

# The 1<sup>st</sup> Zellwood Bird Report

**August 15, 1998 to August 14, 1999**

**By**

**Harry Robinson**

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**REVISED EDITION**

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**Bird Usage of Lake Apopka North Shore Restoration Area**

**Specifically**

**The former Zellwood Drainage and Water Control District's Units 1 and 2  
together with the Zellwin Sand Farm Property all at Zellwood, Orange  
County, Florida**

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## INTRODUCTION

This is the first report on the birds that visited the former Zellwood Drainage and Water Control District's Units One and Two together with the Zellwin Sand Farm Property. All are located in Orange County, Florida.

This detailed summary covers the period August 15, 1998 to August 14, 1999. The survey is ongoing (as at 2014). At the end of this survey year a total of 88 surveys had been completed involving at least 1,000 hours of field work. Table C gives details of the days the site was visited and the number of species/individuals seen. I did not keep a daily record of the time spent doing the fieldwork but during this year a total of at least 1,000 hours was spent on fieldwork over the 88 visits. In August there was just one survey with four in September and four in October. Surveys were then conducted on Wednesdays and Sundays.

During the winter birds started to die in Unit Two; the majority were American White Pelicans. The District took steps to drain the fields but this was not completed until February 17. On February 19 I was advised that the area was closed, for the next two weeks I was unsure how to proceed. From March 7 until access was again granted I checked every gate and those sections of the border of the property that I could reach. I did not regain access to the property until April 20.

Most of Unit Two was flooded when farming ceased in the fall of 1998. There were two areas that were only partially inundated. One area was a farm block south of Roach Road and the other was on the eastern boundary of Lust Road, Airport Road and Hooper Farms Road. Both of these areas were covered primarily by grasses and dry prairie vegetation. Unit One was not flooded in the fall of 1998 and some fields were still being farmed. The Sod Farm and Potter's Farm were still in use as was an additional small parcel on the east side. On entering Unit One by Laughlin Road there were weedy fields on both sides. The vegetation was, in general, less than two-three foot tall with scattered taller bushes. A strip of saltbush ran parallel to Laughlin Road about 150 yards to the west. The understory vegetation, which typically included ragweed, aster, pokeweed, pigweed, horseweed, nightshade and stinging nettle, was eventually shaded out. The canal banks were covered with grasses and occasionally with evening primrose. The canals also contained extensive growths of evening primrose, alligator weed, common duckweed and cattail. From Interceptor Road to the McDonald Canal there

were only weedy fields. To the west of Laughlin Road the vegetation was sparse, with extensive beds of curly dock. The Lake Level Canal formed the western boundary of Unit One and contained water hyacinth, pennywort, pigweed, cattail and pickerelweed.

In the winter of 1998/1999 the fields in Unit Two were gradually drained as water was drawn off to the south. The last field was drained on February 17. The first plant colonizers included ground cover plants such as curly dock, grasses, sedges, clovers and heartwing sorel. Eventually the colonizing plants were replaced by taller, prairie type herbaceous plants such as dog fennel and pigweed. Over time woody vegetation became established including saltbush and elderberry. In some areas where the soil remained saturated evening primrose was the dominant plant. In the area east of Airport Road dog fennel and saltbush were established. Unit One remained covered mostly in prairie type plants and shrubs with the addition of golden ragwort and golden rod. In the summer/fall of 1999 there were some significant changes. In Unit One Potter's Farm closed and its fields became colonized by grasses. In Unit Two the District started to clear the vegetation from the fields for sampling work. The fields between Lust and Hooper Farms Road were disked. Several fields north of Lust Road were also disked. Later only a band was disked along canal and ditch banks. Because there was a local explosion in the House Mouse population a wide firebreak was created along the northern and eastern borders.

In all I surveyed some 10,000 acres, this total included 2,800 acres of Unit One, 6,000 acres of Unit Two and 1,200 acres of the Sand Farm. The District has given the whole area the name Lake Apopka North Shore Restoration Area or LANSRA for short. This is the name used by the American Birding Association in its reports. As I am only covering the eastern half of this area I am using the old ornithological name of "Zellwood" in an attempt to avoid later confusion.

The aim of this report is to record what I saw during the twelve months. I concentrate on the basic unit an influx (this is defined in both of the five year analyses) and I try to show you its shape and duration. The actual pattern of migration at Zellwood is very different from the generalized ideas that are out there. Hopefully I will show you that winter visitors for instance are in fact passage migrants. One thing is very clear bird migration follows a very strict timetable.

There was a Breeding Bird Survey this year; this was the first of six such surveys. Rather than just show the results for this year I am including all six surveys so that that this one year can be put into perspective. The counts for all the years are detailed in Appendix C.

