2	3
6/2/2011 0:00	5:33:02 AM	45.50128	-92.37646	Chipping Sparrow	1	
6/2/2011 0:00	5:33:02 AM	45.50128	-92.37646	American Robin	1	
6/2/2011 0:00	5:33:02 AM	45.50128	-92.37646	American Crow	1	6
6/2/2011 0:00	5:33:02 AM	45.50128	-92.37646	Brown-headed Cowbird	1	
6/2/2011 0:00	5:33:02 AM	45.50128	-92.37646	White-breasted Nuthatch	1	
6/2/2011 0:00	5:33:02 AM	45.50128	-92.37646	House Wren	1	1
6/2/2011 0:00	5:33:02 AM	45.50128	-92.37646	Common Grackle	1	
6/2/2011 0:00	5:33:02 AM	45.50128	-92.37646	American Goldfinch	1	1
6/2/2011 0:00	5:33:02 AM	45.50128	-92.37646	Black-capped Chickadee	1	1
6/2/2011 0:00	5:33:02 AM	45.50128	-92.37646	Green Heron	1	
6/2/2011 0:00	5:33:02 AM	45.50128	-92.37646	Purple Martin	1	1
6/2/2011 0:00	5:33:02 AM	45.50128	-92.37646	Trumpeter Swan	6	
6/2/2011 0:00	5:33:02 AM	45.50128	-92.37646	Sandhill Crane		1
6/2/2011 0:00	5:33:02 AM	45.50128	-92.37646	Ring-necked Pheasant		1
6/2/2011 0:00	5:33:02 AM	45.50128	-92.37646	Yellow-bellied Sapsucker		1
6/2/2011 0:00	5:33:02 AM	45.50128	-92.37646	Blue Jay		2
6/2/2011 0:00	5:33:02 AM	45.50128	-92.37646	Downy Woodpecker		1
6/2/2011 0:00	5:48:21 AM	45.50311	-92.37323	Bald Eagle (imm)	1	
6/2/2011 0:00	5:48:21 AM	45.50311	-92.37323	Eastern Phoebe	1	
6/2/2011 0:00	5:48:21 AM	45.50311	-92.37323	Yellow-bellied Sapsucker	1	
6/2/2011 0:00	5:48:21 AM	45.50311	-92.37323	Baltimore Oriole	2	1
6/2/2011 0:00	5:48:21 AM	45.50311	-92.37323	House Wren	1	
6/2/2011 0:00	5:48:21 AM	45.50311	-92.37323	American Crow	1	
6/2/2011 0:00	5:48:21 AM	45.50311	-92.37323	European Starling	1	
6/2/2011 0:00	5:48:21 AM	45.50311	-92.37323	Northern Flicker	1	
6/2/2011 0:00	5:48:21 AM	45.50311	-92.37323	Black-capped Chickadee	1	1
6/2/2011 0:00	5:48:21 AM	45.50311	-92.37323	Red-eyed Vireo	1	
6/2/2011 0:00	5:48:21 AM	45.50311	-92.37323	Mourning Dove		1
6/2/2011 0:00	5:48:21 AM	45.50311	-92.37323	Hairy Woodpecker		1
6/2/2011 0:00	5:48:21 AM	45.50311	-92.37323	Blue Jay		2
6/2/2011 0:00	5:48:21 AM	45.50311	-92.37323	American Goldfinch		1
6/2/2011 0:00	6:02:51 AM	45.50494	-92.37205	Song Sparrow	1	
6/2/2011 0:00	6:02:51 AM	45.50494	-92.37205	Northern Rough-winged Swallow	1	
6/2/2011 0:00	6:02:51 AM	45.50494	-92.37205	Great Horned Owl	2	
6/2/2011 0:00	6:02:51 AM	45.50494	-92.37205	Brown-headed Cowbird	1	
6/2/2011 0:00	6:02:51 AM	45.50494	-92.37205	Black-capped Chickadee	1	

6/2/2011 0:00	6:02:51 AM	45.50494	-92.37205	Black-and-white Warbler	1	
6/2/2011 0:00	6:02:51 AM	45.50494	-92.37205	Chipping Sparrow	1	
6/2/2011 0:00	6:02:51 AM	45.50494	-92.37205	Red-eyed Vireo	1	
6/2/2011 0:00	6:02:51 AM	45.50494	-92.37205	Tree Swallow	1	
6/2/2011 0:00	6:02:51 AM	45.50494	-92.37205	Great Blue Heron	2	
6/2/2011 0:00	6:02:51 AM	45.50494	-92.37205	Blue Jay	2	
6/2/2011 0:00	6:02:51 AM	45.50494	-92.37205	Baltimore Oriole	2	
6/2/2011 0:00	6:02:51 AM	45.50494	-92.37205	Common Grackle	1	
6/2/2011 0:00	6:02:51 AM	45.50494	-92.37205	American Crow	1	
6/2/2011 0:00	6:02:51 AM	45.50494	-92.37205	Eastern Wood Pewee	1	
6/2/2011 0:00	6:02:51 AM	45.50494	-92.37205	Belted Kingfisher	1	
6/2/2011 0:00	6:02:51 AM	45.50494	-92.37205	House Wren		2
6/2/2011 0:00	6:27:14 AM	45.5074	-92.3747	Great Crested Flycatcher	2	
6/2/2011 0:00	6:27:14 AM	45.5074	-92.3747	American Crow	2	2
6/2/2011 0:00	6:27:14 AM	45.5074	-92.3747	Downy Woodpecker	1	
6/2/2011 0:00	6:27:14 AM	45.5074	-92.3747	Baltimore Oriole	1	2
6/2/2011 0:00	6:27:14 AM	45.5074	-92.3747	American Robin	1	
6/2/2011 0:00	6:27:14 AM	45.5074	-92.3747	American Goldfinch	1	
6/2/2011 0:00	6:27:14 AM	45.5074	-92.3747	Eastern Wood Pewee	1	
6/2/2011 0:00	6:27:14 AM	45.5074	-92.3747	Red-bellied Woodpecker	1	2
6/2/2011 0:00	6:27:14 AM	45.5074	-92.3747	Brown-headed Cowbird	1	
6/2/2011 0:00	6:27:14 AM	45.5074	-92.3747	Black-capped Chickadee	1	
6/2/2011 0:00	6:27:14 AM	45.5074	-92.3747	Red-eyed Vireo	1	
6/2/2011 0:00	6:27:14 AM	45.5074	-92.3747	Chipping Sparrow	1	
6/2/2011 0:00	6:27:14 AM	45.5074	-92.3747	Bald Eagle (Nest)	1	
6/2/2011 0:00	6:27:14 AM	45.5074	-92.3747	Belted Kingfisher	1	
6/2/2011 0:00	6:27:14 AM	45.5074	-92.3747	European Starling	1	
6/2/2011 0:00	6:27:14 AM	45.5074	-92.3747	Eastern Phoebe	1	
6/2/2011 0:00	6:27:14 AM	45.5074	-92.3747	Song Sparrow	1	
6/2/2011 0:00	6:27:14 AM	45.5074	-92.3747	Nashville Warbler	1	
6/2/2011 0:00	6:27:14 AM	45.5074	-92.3747	Trumpeter Swan	2	
6/2/2011 0:00	6:27:14 AM	45.5074	-92.3747	Tree Swallow	3	
6/2/2011 0:00	6:27:14 AM	45.5074	-92.3747	Ring-necked Pheasant		1
6/2/2011 0:00	6:43:21 AM	45.50959	-92.37746	Chipping Sparrow	1	
6/2/2011 0:00	6:43:21 AM	45.50959	-92.37746	Hairy Woodpecker	1	
6/2/2011 0:00	6:43:21 AM	45.50959	-92.37746	Red-bellied Woodpecker	1	
6/2/2011 0:00	6:43:21 AM	45.50959	-92.37746	Chestnut-sided Warbler	1	
6/2/2011 0:00	6:43:21 AM	45.50959	-92.37746	Blue Jay	1	
6/2/2011 0:00	6:43:21 AM	45.50959	-92.37746	Pine Warbler		1
6/2/2011 0:00	6:43:21 AM	45.50959	-92.37746	House Wren		1
6/2/2011 0:00	6:43:21 AM	45.50959	-92.37746	American Robin		1
6/2/2011 0:00	6:43:21 AM	45.50959	-92.37746	American Crow		2
6/2/2011 0:00	6:43:21 AM	45.50959	-92.37746	Great Crested Flycatcher		1