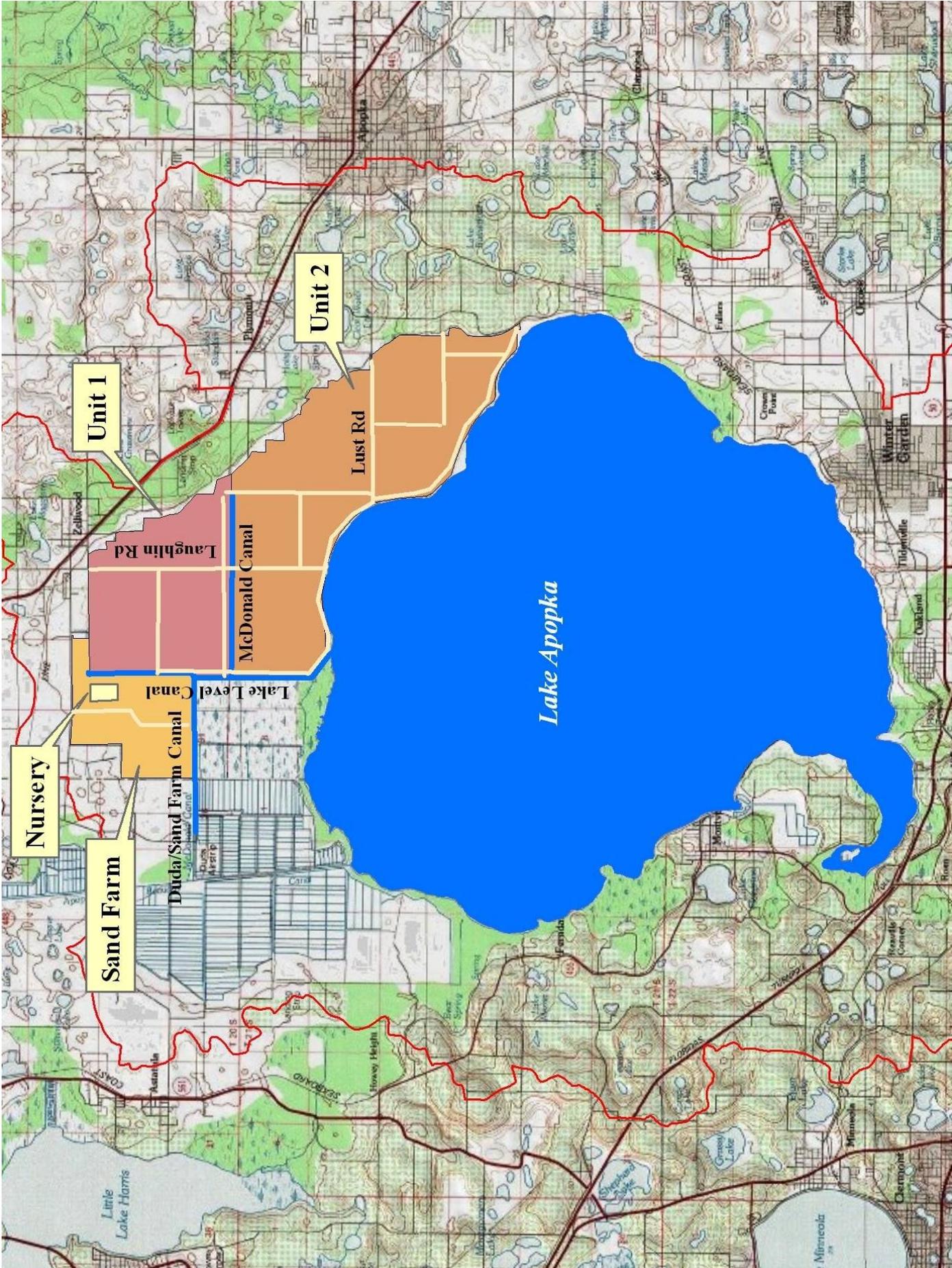
I have also tried to identify all butterflies, dragonflies, damselflies, amphibians, reptiles and mammals that I came across. I have listed all the species seen during the first set of five years and have provided details of the first date on which I observed each species in each calendar year. I have decided that all the reports 1 to 5 will carry the data for the first five years.

There is also a bird list of all the bird species seen during the first five years together with the highest daily count for each species. For comparison purposes I am including a second list detailing the highest daily counts as at August 14, 2012. Again I have used the 5<sup>th</sup> year as the benchmark rather than continue to show lower and lower peak counts.

Finally the spreadsheet for the year is included together with a simple analysis which aims to give an idea of how many birds were using the different habitats on a daily basis.

I have now completed an analysis of the first five years together with an analysis of the second set of five years. For information about these analyses please contact the author at [sirharrydeland@gmail.com](mailto:sirharrydeland@gmail.com).

**Front Cover:** this photograph of an immature Red-shouldered Hawk was taken by the late Rebecca Holmes on January 19, 2013.



This map shows most of the Lake Apopka watershed together with Units One and Two and the Sand Farm property. This map was kindly provided by Pam Bowen of the St. Johns River Water Management District

## ACKNOWLEDGEMENTS

On August 15, 1998 I was persuaded by Wes Biggs to attend a meeting between a group of birders and staff of St Johns River Water Management District; the birders were led by John Basili of Audubon of Florida. One outcome of this meeting was that there was a clear need for additional information on the birds occurring at Zellwood. I had the time so I started the survey which is still going strong in 2014. Without that initial push from Wes you would not be looking at this report.

During the first year Jim Peterson, Harold Weatherman, Roxanne Conrow of the District and John Basili of Audubon made the survey possible. As an outsider it is hard to know what actually goes on but I am sure that it took a lot of effort by them and others to get me back onto the property on April 20. I thank you all.

From the beginning Bill Pranty assisted by putting all the data into what became a massive spreadsheet. Table A contains that part of the spreadsheet that relates to the first year of the survey. Bill your help was much appreciated; I say was as he has now transferred this task to me.

The vegetation section of the introduction was written at the time by Jim Peterson and that is a real bonus as otherwise I would have only been able to make the most general of statements; thanks Jim.

Coming more up to date Pam Bowen of the District has kindly provided a map of Lake Apopka that shows most of the watershed; thanks Pam.

Normally one would write these reports starting with the 1st but in this instance I started with the 13<sup>th</sup> and have worked backwards. Kacy Ray has helped with all 13 reports and the second five year analysis. She has put together the front covers, corrected the page numbering, inserted the maps and especially with the first books helped me learn how to actually write the books on the computer. However it is the other tasks that were so important to me; she has taken that part of the spreadsheet that related to a book and divided it into 100 or more segments. She has also done a simple analysis of the data for each year using a pivot table. Without all her help none of these books would have been completed. Thank you so very much Kacy.

Rachel Gerker has helped me get this particular copy ready for Orange County Audubon, thanks Rachel.

Harry Robinson

## THE SURVEY ROUTE

I concentrated initially on the northern fields and the eastern border. I would start each morning at Canal Road near Jones Avenue in the dark and at first light I would walk around the corner. In the winter this was the spot for American Woodcock. I would then walk a four mile route around Potter's Farm. I would then check the Sod Farm and the Sand Farm Cattail Marsh.

During the fall and the winter of 1998/1999 I then concentrated on the flooded areas of Unit Two. This meant checking both sides of Laughlin Road south of the McDonald Canal, the McDonald Canal Road, the Lake Level Canal and Roach Road from the canal to Pole Road. Next I would walk Pole Road extension (it was sometimes too wet to drive). Then it was on to Lust Road via Pole Road. After Lust Road I would drive south down what later became Airport Road to Hooper Farms Road. After checking the fields to the south I would then return to Lust Road and the pump house and travel south down the bank of Lake Apopka; there was no road at that time just a very rough grass track. That would often be all that I could manage in a day. In late October I started to check a portion of the eastern border but I am not now (2013) sure which section that would have been. Later when they started to drain the fields I followed the water and was able to expand the areas covered.

After the fields finally drained on February 17 I was not allowed onto the property for two months (I did start a survey on February 19). From March 7 I would start each day as before at Canal Road. I would then go to Laughlin Road gate where I could check a section of Ponkan Road, Next I would go to Hogshead and Conrad Roads gates, the latter gave me a good view of many of the fields. Lust Road gate was next on the list followed by the wood that stretched south to the Hooper Farms Road gate. This route I followed up to and including April 17.

With my re-entry onto the property on April 20 I started the day as before with perhaps a longer stay at the Sand Farm Cattail Marsh as this was the only piece of water. I would then drive to the Workshop area where I would walk to the south along the edge of the wood to the eastern end of Interceptor Road. After the Workshops I would drive to the eastern end of the McDonald Canal. I would then either drive south down Pole Road extension or return to Laughlin Road and work my way south by Roach Road. At Lust Road I would check Lake Apopka. The "tracks" to the north and south of the pump house were exceedingly rutted so I did not drive them very often. After the lake I would work my way down Lust Road to the buildings that later became Plant Express. I would then walk south through the wood to Hooper Farms Road. My return north would either be back through the wood or I would work my way north along the outside of the wood. If there was time I would return to the Sand Farm Cattail Marsh.

# AN ANNOTATED CHECKLIST OF THE BIRDS OF

## ZELLWOOD

### AUGUST 15, 1998 TO AUGUST 14, 1999

This checklist covers the 1st year of the survey. With the printing of this book I will have covered the 1<sup>st</sup> to the 13<sup>th</sup> year. The survey covered Units One and Two and the Sand Farm, in all some 10,000 acres were surveyed twice a week. During the year I carried out 88 surveys and spent over 1,000 hours on the fieldwork.

A brief description is given of each species indicating its Zellwood status for this particular year. The description in later reports may differ due to changes in the habitat. In the text I attempt to show the ebb and flow of passage by identifying each influx and by describing their shape.