6/2/2011 0:00	6:56:54 AM	45.51238	-92.37902	Pine Warbler	1	1
6/2/2011 0:00	6:56:54 AM	45.51238	-92.37902	Black-capped Chickadee	1	
6/2/2011 0:00	6:56:54 AM	45.51238	-92.37902	Chipping Sparrow	2	1
6/2/2011 0:00	6:56:54 AM	45.51238	-92.37902	American Robin	3	1
6/2/2011 0:00	6:56:54 AM	45.51238	-92.37902	Baltimore Oriole	1	

6/2/2011 0:00	6:56:54 AM	45.51238	-92.37902	House Wren	1	2
6/2/2011 0:00	6:56:54 AM	45.51238	-92.37902	Eastern Phoebe	1	
6/2/2011 0:00	6:56:54 AM	45.51238	-92.37902	American Goldfinch	1	
6/2/2011 0:00	6:56:54 AM	45.51238	-92.37902	Tree Swallow	2	
6/2/2011 0:00	6:56:54 AM	45.51238	-92.37902	Great Crested Flycatcher	2	
6/2/2011 0:00	6:56:54 AM	45.51238	-92.37902	Belted Kingfisher	2	
6/2/2011 0:00	6:56:54 AM	45.51238	-92.37902	Barn Swallow	2	
6/2/2011 0:00	6:56:54 AM	45.51238	-92.37902	Hooded Merganser	1	
6/2/2011 0:00	6:56:54 AM	45.51238	-92.37902	Canada Goose	*35*	
6/2/2011 0:00	6:56:54 AM	45.51238	-92.37902	Mallard		2
6/2/2011 0:00	6:56:54 AM	45.51238	-92.37902	Song Sparrow		1
6/2/2011 0:00	6:56:54 AM	45.51238	-92.37902	Red-eyed Vireo		1
6/2/2011 0:00	6:56:54 AM	45.51238	-92.37902	Blue Jay		1
6/2/2011 0:00	6:56:54 AM	45.51238	-92.37902	Yellow-throated Vireo		1
6/2/2011 0:00	6:56:54 AM	45.51238	-92.37902	American Crow		1
6/2/2011 0:00	7:14:17 AM	45.51597	-92.37888	Barn Swallow	3	2
6/2/2011 0:00	7:14:17 AM	45.51597	-92.37888	Great Crested Flycatcher	1	1
6/2/2011 0:00	7:14:17 AM	45.51597	-92.37888	Red-eyed Vireo	2	
6/2/2011 0:00	7:14:17 AM	45.51597	-92.37888	American Robin	2	1
6/2/2011 0:00	7:14:17 AM	45.51597	-92.37888	American Crow	1	
6/2/2011 0:00	7:14:17 AM	45.51597	-92.37888	Pine Warbler	1	
6/2/2011 0:00	7:14:17 AM	45.51597	-92.37888	Song Sparrow	1	
6/2/2011 0:00	7:14:17 AM	45.51597	-92.37888	House Wren	1	1
6/2/2011 0:00	7:14:17 AM	45.51597	-92.37888	Tree Swallow	1	2
6/2/2011 0:00	7:14:17 AM	45.51597	-92.37888	Chipping Sparrow		1
6/2/2011 0:00	7:14:17 AM	45.51597	-92.37888	Northern Cardinal		1
6/2/2011 0:00	7:14:17 AM	45.51597	-92.37888	Blue Jay		1
6/2/2011 0:00	7:14:17 AM	45.51597	-92.37888	Canada Goose	*17*	
6/6/2011 0:00	5:19:19 AM	45.5641	-92.39743	Northern Cardinal	1	
6/6/2011 0:00	5:19:19 AM	45.5641	-92.39743	Black-capped Chickadee	2	
6/6/2011 0:00	5:19:19 AM	45.5641	-92.39743	Purple Martin	4	
6/6/2011 0:00	5:19:19 AM	45.5641	-92.39743	Bald Eagle (adult)	1	
6/6/2011 0:00	5:19:19 AM	45.5641	-92.39743	American Robin	1	4
6/6/2011 0:00	5:19:19 AM	45.5641	-92.39743	Eastern Phoebe	1	1
6/6/2011 0:00	5:19:19 AM	45.5641	-92.39743	Bald Eagle (imm)	1	
6/6/2011 0:00	5:19:19 AM	45.5641	-92.39743	Cedar Waxwing	2	
6/6/2011 0:00	5:19:19 AM	45.5641	-92.39743	Bald Eagle (adult)	1	
6/6/2011 0:00	5:19:19 AM	45.5641	-92.39743	Tree Swallow	1	
6/6/2011 0:00	5:19:19 AM	45.5641	-92.39743	Common Grackle	1	
6/6/2011 0:00	5:19:19 AM	45.5641	-92.39743	Common Loon	2	1
6/6/2011 0:00	5:19:19 AM	45.5641	-92.39743	Chipping Sparrow		1
6/6/2011 0:00	5:19:19 AM	45.5641	-92.39743	American Crow		4
6/6/2011 0:00	5:19:19 AM	45.5641	-92.39743	Common Yellowthroat		2
6/6/2011 0:00	5:19:19 AM	45.5641	-92.39743	Eastern Kingbird		1
6/6/2011 0:00	5:19:19 AM	45.5641	-92.39743	Wild Turkey		1
6/6/2011 0:00	5:19:19 AM	45.5641	-92.39743	Mourning Dove		3
6/6/2011 0:00	5:19:19 AM	45.5641	-92.39743	Song Sparrow		2
6/6/2011 0:00	5:19:19 AM	45.5641	-92.39743	Veery		1

6/6/2011 0:00	5:19:19 AM	45.5641	-92.39743	Sandhill Crane	*2*	
6/6/2011 0:00	5:19:19 AM	45.5641	-92.39743	Yellow Warbler		1
6/6/2011 0:00	5:19:19 AM	45.5641	-92.39743	Canada Goose		11
6/6/2011 0:00	5:19:19 AM	45.5641	-92.39743	Red-winged Blackbird		1
6/6/2011 0:00	5:33:30 AM	45.56666	-92.39945	Mourning Dove	2	1
6/6/2011 0:00	5:33:30 AM	45.56666	-92.39945	Yellow Warbler	1	2
6/6/2011 0:00	5:33:30 AM	45.56666	-92.39945	Red-winged Blackbird	4	
6/6/2011 0:00	5:33:30 AM	45.56666	-92.39945	Song Sparrow	3	2
6/6/2011 0:00	5:33:30 AM	45.56666	-92.39945	Common Yellowthroat	1	
6/6/2011 0:00	5:33:30 AM	45.56666	-92.39945	American Robin	2	
6/6/2011 0:00	5:33:30 AM	45.56666	-92.39945	Purple Martin	11	
6/6/2011 0:00	5:33:30 AM	45.56666	-92.39945	Cedar Waxwing	3	
6/6/2011 0:00	5:33:30 AM	45.56666	-92.39945	Common Grackle	1	
6/6/2011 0:00	5:33:30 AM	45.56666	-92.39945	Chipping Sparrow	1	
6/6/2011 0:00	5:33:30 AM	45.56666	-92.39945	Gray Catbird	1	
6/6/2011 0:00	5:33:30 AM	45.56666	-92.39945	Baltimore Oriole	1	
6/6/2011 0:00	5:33:30 AM	45.56666	-92.39945	House Wren	1	1
6/6/2011 0:00	5:33:30 AM	45.56666	-92.39945	Tree Swallow	2	
6/6/2011 0:00	5:33:30 AM	45.56666	-92.39945	Green Heron	1	
6/6/2011 0:00	5:33:30 AM	45.56666	-92.39945	Hooded Merganser	1	
6/6/2011 0:00	5:33:30 AM	45.56666	-92.39945	Barn Swallow	2	
6/6/2011 0:00	5:33:30 AM	45.56666	-92.39945	House Sparrow	1	
6/6/2011 0:00	5:33:30 AM	45.56666	-92.39945	Eastern Phoebe		1
6/6/2011 0:00	5:33:30 AM	45.56666	-92.39945	Rock Pigeon	4	
6/6/2011 0:00	5:33:30 AM	45.56666	-92.39945	Eastern Wood Pewee		1
6/6/2011 0:00	5:33:30 AM	45.56666	-92.39945	American Crow		1
6/6/2011 0:00	5:33:30 AM	45.56666	-92.39945	Canada Goose	*20*	
6/6/2011 0:00	5:33:30 AM	45.56666	-92.39945	Sandhill Crane		1