This report covers the period from August 15, 1998 to August 14, 1999. As I have no information prior to August 15, 1998 I am unable this year to describe the beginning of the early fall passage. I will however include records from the 1999/2000 year where that helps to provide a clearer picture of the early fall passage in 1999. **These entries are all in italics to show that they do not belong to this survey year.**

### Pied-billed Grebe (*Podilymbus podiceps*)

Whilst the fields flooded this was a very common bird although the numbers fell in early December; after the fields drained only small numbers seen. During the Breeding Bird Survey a total of five pairs located at the Sand Farm Cattail Marsh; broods were first seen from July 4 to August 6. For the remainder of the early fall passage there were 20 on August 15 with 40 on September 2, 175 on September 11 and 200 on September 17, then 95 seen on September 30. That was the early fall passage. For the main fall passage there were 170 on October 6 with 219 on October 16 and 620 on October 21, then 610 seen on November 2 with 475 on November 6 and 445 on November 11. There were 540 on November 13 with 750 on November 18, then 585 seen on November 25 with 460 on November 30. The count of 750 was the highest count for Zellwood but the highest count is now (2014) that of 945 on November 26, 2010. That closed the main fall passage. For the winter passage there were 555 on December 3 with 245 on December 8. There were 330 on December 11 with 460 on December 16, then 225 seen on December 18 with 221 on December 20. There were 425 on December 28 with 280 on December 31 and 175 on January 1. There were 230 on January 7 with 235 on January 8, then 205 seen on January 12 with 195 on January 15. This influx is one of those that I could place in two different passages; I have placed it in the winter passage so for the early spring passage there were 320 on January 19 with 160 on January 29, 145 on February 5, 115 on February 9, 75 on February 10 and 40 on February 17. I did not have access to the property for the next two months. For the remainder of the late spring passage there were seven on April 20 with six on April 26, five on May 1, two on May 4 and one on May 7. For the summer passage there were three on May 10 with seven on May 14, then one seen on May 18. There were four on May 22 with six on May 25, seven to June 5, ten on June 7 and 11 on June 12, then nine seen on June 14 with eight on June 19, seven on June 25 and six on June 29. There were 12 on July 4 with 13 on July 6, then 11 seen on July 9 with ten to July 14. That closed the summer passage. For the post-breeding gathering there were 14 on July 16 with 15 on July 23, 26 on July 27, 29 on August 3, 46 on August 6, 48 on August 13, 51 on August 18, 54 on August 20 and 58 on August 25, then 53 seen on August 27 with 43 on August 31. There were 66 on September 3 with 71 on September 6 and 95 on September 8, then 88 seen on September 17 with 66 on September 23. There were 91 on September 25 with 47 on September 30. That ended the post-breeding gathering.

### Horned Grebe (*Podiceps auritus*)

A passage migrant and winter visitor in very low numbers; all the sightings were from the flooded fields. For the fall passage there were singles on November 2 and November 6 with three on November 11, November 13 and November 18, then two seen to November 30. That closed the fall passage. For the winter passage there were singles on December 3 and

December 8 with two on December 11 and December 16, then singles seen to December 20. There were also two from December 31 to January 11. That completed the winter passage. For the early spring passage there were two on January 12 with one on January 15. There were two on January 19 and January 27 with singles on January 29 and February 3. That was the early spring passage. There were no later records.

#### Eared Grebe (*Podiceps nigricollis*)

A passage migrant and winter visitor; exceptionally numbers were higher than those for the Horned Grebe. For the fall passage there were two on November 11 and November 13 with three from November 18 to November 30, then two seen on December 3. That closed the fall passage. For the winter passage there were two on December 4 and December 7 with three on December 8 and December 18, then singles seen to December 28. There were two on December 31 with four on January 1, then three seen to January 8 with two to January 12. That completed the winter passage. For the early spring passage there were three on January 15 with four on January 19, then three seen on January 27 with two on January 29. There were four on February 3 and February 5 with three to February 10. That ended the early spring passage; there were no later sightings. The counts of four are still (2014) the highest counts for Zellwood.

#### American White Pelican (*Pelecanus erythrorhynchos*)

Seen from September to June there was a strong fall and early winter passage. From mid-December a massive invasion started and this event reached its peak in late January. Pelicans were dying from pesticide poisoning and the District drained Unit Two as quickly as it could. The last water was drained out on February 17 and there were still 2,190 pelicans standing around on the mud on that day. The area was closed to me for the next two months so I do not know how that event ended. For the early fall passage there were 216 on September 17 with one on September 30. For the main fall passage there were 190 on October 6 with 140 on October 16, 105 on October 21 and 87 on October 28. There were 160 on November 2 with 186 on November 6, 640 on November 13, 920 on November 18 and 1,350 on November 25, then 460 seen on November 30. That was the main fall passage. For the winter passage there were 860 on December 3 with 85 on December 8. There were 95 on December 11 with 150 on December 16, 1,440 on December 18 and 3,550 on December 28, then 1,570 seen on December 31 with 695 on January 1. There were 2,320 on January 7 with 600 on January 8. That completed the winter passage. For the early spring passage there were 1,700 on January 11 with 3,310 on January 12, then 2,580 seen on January 19 with 2,150 on January 27. There were 4,370 on January 29 with 2,610 on February 5, 2,370 on February 9 and 2,190 on February