6/6/2011 0:00	5:50:27 AM	45.56545	-92.40353	Cedar Waxwing	1	
6/6/2011 0:00	5:50:27 AM	45.56545	-92.40353	Yellow Warbler	4	1
6/6/2011 0:00	5:50:27 AM	45.56545	-92.40353	Red-eyed Vireo	1	
6/6/2011 0:00	5:50:27 AM	45.56545	-92.40353	Common Yellowthroat	2	1
6/6/2011 0:00	5:50:27 AM	45.56545	-92.40353	Great Blue Heron	3	2
6/6/2011 0:00	5:50:27 AM	45.56545	-92.40353	Red-winged Blackbird	3	
6/6/2011 0:00	5:50:27 AM	45.56545	-92.40353	Alder Flycatcher	3	
6/6/2011 0:00	5:50:27 AM	45.56545	-92.40353	Ruffed Grouse	1	
6/6/2011 0:00	5:50:27 AM	45.56545	-92.40353	Veery	2	
6/6/2011 0:00	5:50:27 AM	45.56545	-92.40353	Golden-winged Warbler	1	
6/6/2011 0:00	5:50:27 AM	45.56545	-92.40353	Common Raven	3	
6/6/2011 0:00	5:50:27 AM	45.56545	-92.40353	Hairy Woodpecker	1	
6/6/2011 0:00	5:50:27 AM	45.56545	-92.40353	Purple Martin	1	
6/6/2011 0:00	5:50:27 AM	45.56545	-92.40353	Tree Swallow	2	
6/6/2011 0:00	5:50:27 AM	45.56545	-92.40353	Sandhill Crane	2	
6/6/2011 0:00	5:50:27 AM	45.56545	-92.40353	Eastern Kingbird	1	
6/6/2011 0:00	5:50:27 AM	45.56545	-92.40353	Swamp Sparrow	1	
6/6/2011 0:00	5:50:27 AM	45.56545	-92.40353	Warbling Vireo	1	
6/6/2011 0:00	5:50:27 AM	45.56545	-92.40353	Green Heron	1	
6/6/2011 0:00	5:50:27 AM	45.56545	-92.40353	Pileated Woodpecker		1

6/6/2011 0:00	5:50:27 AM	45.56545	-92.40353	Red-shouldered Hawk		1
6/6/2011 0:00	5:50:27 AM	45.56545	-92.40353	Black-and-white Warbler		1
6/6/2011 0:00	5:50:27 AM	45.56545	-92.40353	Mourning Dove		2
6/6/2011 0:00	5:50:27 AM	45.56545	-92.40353	Rock Pigeon		1
6/6/2011 0:00	5:50:27 AM	45.56545	-92.40353	Wild Turkey		1
6/6/2011 0:00	5:50:27 AM	45.56545	-92.40353	Bald Eagle (imm)		1
6/6/2011 0:00	5:50:27 AM	45.56545	-92.40353	American Crow		2
6/6/2011 0:00	5:50:27 AM	45.56545	-92.40353	Song Sparrow		1
6/6/2011 0:00	6:09:45 AM	45.56262	-92.40313	Mourning Dove	1	
6/6/2011 0:00	6:09:45 AM	45.56262	-92.40313	Warbling Vireo	1	1
6/6/2011 0:00	6:09:45 AM	45.56262	-92.40313	Red-winged Blackbird	2	
6/6/2011 0:00	6:09:45 AM	45.56262	-92.40313	Common Yellowthroat	2	
6/6/2011 0:00	6:09:45 AM	45.56262	-92.40313	Great Crested Flycatcher	1	
6/6/2011 0:00	6:09:45 AM	45.56262	-92.40313	Song Sparrow	1	3
6/6/2011 0:00	6:09:45 AM	45.56262	-92.40313	Brown-headed Cowbird	1	
6/6/2011 0:00	6:09:45 AM	45.56262	-92.40313	Veery	1	1
6/6/2011 0:00	6:09:45 AM	45.56262	-92.40313	Golden-winged Warbler	1	1
6/6/2011 0:00	6:09:45 AM	45.56262	-92.40313	Barn Swallow	3	
6/6/2011 0:00	6:09:45 AM	45.56262	-92.40313	Hooded Merganser	1	
6/6/2011 0:00	6:09:45 AM	45.56262	-92.40313	American Redstart	1	1
6/6/2011 0:00	6:09:45 AM	45.56262	-92.40313	Rose-breasted Grosbeak	1	
6/6/2011 0:00	6:09:45 AM	45.56262	-92.40313	Swamp Sparrow	1	
6/6/2011 0:00	6:09:45 AM	45.56262	-92.40313	Yellow Warbler	1	1
6/6/2011 0:00	6:09:45 AM	45.56262	-92.40313	Alder Flycatcher	1	
6/6/2011 0:00	6:09:45 AM	45.56262	-92.40313	Great Blue Heron	3	
6/6/2011 0:00	6:09:45 AM	45.56262	-92.40313	American Crow		1
6/6/2011 0:00	6:09:45 AM	45.56262	-92.40313	Common Raven		1
6/6/2011 0:00	6:09:45 AM	45.56262	-92.40313	Wild Turkey		1
6/6/2011 0:00	6:09:45 AM	45.56262	-92.40313	Blue Jay		2
6/6/2011 0:00	6:09:45 AM	45.56262	-92.40313	Purple Martin		1
6/6/2011 0:00	6:09:45 AM	45.56262	-92.40313	Red-bellied Woodpecker		1
6/6/2011 0:00	6:25:13 AM	45.56063	-92.40044	Wood Duck	1	
6/6/2011 0:00	6:25:13 AM	45.56063	-92.40044	Barn Swallow	1	
6/6/2011 0:00	6:25:13 AM	45.56063	-92.40044	American Goldfinch	2	
6/6/2011 0:00	6:25:13 AM	45.56063	-92.40044	Song Sparrow	1	1
6/6/2011 0:00	6:25:13 AM	45.56063	-92.40044	Chipping Sparrow	1	1
6/6/2011 0:00	6:25:13 AM	45.56063	-92.40044	Baltimore Oriole	1	
6/6/2011 0:00	6:25:13 AM	45.56063	-92.40044	White-breasted Nuthatch	1	
6/6/2011 0:00	6:25:13 AM	45.56063	-92.40044	Red-winged Blackbird	4	3
6/6/2011 0:00	6:25:13 AM	45.56063	-92.40044	Eastern Phoebe	1	
6/6/2011 0:00	6:25:13 AM	45.56063	-92.40044	Blue Jay	1	
6/6/2011 0:00	6:25:13 AM	45.56063	-92.40044	American Robin	1	
6/6/2011 0:00	6:25:13 AM	45.56063	-92.40044	Purple Martin	2	
6/6/2011 0:00	6:25:13 AM	45.56063	-92.40044	Eastern Kingbird	1	
6/6/2011 0:00	6:25:13 AM	45.56063	-92.40044	Green Heron	1	
6/6/2011 0:00	6:25:13 AM	45.56063	-92.40044	European Starling	1	
6/6/2011 0:00	6:25:13 AM	45.56063	-92.40044	Warbling Vireo		1
6/6/2011 0:00	6:25:13 AM	45.56063	-92.40044	Rock Pigeon		1

6/6/2011 0:00	6:25:13 AM	45.56063	-92.40044	Yellow Warbler		1
6/6/2011 0:00	6:25:13 AM	45.56063	-92.40044	Alder Flycatcher		1
6/6/2011 0:00	6:25:13 AM	45.56063	-92.40044	Common Yellowthroat		1
6/6/2011 0:00	6:25:13 AM	45.56063	-92.40044	Swamp Sparrow		1
6/6/2011 0:00	6:25:13 AM	45.56063	-92.40044	Veery		1
6/6/2011 0:00	6:40:51 AM	45.55804	-92.39915	White-breasted Nuthatch	1	1
6/6/2011 0:00	6:40:51 AM	45.55804	-92.39915	House Wren	1	1
6/6/2011 0:00	6:40:51 AM	45.55804	-92.39915	Mourning Dove	1	1
6/6/2011 0:00	6:40:51 AM	45.55804	-92.39915	Red-eyed Vireo	1	1
6/6/2011 0:00	6:40:51 AM	45.55804	-92.39915	Eastern Phoebe	1	
6/6/2011 0:00	6:40:51 AM	45.55804	-92.39915	Black-capped Chickadee	1	
6/6/2011 0:00	6:40:51 AM	45.55804	-92.39915	Green Heron	2	
6/6/2011 0:00	6:40:51 AM	45.55804	-92.39915	Barn Swallow	2	
6/6/2011 0:00	6:40:51 AM	45.55804	-92.39915	Belted Kingfisher	1	
6/6/2011 0:00	6:40:51 AM	45.55804	-92.39915	American Crow		2
6/6/2011 0:00	6:40:51 AM	45.55804	-92.39915	American Robin		1
6/6/2011 0:00	6:40:51 AM	45.55804	-92.39915	Blue Jay		1
6/6/2011 0:00	6:40:51 AM	45.55804	-92.39915	Chipping Sparrow		1
6/6/2011 0:00	6:40:51 AM	45.55804	-92.39915	Red-winged Blackbird		1
6/6/2011 0:00	6:40:51 AM	45.55804	-92.39915	Great Crested Flycatcher		1
6/6/2011 0:00	6:56:36 AM	45.55527	-92.39931	Chimney Swift	2	
6/6/2011 0:00	6:56:36 AM	45.55527	-92.39931	House Wren	2	1
6/6/2011 0:00	6:56:36 AM	45.55527	-92.39931	Great Crested Flycatcher	1	1
6/6/2011 0:00	6:56:36 AM	45.55527	-92.39931	Red-bellied Woodpecker	1	1
6/6/2011 0:00	6:56:36 AM	45.55527	-92.39931	Eastern Phoebe	2	
6/6/2011 0:00	6:56:36 AM	45.55527	-92.39931	Red-eyed Vireo	1	1
6/6/2011 0:00	6:56:36 AM	45.55527	-92.39931	Cedar Waxwing	1	
6/6/2011 0:00	6:56:36 AM	45.55527	-92.39931	Barn Swallow	1	
6/6/2011 0:00	6:56:36 AM	45.55527	-92.39931	Common Raven		1
6/6/2011 0:00	6:56:36 AM	45.55527	-92.39931	Pileated Woodpecker		1
6/6/2011 0:00	6:56:36 AM	45.55527	-92.39931	Chestnut-sided Warbler		1
6/6/2011 0:00	6:56:36 AM	45.55527	-92.39931	American Crow		1
6/6/2011 0:00	6:56:36 AM	45.55527	-92.39931	American Redstart		1
6/6/2011 0:00	6:56:36 AM	45.55527	-92.39931	Great Blue Heron		2
6/6/2011 0:00	7:09:10 AM	45.55237	-92.39923	Pine Warbler	1	
6/6/2011 0:00	7:09:10 AM	45.55237	-92.39923	American Crow	2	4
6/6/2011 0:00	7:09:10 AM	45.55237	-92.39923	Eastern Phoebe	1	1
6/6/2011 0:00	7:09:10 AM	45.55237	-92.39923	Red-eyed Vireo	1	1
6/6/2011 0:00	7:09:10 AM	45.55237	-92.39923	Great Crested Flycatcher	1	1
6/6/2011 0:00	7:09:10 AM	45.55237	-92.39923	White-breasted Nuthatch	1	1
6/6/2011 0:00	7:09:10 AM	45.55237	-92.39923	Red-bellied Woodpecker	1	
6/6/2011 0:00	7:09:10 AM	45.55237	-92.39923	Cedar Waxwing	2	
6/6/2011 0:00	7:09:10 AM	45.55237	-92.39923	House Wren	1	3
6/6/2011 0:00	7:09:10 AM	45.55237	-92.39923	Canada Goose	1	
6/6/2011 0:00	7:09:10 AM	45.55237	-92.39923	Warbling Vireo		1
6/6/2011 0:00	7:09:10 AM	45.55237	-92.39923	American Robin		1
6/6/2011 0:00	7:09:10 AM	45.55237	-92.39923	Rose-breasted Grosbeak		1
6/6/2011 0:00	7:09:10 AM	45.55237	-92.39923	Blue Jay		1

6/6/2011 0:00	7:09:10 AM	45.55237	-92.39923	Eastern Wood Pewee			1
6/6/2011 0:00	7:25:49 AM	45.55005	-92.39702	Baltimore Oriole	2		
6/6/2011 0:00	7:25:49 AM	45.55005	-92.39702	American Robin	1		
6/6/2011 0:00	7:25:49 AM	45.55005	-92.39702	Red-bellied Woodpecker	1		1
6/6/2011 0:00	7:25:49 AM	45.55005	-92.39702	Common Yellowthroat	1		
6/6/2011 0:00	7:25:49 AM	45.55005	-92.39702	Chipping Sparrow	2		
6/6/2011 0:00	7:25:49 AM	45.55005	-92.39702	American Redstart	1		
6/6/2011 0:00	7:25:49 AM	45.55005	-92.39702	Downy Woodpecker	1		
6/6/2011 0:00	7:25:49 AM	45.55005	-92.39702	Eastern Bluebird	2		
6/6/2011 0:00	7:25:49 AM	45.55005	-92.39702	Barn Swallow	3		
6/6/2011 0:00	7:25:49 AM	45.55005	-92.39702	Canada Goose		*9*	
6/6/2011 0:00	7:25:49 AM	45.55005	-92.39702	Common Loon	1		
6/6/2011 0:00	7:25:49 AM	45.55005	-92.39702	Eastern Phoebe			1
6/6/2011 0:00	7:25:49 AM	45.55005	-92.39702	House Wren			3
6/6/2011 0:00	7:25:49 AM	45.55005	-92.39702	American Crow			1
6/6/2011 0:00	7:25:49 AM	45.55005	-92.39702	Mourning Dove			1
6/6/2011 0:00	7:25:49 AM	45.55005	-92.39702	Blue Jay			1
6/6/2011 0:00	7:25:49 AM	45.55005	-92.39702	Song Sparrow			1
6/6/2011 0:00	7:25:49 AM	45.55005	-92.39702	Yellow Warbler			1
6/6/2011 0:00	7:25:49 AM	45.55005	-92.39702	Great Crested Flycatcher			1
6/6/2011 0:00	7:25:49 AM	45.55005	-92.39702	Bald Eagle (imm)			1
6/6/2011 0:00	7:25:49 AM	45.55005	-92.39702	Northern Flicker			1
6/6/2011 0:00	7:44:26 AM	45.54807	-92.39334	House Wren	2		1
6/6/2011 0:00	7:44:26 AM	45.54807	-92.39334	Common Grackle	1		1
6/6/2011 0:00	7:44:26 AM	45.54807	-92.39334	American Robin	1		1
6/6/2011 0:00	7:44:26 AM	45.54807	-92.39334	Eastern Kingbird	1		
6/6/2011 0:00	7:44:26 AM	45.54807	-92.39334	Mourning Dove	1		
6/6/2011 0:00	7:44:26 AM	45.54807	-92.39334	Baltimore Oriole	2		
6/6/2011 0:00	7:44:26 AM	45.54807	-92.39334	Black-capped Chickadee	1		1
6/6/2011 0:00	7:44:26 AM	45.54807	-92.39334	Blue Jay	1		1
6/6/2011 0:00	7:44:26 AM	45.54807	-92.39334	Chipping Sparrow	2		
6/6/2011 0:00	7:44:26 AM	45.54807	-92.39334	Eastern Phoebe	1		1
6/6/2011 0:00	7:44:26 AM	45.54807	-92.39334	Eastern Bluebird	1		
6/6/2011 0:00	7:44:26 AM	45.54807	-92.39334	American Crow	1		
6/6/2011 0:00	7:44:26 AM	45.54807	-92.39334	Cedar Waxwing	1		
6/6/2011 0:00	7:44:26 AM	45.54807	-92.39334	Red-eyed Vireo	2		
6/6/2011 0:00	7:44:26 AM	45.54807	-92.39334	White-breasted Nuthatch	1		1
6/6/2011 0:00	7:44:26 AM	45.54807	-92.39334	Great Blue Heron	1		
6/6/2011 0:00	7:44:26 AM	45.54807	-92.39334	Barn Swallow	3		
6/6/2011 0:00	7:44:26 AM	45.54807	-92.39334	Tree Swallow	2		
6/6/2011 0:00	7:44:26 AM	45.54807	-92.39334	Great Crested Flycatcher			1
6/6/2011 0:00	7:44:26 AM	45.54807	-92.39334	Red-bellied Woodpecker			1
6/6/2011 0:00	7:44:26 AM	45.54807	-92.39334	Song Sparrow			1