17 after which the area closed for two months. The count of 4,370 is still (2014) the highest count for Zellwood. During March I was able to see a few by looking in from the boundary. For the late spring passage there were seven on March 11 with three to March 16. There were 34 on March 18 with 40 on March 23, then seven seen on March 30 with two on April 1 and one on April 6. There were 12 on April 9 with three to April 17. Numbers were no higher when access granted again on April 20. There were four on April 20 with 34 on April 23. There were also 12 on May 4 with 14 on May 7. That was the end of the late spring passage. For the summer passage there were 12 on June 5 with five on June 14 that was it. There were no later records for the survey year. *For the early fall passage in the following survey year there was one on September 8 with six on September 10, then one seen on September 17.*

#### Brown Pelican (*Pelecanus occidentalis*)

This was a vagrant. For the late spring passage there was an immature on May 4.

#### Double-crested Cormorant (*Phalacrocorax auritus*)

A common fall and winter visitor to the flooded fields; numbers were surprisingly low during January. There was a marked spring passage but numbers were much lower than those for many of the later years as at this time I only counted birds that were close to the shore of Lake Apopka. For the fall passage there were five on September 2 with one on September 11. There were two on September 17 with seven on September 30, 58 on October 16, 137 on October 21, 322 on October 29 and 442 on November 2, then 280 seen on November 11 with 79 on November 13. The count of 442 was the highest count for this year but the highest count is now (2014) that of 7,800 on February 22, 2004. There were 115 on November 18 with 162 on November 20 and 186 on November 25, then 170 seen on November 30 with 141 on December 3. That completed the fall passage. For the winter passage there were 130 on December 8 with 150 on December 11, then 138 seen on December 18 with 79 on December 20, 58 on December 28, 47 on December 31, 27 on January 1, 17 on January 7, eight on January 8 and five on January 11. That closed the winter passage. For the early spring passage there were ten on January 12 with 70 on January 15, then five seen on January 19. There were 16 on January 27 with 59 on January 29, then 46 seen on February 5 with ten on February 9. There were 25 on February 10 with 39 on February 17. With the closure of the area that was the early end of the early spring passage. From the various entrances I was able to see these birds perched on snags by the lake. For the main spring passage there were 35 on March 7 with 38 on March 13, then 21 seen on March 16. There were 24 on March 18 with 66 on March 19, then 49 seen on March 25 with 38 on March 30. There were 51 on April 1 with 99 on April 6, then 88 seen on April 9 with 43 on April 14 and 16 on April 17. There were 58 on April 20 with 18 on April 26 and 17 on

May 1. That ended the main spring passage so for the summer passage there were 30 on May 4 with 24 on May 10 and eight on May 14. There were nine on May 18 with 17 on May 22, then 12 seen on May 25 with 11 on May 29, eight on June 5 and six on June 7. There were ten on June 12 with six on June 19 and one on June 22. There were three on June 25 with five on June 29, then four seen on July 4 with singles to July 9. That concluded the summer passage. For the early fall passage there were three on July 12 with five on July 16, then two seen to July 23 with one on July 27. There were five on August 3 with three on August 6 and singles to August 13. *There were six on August 18 and August 20 with four on August 25 and one on August 27. There were six on August 31 with two on September 3 and one on September 6. There were two on September 8 with six on September 10, then one seen on September 17. There were six on September 23 with five on September 25 and three on September 30; that finished the early fall passage.*

#### Anhinga (*Anhinga anhinga*)

Passage was heaviest from late October to the end of December; smaller numbers were present for the rest of the year. For the early fall passage there were four on August 15 with one on September 2. There were 11 on September 11 with 12 on September 17, then six seen on September 30. That was the early fall passage. For the main fall passage there were six on October 16 with 31 on October 21, then 29 seen on October 29 with 12 on November 2. There were 21 on November 6 with 33 on November 11, then 23 seen on November 13 with 20 on November 18. There were 27 on November 25 with 16 on November 30. That closed the main fall passage. For the winter passage there were 22 on December 3 and December 8 with 24 on December 11, 25 on December 16 and 35 on December 18, then 33 seen on December 28 with 17 to January 7 and 16 on January 8. That completed the winter passage. Numbers were now much lower for the early spring passage; there were 22 on January 11 with 19 on January 12, 18 on January 15 and ten on January 19. There were 12 on January 27 with 18 on January 29, then eight seen on February 3. There were nine on February 5 and February 9 with 11 on February 10 and 15 on February 17, and then the area was closed. That was the end of the early spring passage. For the late spring passage there were ten on March 7 with two on March 11 and singles to March 16. There were four on March 18 with six on March 19, then two seen on March 23 with one on March 25. There were 21 on March 30 with eight on April 1, three on April 9 and one on April 14. There was not a great change in numbers when access granted again on April 20. There were three on April 17 with seven on April 20 and 13 on April 26, then 11 seen on May 1 with seven on May 4 and five to May 10. That finished the late spring passage. For the summer passage there were seven on May 14 with 18 on May 18, then 14 seen on May 22 with 11 on May 25. There were 13 on May 29 with 16 on May 31 and 18 on June 7, then 11 seen on June 12 with eight on June 14. There were 22 on June 19 with 12 to June 29 and seven on July 4. That was the summer passage. For the early fall passage there