6/6/2011 0:00	7:44:26 AM	45.54807	-92.39334	Canada Goose		*42*	
6/6/2011 0:00	7:59:54 AM	45.54522	-92.39399	Black-capped Chickadee	1		
6/6/2011 0:00	7:59:54 AM	45.54522	-92.39399	American Goldfinch	1		
6/6/2011 0:00	7:59:54 AM	45.54522	-92.39399	Chipping Sparrow	1		1
6/6/2011 0:00	7:59:54 AM	45.54522	-92.39399	Baltimore Oriole	1		2

6/6/2011 0:00	7:59:54 AM	45.54522	-92.39399	Song Sparrow	1	
6/6/2011 0:00	7:59:54 AM	45.54522	-92.39399	Blue Jay	1	1
6/6/2011 0:00	7:59:54 AM	45.54522	-92.39399	Common Grackle	4	
6/6/2011 0:00	7:59:54 AM	45.54522	-92.39399	House Wren	1	1
6/6/2011 0:00	7:59:54 AM	45.54522	-92.39399	Green Heron	1	
6/6/2011 0:00	7:59:54 AM	45.54522	-92.39399	Eastern Phoebe	1	1
6/6/2011 0:00	7:59:54 AM	45.54522	-92.39399	Cedar Waxwing	2	
6/6/2011 0:00	7:59:54 AM	45.54522	-92.39399	American Robin	1	2
6/6/2011 0:00	7:59:54 AM	45.54522	-92.39399	Warbling Vireo	1	
6/6/2011 0:00	7:59:54 AM	45.54522	-92.39399	Barn Swallow	3	
6/6/2011 0:00	7:59:54 AM	45.54522	-92.39399	Tree Swallow	1	
6/6/2011 0:00	7:59:54 AM	45.54522	-92.39399	American Crow		3
6/6/2011 0:00	7:59:54 AM	45.54522	-92.39399	Chimney Swift		1
6/6/2011 0:00	7:59:54 AM	45.54522	-92.39399	European Starling		1
6/6/2011 0:00	7:59:54 AM	45.54522	-92.39399	Red-bellied Woodpecker		1
6/6/2011 0:00	8:17:12 AM	45.54243	-92.39497	Warbling Vireo	1	
6/6/2011 0:00	8:17:12 AM	45.54243	-92.39497	Baltimore Oriole	1	1
6/6/2011 0:00	8:17:12 AM	45.54243	-92.39497	Barn Swallow	3	
6/6/2011 0:00	8:17:12 AM	45.54243	-92.39497	European Starling	2	
6/6/2011 0:00	8:17:12 AM	45.54243	-92.39497	Eastern Phoebe	1	
6/6/2011 0:00	8:17:12 AM	45.54243	-92.39497	American Robin	1	1
6/6/2011 0:00	8:17:12 AM	45.54243	-92.39497	House Wren	1	2
6/6/2011 0:00	8:17:12 AM	45.54243	-92.39497	Pine Warbler	1	
6/6/2011 0:00	8:17:12 AM	45.54243	-92.39497	Song Sparrow	1	
6/6/2011 0:00	8:17:12 AM	45.54243	-92.39497	Chipping Sparrow	1	
6/6/2011 0:00	8:17:12 AM	45.54243	-92.39497	Purple Martin	3	
6/6/2011 0:00	8:17:12 AM	45.54243	-92.39497	Chimney Swift	2	
6/6/2011 0:00	8:17:12 AM	45.54243	-92.39497	Tree Swallow	1	
6/6/2011 0:00	8:17:12 AM	45.54243	-92.39497	Chestnut-sided Warbler		1
6/6/2011 0:00	8:17:12 AM	45.54243	-92.39497	Black-capped Chickadee		2
6/6/2011 0:00	8:17:12 AM	45.54243	-92.39497	Canada Goose		1
6/6/2011 0:00	8:32:45 AM	45.54025	-92.39797	Red-winged Blackbird	1	
6/6/2011 0:00	8:32:45 AM	45.54025	-92.39797	Baltimore Oriole	2	
6/6/2011 0:00	8:32:45 AM	45.54025	-92.39797	Song Sparrow	1	1
6/6/2011 0:00	8:32:45 AM	45.54025	-92.39797	American Goldfinch	2	
6/6/2011 0:00	8:32:45 AM	45.54025	-92.39797	Black-capped Chickadee	1	
6/6/2011 0:00	8:32:45 AM	45.54025	-92.39797	Yellow Warbler	1	1
6/6/2011 0:00	8:32:45 AM	45.54025	-92.39797	Eastern Phoebe	1	1
6/6/2011 0:00	8:32:45 AM	45.54025	-92.39797	Gray Catbird	1	
6/6/2011 0:00	8:32:45 AM	45.54025	-92.39797	Brown-headed Cowbird	1	
6/6/2011 0:00	8:32:45 AM	45.54025	-92.39797	Chipping Sparrow	1	
6/6/2011 0:00	8:32:45 AM	45.54025	-92.39797	European Starling	1	
6/6/2011 0:00	8:32:45 AM	45.54025	-92.39797	Cedar Waxwing	2	
6/6/2011 0:00	8:32:45 AM	45.54025	-92.39797	Warbling Vireo	1	1
6/6/2011 0:00	8:32:45 AM	45.54025	-92.39797	Barn Swallow	2	
6/6/2011 0:00	8:32:45 AM	45.54025	-92.39797	Purple Martin	1	
6/6/2011 0:00	8:32:45 AM	45.54025	-92.39797	Green Heron	1	
6/6/2011 0:00	8:32:45 AM	45.54025	-92.39797	Red-eyed Vireo		1

6/6/2011 0:00	8:32:45 AM	45.54025	-92.39797	Canada Goose	*58*	
6/6/2011 0:00	8:46:26 AM	45.53761	-92.39949	Baltimore Oriole	2	
6/6/2011 0:00	8:46:26 AM	45.53761	-92.39949	Brown-headed Cowbird	1	
6/6/2011 0:00	8:46:26 AM	45.53761	-92.39949	Yellow Warbler	1	
6/6/2011 0:00	8:46:26 AM	45.53761	-92.39949	Blue Jay	1	
6/6/2011 0:00	8:46:26 AM	45.53761	-92.39949	Red-eyed Vireo	1	1
6/6/2011 0:00	8:46:26 AM	45.53761	-92.39949	Hairy Woodpecker	1	
6/6/2011 0:00	8:46:26 AM	45.53761	-92.39949	Eastern Kingbird	1	
6/6/2011 0:00	8:46:26 AM	45.53761	-92.39949	Northern Cardinal	1	1
6/6/2011 0:00	8:46:26 AM	45.53761	-92.39949	Song Sparrow	1	2
6/6/2011 0:00	8:46:26 AM	45.53761	-92.39949	Common Grackle	1	
6/6/2011 0:00	8:46:26 AM	45.53761	-92.39949	American Redstart	1	1
6/6/2011 0:00	8:46:26 AM	45.53761	-92.39949	American Goldfinch	2	
6/6/2011 0:00	8:46:26 AM	45.53761	-92.39949	Cedar Waxwing	1	
6/6/2011 0:00	8:46:26 AM	45.53761	-92.39949	Mallard	2	
6/6/2011 0:00	8:46:26 AM	45.53761	-92.39949	Barn Swallow	1	1
6/6/2011 0:00	8:46:26 AM	45.53761	-92.39949	Tree Swallow	3	
6/6/2011 0:00	8:46:26 AM	45.53761	-92.39949	Mourning Dove		1
6/6/2011 0:00	8:46:26 AM	45.53761	-92.39949	American Crow		6
6/6/2011 0:00	8:46:26 AM	45.53761	-92.39949	Great Crested Flycatcher		1
6/6/2011 0:00	8:46:26 AM	45.53761	-92.39949	Warbling Vireo		1
6/6/2011 0:00	8:46:26 AM	45.53761	-92.39949	House Wren		1
6/6/2011 0:00	8:46:26 AM	45.53761	-92.39949	Red-bellied Woodpecker		1
6/6/2011 0:00	8:46:26 AM	45.53761	-92.39949	Chimney Swift		1
6/6/2011 0:00	9:01:10 AM	45.53484	-92.40074	Eastern Phoebe	1	1
6/6/2011 0:00	9:01:10 AM	45.53484	-92.40074	Common Yellowthroat	1	1
6/6/2011 0:00	9:01:10 AM	45.53484	-92.40074	Rose-breasted Grosbeak	1	