were nine on July 6 with 11 on July 9, 13 on July 12 and 19 on July 16, then 11 seen on July 20 with ten on July 23. There were 12 on July 27 with 26 on August 3, then 16 seen on August 6. There were 22 on August 10 with 23 on August 13 *and August 20, then 16 seen on August 25. There were 20 on August 27 with 27 on August 31, then 23 seen on September 3. There were 26 on September 6 with 42 on September 8 and September 17, then 36 seen on September 25 with 25 on September 30. That concluded the early fall passage.*

#### American Bittern (*Botaurus lentiginosus*)

An uncommon passage migrant and winter visitor; there was a single record for the late spring passage. For the fall passage there were singles on October 6, November 11 and November 13 with two on November 18, then singles seen on November 20 and November 25. That closed the fall passage. For the winter passage there were two on November 30 with three on December 3, then two seen to December 7 with one on December 8. There were two on December 11 with singles on December 16, December 18, December 20 and December 31. That completed the winter passage. For the early spring passage there were singles on January 15 and January 29 with two on February 3, then singles seen on February 9 and February 17. That was the extent of the early spring passage. There were no sightings whilst access denied. Finally for the late spring passage there was one on April 20; my first day back in the area. There were no later records.

#### Least Bittern (*Ixobrychus exilis*)

Perhaps surprisingly there were no sightings until May, 1999. During the Breeding Bird Survey a total of three pairs located; the first fledged young were seen on July 9. So for the summer passage there was one on May 4 with two on May 22, then one seen on June 12. There were two on June 19 with singles on June 22, June 29, July 4 and July 6. There were three on July 9 with two on July 16. There were three on July 20 and July 23 with two to August 6. That closed the summer passage. *For the early fall passage there were singles on August 18, August 25 and September 6.*

#### Great Blue Heron (*Ardea herodias*)

Very large numbers were present from August to February with much lower numbers thereafter. For the early fall passage there were 250 on August 15 with 30 on September 2. There were 125 on September 11 with 195 on September 17, then 85 seen on September 30. That was the early fall passage. For the main fall passage there were 155 on October 6 with 96

on October 16 and 82 on October 21. There were 140 on October 29 with 245 on November 2 and 285 on November 11, then 240 seen on November 13. That was the early close of the main fall passage. For the winter passage there were 275 on November 18 with 280 on November 25, 295 on November 30 and 395 on December 3, then 310 seen on December 8 with 283 on December 11, 170 on December 16 and 150 on December 18. The count of 395 is still (2014) the highest count for Zellwood. There were 160 on December 20 with 217 on December 28, 234 on December 31 and 285 on January 1, then 220 seen on January 7. That completed the winter passage. For the early spring passage there were 231 on January 8 with 297 on January 12 and 385 on January 15, then 374 seen on January 19 with 296 on January 27, 207 on January 29 and 167 on February 3. There were 237 on February 5 with 326 on February 9, then 205 seen on February 10 with 175 on February 17; then the area closed. That was the end of the early spring passage. For the late spring passage there were six on March 11 with three on March 13 and two on March 16. There were 12 on March 18 with four on March 19, two on March 23 and one on March 25. There were four on March 30 with two to April 14 and one on April 17. That concluded the late spring passage. For the summer passage (this is a winter nester....) there were 14 on April 20 with 20 on April 26, then 18 seen on May 4 with 14 on May 7. There were 27 on May 10 with 12 to May 18. There were 31 on May 22 with 21 on May 25 and 20 on May 29. There were 28 on May 31 with 24 on June 5. There were 26 on June 7 with 30 on June 12, then 28 seen on June 19 with 20 on June 22 and 18 on June 25. That ended the summer passage. For the early fall passage there were 25 on June 29 with 32 on July 4 and 42 on July 6, then 24 seen on July 9 with 22 on July 14 and 20 on July 16. There were 21 on July 20 with 26 on July 23, then 12 seen on July 27. There were 23 on August 3 and August 6 with 25 on August 10, 27 on August 18, 33 on August 20 and 35 on August 27, then 16 seen on August 31. *There were 23 on September 3 with 36 on September 6, then 20 seen on September 8 with 16 on September 10. There were 33 on September 17 with 30 on September 23, 25 on September 25 and 17 on September 30; that finished the early fall passage.*