6/6/2011 0:00	9:01:10 AM	45.53484	-92.40074	Ruby-throated Hummingbird	1	
6/6/2011 0:00	9:01:10 AM	45.53484	-92.40074	Yellow Warbler	1	2
6/6/2011 0:00	9:01:10 AM	45.53484	-92.40074	Baltimore Oriole	1	1
6/6/2011 0:00	9:01:10 AM	45.53484	-92.40074	American Redstart	1	1
6/6/2011 0:00	9:01:10 AM	45.53484	-92.40074	American Goldfinch	1	
6/6/2011 0:00	9:01:10 AM	45.53484	-92.40074	Gray Catbird	1	
6/6/2011 0:00	9:01:10 AM	45.53484	-92.40074	Tree Swallow	1	
6/6/2011 0:00	9:01:10 AM	45.53484	-92.40074	Song Sparrow	1	2
6/6/2011 0:00	9:01:10 AM	45.53484	-92.40074	Great Crested Flycatcher	1	1
6/6/2011 0:00	9:01:10 AM	45.53484	-92.40074	Yellow-bellied Sapsucker	1	
6/6/2011 0:00	9:01:10 AM	45.53484	-92.40074	Yellow-throated Vireo		1
6/6/2011 0:00	9:01:10 AM	45.53484	-92.40074	Chipping Sparrow		1
6/6/2011 0:00	9:16:18 AM	45.53185	-92.40107	Song Sparrow	1	1
6/6/2011 0:00	9:16:18 AM	45.53185	-92.40107	American Goldfinch	1	
6/6/2011 0:00	9:16:18 AM	45.53185	-92.40107	American Robin	1	1
6/6/2011 0:00	9:16:18 AM	45.53185	-92.40107	Eastern Wood Pewee	1	
6/6/2011 0:00	9:16:18 AM	45.53185	-92.40107	Downy Woodpecker	1	
6/6/2011 0:00	9:16:18 AM	45.53185	-92.40107	Yellow-throated Vireo	1	
6/6/2011 0:00	9:16:18 AM	45.53185	-92.40107	Red-eyed Vireo	1	1
6/6/2011 0:00	9:16:18 AM	45.53185	-92.40107	Baltimore Oriole	1	
6/6/2011 0:00	9:16:18 AM	45.53185	-92.40107	American Redstart	1	

6/6/2011 0:00	9:16:18 AM	45.53185	-92.40107	Purple Martin	8	
6/6/2011 0:00	9:16:18 AM	45.53185	-92.40107	Yellow Warbler		3
6/6/2011 0:00	9:16:18 AM	45.53185	-92.40107	Chestnut-sided Warbler		1
6/6/2011 0:00	9:16:18 AM	45.53185	-92.40107	Red-bellied Woodpecker		1
6/6/2011 0:00	9:16:18 AM	45.53185	-92.40107	Rose-breasted Grosbeak		1
6/6/2011 0:00	9:16:18 AM	45.53185	-92.40107	Indigo Bunting		1
6/6/2011 0:00	9:16:18 AM	45.53185	-92.40107	Common Yellowthroat		1
6/6/2011 0:00	9:31:26 AM	45.5292	-92.40019	Yellow Warbler	3	
6/6/2011 0:00	9:31:26 AM	45.5292	-92.40019	Song Sparrow	1	1
6/6/2011 0:00	9:31:26 AM	45.5292	-92.40019	Red-winged Blackbird	2	
6/6/2011 0:00	9:31:26 AM	45.5292	-92.40019	Eastern Phoebe	1	1
6/6/2011 0:00	9:31:26 AM	45.5292	-92.40019	Common Yellowthroat	2	1
6/6/2011 0:00	9:31:26 AM	45.5292	-92.40019	European Starling	1	
6/6/2011 0:00	9:31:26 AM	45.5292	-92.40019	American Robin	1	
6/6/2011 0:00	9:31:26 AM	45.5292	-92.40019	White-breasted Nuthatch	1	
6/6/2011 0:00	9:31:26 AM	45.5292	-92.40019	Indigo Bunting	1	
6/6/2011 0:00	9:31:26 AM	45.5292	-92.40019	Baltimore Oriole	1	
6/6/2011 0:00	9:31:26 AM	45.5292	-92.40019	Veery	1	1
6/6/2011 0:00	9:31:26 AM	45.5292	-92.40019	Northern Cardinal	1	
6/6/2011 0:00	9:31:26 AM	45.5292	-92.40019	American Goldfinch	1	
6/6/2011 0:00	9:31:26 AM	45.5292	-92.40019	Common Grackle	2	
6/6/2011 0:00	9:31:26 AM	45.5292	-92.40019	Barn Swallow	1	
6/6/2011 0:00	9:31:26 AM	45.5292	-92.40019	Tree Swallow	1	
6/6/2011 0:00	9:31:26 AM	45.5292	-92.40019	Purple Martin	2	1
6/6/2011 0:00	9:31:26 AM	45.5292	-92.40019	House Wren		2
6/6/2011 0:00	9:31:26 AM	45.5292	-92.40019	Red-bellied Woodpecker		2
6/6/2011 0:00	9:31:26 AM	45.5292	-92.40019	Red-eyed Vireo		2
6/6/2011 0:00	9:48:17 AM	45.52648	-92.39729	Warbling Vireo	3	
6/6/2011 0:00	9:48:17 AM	45.52648	-92.39729	Mourning Dove	1	
6/6/2011 0:00	9:48:17 AM	45.52648	-92.39729	Eastern Wood Pewee	1	
6/6/2011 0:00	9:48:17 AM	45.52648	-92.39729	Chipping Sparrow	1	
6/6/2011 0:00	9:48:17 AM	45.52648	-92.39729	Tree Swallow	1	
6/6/2011 0:00	9:48:17 AM	45.52648	-92.39729	White-breasted Nuthatch	1	
6/6/2011 0:00	9:48:17 AM	45.52648	-92.39729	Baltimore Oriole	1	
6/6/2011 0:00	9:48:17 AM	45.52648	-92.39729	House Wren	1	
6/6/2011 0:00	9:48:17 AM	45.52648	-92.39729	Yellow-throated Vireo	1	
6/6/2011 0:00	9:48:17 AM	45.52648	-92.39729	Eastern Phoebe	1	
6/6/2011 0:00	9:48:17 AM	45.52648	-92.39729	Ruby-throated Hummingbird	3	
6/6/2011 0:00	9:48:17 AM	45.52648	-92.39729	Red-winged Blackbird	1	
6/6/2011 0:00	9:48:17 AM	45.52648	-92.39729	Barn Swallow	3	
6/6/2011 0:00	9:48:17 AM	45.52648	-92.39729	Red-bellied Woodpecker		1
6/6/2011 0:00	9:48:17 AM	45.52648	-92.39729	Brown-headed Cowbird		1
6/6/2011 0:00	9:48:17 AM	45.52648	-92.39729	Yellow Warbler		1
6/6/2011 0:00	9:48:17 AM	45.52648	-92.39729	Eastern Bluebird		1
6/6/2011 0:00	9:48:17 AM	45.52648	-92.39729	European Starling		1
6/6/2011 0:00	10:07:32 AM	45.52297	-92.39469	Common Yellowthroat	1	1
6/6/2011 0:00	10:07:32 AM	45.52297	-92.39469	Yellow Warbler	2	1
6/6/2011 0:00	10:07:32 AM	45.52297	-92.39469	House Wren	1	

6/6/2011 0:00 10:07:32 AM 45.52297 -92.39469 Song Sparrow	1	2
6/6/2011 0:00 10:07:32 AM 45.52297 -92.39469 Northern Flicker	1	
6/6/2011 0:00 10:07:32 AM 45.52297 -92.39469 American Redstart	1	1
6/6/2011 0:00 10:07:32 AM 45.52297 -92.39469 Baltimore Oriole	1	1
6/6/2011 0:00 10:07:32 AM 45.52297 -92.39469 Red-winged Blackbird	1	1
6/6/2011 0:00 10:07:32 AM 45.52297 -92.39469 Barn Swallow	2	1
6/6/2011 0:00 10:07:32 AM 45.52297 -92.39469 Black-capped Chickadee	1	
6/6/2011 0:00 10:07:32 AM 45.52297 -92.39469 Great Crested Flycatcher		2
6/6/2011 0:00 10:07:32 AM 45.52297 -92.39469 Warbling Vireo		1