#### Great Egret (*Ardea alba*)

There was a very heavy fall passage with lesser but still very high numbers until the fields drained. Counts then very low to the end of June when a minor fall passage started. For the early fall passage there were 750 on August 15 with 400 on September 2 and 315 on September 11. There were 670 on September 17 with 300 on September 30. That was the early fall passage. For the main fall passage there were 495 on October 6 with 845 on October 16, 860 on October 21, 975 on October 29, 1,080 on November 2 and 1,950 on November 6, then 1,420 seen on November 13 with 1,335 on November 25, 660 on November 30, 575 on December 3, 540 on December 8, 525 on December 16, 480 on December 18, 430 on December 28 and 330 on December 31. The count of 1,950 was the highest count for Zellwood but after the three hurricanes in 2004 the highest count became that of 2,390 on December 5, 2004. The

main fall passage took over all of the winter passage as there was no incoming influx of sufficient size to cover the decline of the main fall passage. It is situations like this that helps one to better understand the mechanics of what is going on. So for the early spring passage there were 526 on January 1 with 730 on January 7, then 480 seen on January 8. There were 485 on January 12 with 615 on January 15 and 806 on January 19, then 695 seen on January 29 with 365 on February 3. There were 810 on February 5 with 535 on February 9, 330 on February 10 and 210 on February 17 when the last field drained. That was the end of the early spring passage. For the late spring passage there were singles from March 11 to April 6; that was whilst I did not have any access. With access for the summer passage there was one on May 1 with two on May 7, then one seen on May 10. There were two on May 14 with singles to May 22. There were two on May 25 with six on June 12, then three seen on June 14. There were five on June 19 with six on June 22, eight to June 29 and 16 on July 4, then 14 seen on July 6 with ten on July 9. That was the summer passage. For the early fall passage there were 25 on July 12 with 30 on July 16 and 32 on July 23, then 15 seen on July 27. There were 22 on August 3 with 25 on August 6, then 14 seen on August 10 with nine on August 13. *There were 21 on August 18 with 23 on August 20, then 22 seen on August 25 with 11 on August 27. There were 32 on August 31 with 26 to September 6 and 11 on September 8. There were 19 on September 10 with 26 on September 17, then 24 seen on September 23 with 14 on September 25. That was the early fall passage.*

#### Snowy Egret (*Egretta thula*)

Unlike the last two species there was no major invasion in the fall now that surprises me as there was such an invasion after the hurricanes in 2004. There was instead a minor passage in the fall otherwise numbers were very low for the rest of the survey year. For the early fall passage there were 300 on August 15. Later there were 125 on September 11 with 205 on September 17, then 77 seen on September 30. That was the early fall passage. For the main fall passage there were 135 on October 6, with 110 on October 21, 80 on November 2, 62 on November 11, 26 on November 13 and 21 on November 18. There were 30 on November 25 with five on November 30 and one on December 3. That closed the main fall passage. For the winter passage there were five on December 8 with singles to December 16. There were two on December 18 with three on December 20 and 26 on December 28, then 18 seen on January 1 with five on January 7. That completed the winter passage. For the early spring passage there were 20 on January 8 with 27 on January 15, then ten seen on January 19 with eight on January 27. There were 24 on January 29 with 19 on February 5, five on February 9 and two on February 10. There were 14 on February 17 but then the area was closed. That concluded the early spring passage. There were no records for the late spring passage. For the summer passage there was one on April 20 with three on May 1, six on May 7 and 12 on May 10, then six seen on May 14 with two on May 18 and singles to May 25. There were five on May 29 with seven on June 5,

then eight seen on June 7 and June 12 with six on June 14 and four on June 19. There were six on June 22 with eight on June 25 and 12 on June 29, then four seen on July 4 with two to July 9. That finished the summer passage so for the early fall passage there were five on July 12 with 13 on July 14, then 11 seen on July 16 with five on July 20, four on July 27 and one on August 3. There were ten on August 6 with four to August 13. *There were 18 on August 18 with 25 on August 20, then 11 seen on August 25 with singles to August 31. There were three on September 3 with 11 on September 6, then ten seen on September 10 with two on September 17 and one on September 23. There were three on September 25 with nine on September 30, then two seen on October 2 with one on October 6. That ended the early fall passage.*

#### Little Blue Heron (*Egretta caerulea*)

Numbers were constant through most of the year; there was no increase in numbers with the flooding of Unit Two but numbers were a little higher during the summer. For the early fall passage there were 70 on August 15 with 19 on September 11, nine on September 30 and two on October 6. That was the early fall passage. For the late fall passage there were three on October 16 with four to October 29, five on November 2 and 13 on November 6, then six seen to November 18 with one on November 25. That closed the late fall passage. For the winter passage there were three on November 30 with six to December 8, seven on December 11 and 22 on December 16, then four seen on December 18. There were six on December 20 with nine on December 28, then three seen on December 31. There were six on January 1 with 16 on January 7, then three seen to January 11. That completed the winter passage. For the early spring passage there were nine on January 12 and January 19 with 13 on January 27, then nine seen on February 3 with eight on February 5, seven on February 9 and four on February 10. There were 11 on February 17 but with the closure I do not know what happened next. That was the early spring passage. For the late spring passage there were two on April 6 with three on April 14, five on April 17 and six on April 20, then five seen on April 26. That was the extent of the late spring passage. For the summer passage there were 13 on May 1 with 22 on May 4 and 27 on May 10, then 22 seen on May 14 with 20 on May 22 and 13 on May 25. There were 17 on May 29 with 20 on May 31 and 22 on June 5, then 15 seen on June 7. There were 19 on June 12 with 22 on June 14, then 16 seen on June 19 with 11 to June 25 and ten on June 29. There were 15 on July 4 with ten on July 6, nine on July 9 and seven on July 12. That was the summer passage. For the early fall passage there were 13 on July 14 with ten on July 16. There were 11 on July 20 and July 23 with 14 on July 27, 15 on August 6 and 27 on August 10, then 16 seen on August 13 *with 13 to August 20. There were 20 on August 25 with 18 on August 27, 16 on August 31, 14 on September 6 and five on September 8. There were seven on September 10 with nine to September 25 and 17 on September 30, then eight seen on October 2 with six on October 6. That concluded the early fall passage.*