6/6/2011 0:00 10:07:32 AM 45.52297 -92.39469 Red-bellied Woodpecker		1
6/6/2011 0:00 10:07:32 AM 45.52297 -92.39469 Yellow-throated Vireo		1
6/6/2011 0:00 10:23:51 AM 45.52062 -92.39261 Red-eyed Vireo	1	
6/6/2011 0:00 10:23:51 AM 45.52062 -92.39261 Yellow Warbler	2	3
6/6/2011 0:00 10:23:51 AM 45.52062 -92.39261 Baltimore Oriole	2	1
6/6/2011 0:00 10:23:51 AM 45.52062 -92.39261 Eastern Bluebird	1	
6/6/2011 0:00 10:23:51 AM 45.52062 -92.39261 House Wren	1	
6/6/2011 0:00 10:23:51 AM 45.52062 -92.39261 White-breasted Nuthatch	1	
6/6/2011 0:00 10:23:51 AM 45.52062 -92.39261 American Redstart	1	
6/6/2011 0:00 10:23:51 AM 45.52062 -92.39261 American Goldfinch	1	
6/6/2011 0:00 10:23:51 AM 45.52062 -92.39261 Mourning Dove	1	
6/6/2011 0:00 10:23:51 AM 45.52062 -92.39261 Green Heron	1	1
6/6/2011 0:00 10:23:51 AM 45.52062 -92.39261 Great Crested Flycatcher	1	1
6/6/2011 0:00 10:23:51 AM 45.52062 -92.39261 Song Sparrow	1	1
6/6/2011 0:00 10:23:51 AM 45.52062 -92.39261 Red-winged Blackbird	3	
6/6/2011 0:00 10:23:51 AM 45.52062 -92.39261 Common Grackle	2	
6/6/2011 0:00 10:23:51 AM 45.52062 -92.39261 Warbling Vireo	1	1
6/6/2011 0:00 10:23:51 AM 45.52062 -92.39261 Barn Swallow	4	
6/6/2011 0:00 10:23:51 AM 45.52062 -92.39261 Tree Swallow	3	
6/6/2011 0:00 10:23:51 AM 45.52062 -92.39261 Great Blue Heron	1	
6/6/2011 0:00 10:23:51 AM 45.52062 -92.39261 Purple Martin		1
6/6/2011 0:00 10:23:51 AM 45.52062 -92.39261 European Starling		1
6/6/2011 0:00 10:23:51 AM 45.52062 -92.39261 American Robin		1
6/6/2011 0:00 10:23:51 AM 45.52062 -92.39261 Common Yellowthroat		1
6/6/2011 0:00 10:41:11 AM 45.52029 -92.38852 Baltimore Oriole	1	2
6/6/2011 0:00 10:41:11 AM 45.52029 -92.38852 Common Grackle	3	
6/6/2011 0:00 10:41:11 AM 45.52029 -92.38852 Cedar Waxwing	1	
6/6/2011 0:00 10:41:11 AM 45.52029 -92.38852 Red-eyed Vireo	1	1
6/6/2011 0:00 10:41:11 AM 45.52029 -92.38852 Downy Woodpecker	1	
6/6/2011 0:00 10:41:11 AM 45.52029 -92.38852 Warbling Vireo	1	1
6/6/2011 0:00 10:41:11 AM 45.52029 -92.38852 American Robin	1	
6/6/2011 0:00 10:41:11 AM 45.52029 -92.38852 Song Sparrow	1	1
6/6/2011 0:00 10:41:11 AM 45.52029 -92.38852 Purple Martin	1	
6/6/2011 0:00 10:41:11 AM 45.52029 -92.38852 Barn Swallow	4	
6/6/2011 0:00 10:41:11 AM 45.52029 -92.38852 Tree Swallow	1	
6/6/2011 0:00 10:41:11 AM 45.52029 -92.38852 House Wren		2
6/6/2011 0:00 10:41:11 AM 45.52029 -92.38852 Mourning Dove		1
6/6/2011 0:00 10:41:11 AM 45.52029 -92.38852 Great Crested Flycatcher		1
6/6/2011 0:00 10:41:11 AM 45.52029 -92.38852 Red-winged Blackbird		1

6/6/2011 0:00	10:41:11 AM	45.52029	-92.38852	Swamp Sparrow		1
6/6/2011 0:00	10:41:11 AM	45.52029	-92.38852	Yellow Warbler		1
6/6/2011 0:00	10:41:11 AM	45.52029	-92.38852	Veery		1
6/6/2011 0:00	10:41:11 AM	45.52029	-92.38852	Pileated Woodpecker		1
6/7/2011 0:00	4:56:38 AM	45.56178	-92.39133	Eastern Wood Pewee	1	
6/7/2011 0:00	4:56:38 AM	45.56178	-92.39133	Great Crested Flycatcher	1	2
6/7/2011 0:00	4:56:38 AM	45.56178	-92.39133	Song Sparrow	1	1
6/7/2011 0:00	4:56:38 AM	45.56178	-92.39133	Common Yellowthroat	2	
6/7/2011 0:00	4:56:38 AM	45.56178	-92.39133	Black-capped Chickadee	2	2
6/7/2011 0:00	4:56:38 AM	45.56178	-92.39133	Chipping Sparrow	1	
6/7/2011 0:00	4:56:38 AM	45.56178	-92.39133	Purple Martin	1	1
6/7/2011 0:00	4:56:38 AM	45.56178	-92.39133	Hooded Merganser	1	
6/7/2011 0:00	4:56:38 AM	45.56178	-92.39133	Canada Goose	2	
6/7/2011 0:00	4:56:38 AM	45.56178	-92.39133	Wild Turkey		1
6/7/2011 0:00	4:56:38 AM	45.56178	-92.39133	Ovenbird		1
6/7/2011 0:00	4:56:38 AM	45.56178	-92.39133	American Crow		1
6/7/2011 0:00	4:56:38 AM	45.56178	-92.39133	Yellow-throated Vireo		1
6/7/2011 0:00	4:56:38 AM	45.56178	-92.39133	Red-eyed Vireo		1
6/7/2011 0:00	4:56:38 AM	45.56178	-92.39133	Great Blue Heron		1
6/7/2011 0:00	5:14:09 AM	45.5596	-92.38885	Red-eyed Vireo	3	3
6/7/2011 0:00	5:14:09 AM	45.5596	-92.38885	Eastern Wood Pewee	1	
6/7/2011 0:00	5:14:09 AM	45.5596	-92.38885	Ovenbird	1	1
6/7/2011 0:00	5:14:09 AM	45.5596	-92.38885	Cedar Waxwing	1	
6/7/2011 0:00	5:14:09 AM	45.5596	-92.38885	Great Crested Flycatcher	1	1
6/7/2011 0:00	5:14:09 AM	45.5596	-92.38885	Purple Martin	1	
6/7/2011 0:00	5:14:09 AM	45.5596	-92.38885	Black-capped Chickadee		2
6/7/2011 0:00	5:14:09 AM	45.5596	-92.38885	Mallard		1
6/7/2011 0:00	5:14:09 AM	45.5596	-92.38885	Great Blue Heron		1
6/7/2011 0:00	5:14:09 AM	45.5596	-92.38885	Ring-necked Pheasant		1
6/7/2011 0:00	5:34:39 AM	45.55713	-92.38786	Red-eyed Vireo	2	1
6/7/2011 0:00	5:34:39 AM	45.55713	-92.38786	White-breasted Nuthatch	2	
6/7/2011 0:00	5:34:39 AM	45.55713	-92.38786	Pine Warbler	1	1
6/7/2011 0:00	5:34:39 AM	45.55713	-92.38786	Mallard	1	
6/7/2011 0:00	5:34:39 AM	45.55713	-92.38786	American Crow	1	3
6/7/2011 0:00	5:34:39 AM	45.55713	-92.38786	Eastern Phoebe	1	
6/7/2011 0:00	5:34:39 AM	45.55713	-92.38786	Cedar Waxwing	1	
6/7/2011 0:00	5:34:39 AM	45.55713	-92.38786	Great Crested Flycatcher	1	1
6/7/2011 0:00	5:34:39 AM	45.55713	-92.38786	Downy Woodpecker	1	
6/7/2011 0:00	5:34:39 AM	45.55713	-92.38786	Baltimore Oriole	1	
6/7/2011 0:00	5:34:39 AM	45.55713	-92.38786	Bald Eagle (adult)	1	
6/7/2011 0:00	5:34:39 AM	45.55713	-92.38786	Mourning Dove		1
6/7/2011 0:00	5:34:39 AM	45.55713	-92.38786	Ovenbird		1
6/7/2011 0:00	5:34:39 AM	45.55713	-92.38786	Red-bellied Woodpecker		1
6/7/2011 0:00	5:34:39 AM	45.55713	-92.38786	Common Raven		1
6/7/2011 0:00	5:34:39 AM	45.55713	-92.38786	Purple Martin		1
6/7/2011 0:00	5:53:04 AM	45.5547	-92.38611	Pine Warbler	1	
6/7/2011 0:00	5:53:04 AM	45.5547	-92.38611	American Crow	1	3
6/7/2011 0:00	5:53:04 AM	45.5547	-92.38611	Black-capped Chickadee	2	

6/7/2011 0:00	5:53:04 AM	45.5547	-92.38611	Great Crested Flycatcher	1	
6/7/2011 0:00	5:53:04 AM	45.5547	-92.38611	Song Sparrow	2	
6/7/2011 0:00	5:53:04 AM	45.5547	-92.38611	Chipping Sparrow	1	
6/7/2011 0:00	5:53:04 AM	45.5547	-92.38611	Blue Jay	1	1
6/7/2011 0:00	5:53:04 AM	45.5547	-92.38611	Red-eyed Vireo		2
6/7/2011 0:00	5:53:04 AM	45.5547	-92.38611	Ovenbird		1
6/7/2011 0:00	5:53:04 AM	45.5547	-92.38611	Mourning Dove		1
6/7/2011 0:00	6:10:58 AM	45.55206	-92.38403	Baltimore Oriole	2	1
6/7/2011 0:00	6:10:58 AM	45.55206	-92.38403	Blue Jay	1	
6/7/2011 0:00	6:10:58 AM	45.55206	-92.38403	House Finch	1	
6/7/2011 0:00	6:10:58 AM	45.55206	-92.38403	American Goldfinch	1	
6/7/2011 0:00	6:10:58 AM	45.55206	-92.38403	American Robin	1	1
6/7/2011 0:00	6:10:58 AM	45.55206	-92.38403	Red-winged Blackbird	1	
6/7/2011 0:00	6:10:58 AM	45.55206	-92.38403	Song Sparrow	1	1
6/7/2011 0:00	6:10:58 AM	45.55206	-92.38403	Chipping Sparrow	1	
6/7/2011 0:00	6:10:58 AM	45.55206	-92.38403	Common Grackle	4	
6/7/2011 0:00	6:10:58 AM	45.55206	-92.38403	Cedar Waxwing	3	
6/7/2011 0:00	6:10:58 AM	45.55206	-92.38403	Chimney Swift	2	
6/7/2011 0:00	6:10:58 AM	45.55206	-92.38403	Tree Swallow	1	
6/7/2011 0:00	6:10:58 AM	45.55206	-92.38403	Mourning Dove		2
6/7/2011 0:00	6:10:58 AM	45.55206	-92.38403	Northern Flicker		1
6/7/2011 0:00	6:10:58 AM	45.55206	-92.38403	American Crow		1
6/7/2011 0:00	6:10:58 AM	45.55206	-92.38403	Warbling Vireo		2
6/7/2011 0:00	6:10:58 AM	45.55206	-92.38403	Ring-necked Pheasant		1
6/7/2011 0:00	6:10:58 AM	45.55206	-92.38403	House Wren		2
6/7/2011 0:00	6:10:58 AM	45.55206	-92.38403	Eastern Wood Pewee		1
6/7/2011 0:00	6:10:58 AM	45.55206	-92.38403	Purple Martin		1
6/7/2011 0:00	6:31:37 AM	45.54955	-92.38549	Mourning Dove	1	1
6/7/2011 0:00	6:31:37 AM	45.54955	-92.38549	Common Grackle	8	
6/7/2011 0:00	6:31:37 AM	45.54955	-92.38549	Blue Jay	1	1
6/7/2011 0:00	6:31:37 AM	45.54955	-92.38549	American Robin	1	
6/7/2011 0:00	6:31:37 AM	45.54955	-92.38549	Pine Warbler	1	
6/7/2011 0:00	6:31:37 AM	45.54955	-92.38549	Eastern Kingbird	1	
6/7/2011 0:00	6:31:37 AM	45.54955	-92.38549	American Crow	1	2
6/7/2011 0:00	6:31:37 AM	45.54955	-92.38549	Barn Swallow	1	
6/7/2011 0:00	6:31:37 AM	45.54955	-92.38549	Great Crested Flycatcher		2
6/7/2011 0:00	6:48:49 AM	45.54673	-92.38509	Eastern Phoebe	1	
6/7/2011 0:00	6:48:49 AM	45.54673	-92.38509	American Robin	1	
6/7/2011 0:00	6:48:49 AM	45.54673	-92.38509	Red-bellied Woodpecker	1	
6/7/2011 0:00	6:48:49 AM	45.54673	-92.38509	Red-eyed Vireo	1	1
6/7/2011 0:00	6:48:49 AM	45.54673	-92.38509	Brown-headed Cowbird	1	
6/7/2011 0:00	6:48:49 AM	45.54673	-92.38509	Tree Swallow	1	
6/7/2011 0:00	6:48:49 AM	45.54673	-92.38509	Barn Swallow	3	
6/7/2011 0:00	6:48:49 AM	45.54673	-92.38509	Bald Eagle (adult)	1	
6/7/2011 0:00	6:48:49 AM	45.54673	-92.38509	American Crow		2
6/7/2011 0:00	6:48:49 AM	45.54673	-92.38509	Common Loon		1
6/7/2011 0:00	7:07:22 AM	45.54418	-92.38227	White-breasted Nuthatch	1	
6/7/2011 0:00	7:07:22 AM	45.54418	-92.38227	Downy Woodpecker	1	

6/7/2011 0:00	7:07:22 AM	45.54418	-92.38227	House Wren	2	
6/7/2011 0:00	7:07:22 AM	45.54418	-92.38227	Yellow-throated Vireo	1	
6/7/2011 0:00	7:07:22 AM	45.54418	-92.38227	Mourning Dove	1	
6/7/2011 0:00	7:07:22 AM	45.54418	-92.38227	American Robin	1	1
6/7/2011 0:00	7:07:22 AM	45.54418	-92.38227	Baltimore Oriole	1	1
6/7/2011 0:00	7:07:22 AM	45.54418	-92.38227	Red-eyed Vireo	1	1
6/7/2011 0:00	7:07:22 AM	45.54418	-92.38227	Blue Jay	1	1
6/7/2011 0:00	7:07:22 AM	45.54418	-92.38227	Brown-headed Cowbird	1	
6/7/2011 0:00	7:07:22 AM	45.54418	-92.38227	Barn Swallow	2	
6/7/2011 0:00	7:07:22 AM	45.54418	-92.38227	Tree Swallow	1	
6/7/2011 0:00	7:07:22 AM	45.54418	-92.38227	Mallard		2
6/7/2011 0:00	7:07:22 AM	45.54418	-92.38227	Red-winged Blackbird		1
6/7/2011 0:00	7:26:02 AM	45.54159	-92.38198	Hairy Woodpecker	2	
6/7/2011 0:00	7:26:02 AM	45.54159	-92.38198	American Crow	3	
6/7/2011 0:00	7:26:02 AM	45.54159	-92.38198	Black-and-white Warbler	1	
6/7/2011 0:00	7:26:02 AM	45.54159	-92.38198	American Robin	2	
6/7/2011 0:00	7:26:02 AM	45.54159	-92.38198	Great Crested Flycatcher	1	1
6/7/2011 0:00	7:26:02 AM	45.54159	-92.38198	Cedar Waxwing	2	
6/7/2011 0:00	7:26:02 AM	45.54159	-92.38198	Chipping Sparrow	1	
6/7/2011 0:00	7:26:02 AM	45.54159	-92.38198	European Starling	1	
6/7/2011 0:00	7:26:02 AM	45.54159	-92.38198	Green Heron	1	
6/7/2011 0:00	7:26:02 AM	45.54159	-92.38198	Tree Swallow	3	
6/7/2011 0:00	7:26:02 AM	45.54159	-92.38198	Barn Swallow	8	
6/7/2011 0:00	7:26:02 AM	45.54159	-92.38198	House Wren		1



American Redstart, male, in full song