### Tricolored Heron (*Egretta tricolor*)

There were minor events during the early fall and winter passages; otherwise only low numbers seen. For the early fall passage there were 60 on August 15 with 70 on September 2, then 35 seen on September 17 with nine on September 30 and two on October 6. That was the early fall passage. For the late fall passage there were three from October 16 to October 29 with nine on November 2, then four seen on November 6. There were five on November 11 with nine on November 13, then seven seen to November 25. That closed the late fall passage. For the winter passage there were 15 on November 30 with 12 on December 7 and nine on December 8. There were 14 on December 11 with 16 on December 18, then seven seen on December 20 with five on December 28 and four on December 31. There were six on January 1 with two on January 7 and one on January 8. That completed the winter passage. For the early spring passage there were two from January 11 to January 27 with singles to February 9. That was the extent of the early spring passage. There was no late spring passage due to the closure of the area. For the summer passage there was one on May 4 with two from May 10 to May 29, three on June 5 and six on June 7, then two seen to June 14. There were four on June 19 with two to June 29. That ended the summer passage. For the early fall passage there were five on July 4 with 11 to July 12 and 17 on July 16 then 12 seen to July 23. There were 18 on July 27 with 12 on August 3, ten on August 6 and eight on August 10. There were nine on August 13 with 25 on August 18 and 28 on August 20, then 22 seen on August 25 with 17 on August 27 and nine on August 31. There were 18 on September 3 with 17 on September 6 and 15 on September 8. There were 18 on September 10 with 19 on September 17, then six seen on September 23 with three on September 25. That closed the early fall passage.

### Cattle Egret (*Bubulcus ibis*)

Present all year this was a complicated species. There was a major early fall passage followed later by a strong winter passage. Numbers then lower until the summer when they rose again; the summer passage appeared to be followed by a strong post-breeding gathering. During the Breeding Bird Survey a colony was located on a series of small islands at the end of Lust Road; there were 413 pairs. For the early fall passage there were 400 on August 15 with 3,000 on September 2, then 2,800 seen on September 17 with 840 on September 30 and 85 on October 6. That was the early fall passage. For the late fall passage there were 2,050 on October 16 with 70 on October 29 and five on November 2. There were 11 on November 6 with 68 on November 11, 250 on November 13 and 435 on November 18, then 350 seen on November 20. That closed the late fall passage. For the winter passage there were 850 on November 25 with 1,540 on November 30, then 705 seen on December 3. There were 1,100 on December 4 with 1,950 on December 8, then 1,160 seen on December 11 with 780 on December 18, 700 on December 20 and 430 on December 28. There were 890 on December 31

with 790 on January 7, 785 on January 8 and 245 on January 12. That completed the winter passage. For the early spring passage there were 970 on January 15 with 830 on January 27, 720 on February 3 and 180 on February 5. There were 185 on February 9 with 220 on February 10 and 430 on February 17; that was when the area closed. That was therefore the end of the early spring passage. For the late spring passage (from the borders) there were 60 on March 7 with 130 on March 11, then 40 seen on March 13. There were 70 on March 16 with 73 on March 18, 155 on March 19, 305 on March 23 and 445 on March 30, then 220 seen on April 6 with 200 on April 9. There were 204 on April 14 with 302 on April 17, 450 on April 20 (I had access again), 560 on April 26 and 930 on May 1, then 880 seen on May 4. That was the late spring passage. For the summer passage there were 930 on May 7 with 1,420 on May 10 and 1,470 on May 14, then 555 seen on May 18. There were 595 on May 22 with 1,145 on May 25, then 975 seen on May 31 with 650 on June 5 and 550 on June 7. There were 1,070 on June 12 with 2,140 on June 14 and 2,450 on June 22, then 2,410 seen on June 25 with 650 on June 29. That finished the summer passage. For the post-breeding gathering there were 1,250 on July 4 with 1,790 on July 6 and 2,260 on July 9, then 2,150 seen on July 12 with 1,360 on July 14. There were 2,010 on July 16 with 2,030 on July 20, 2,345 on July 23, 2,490 on July 27, 2,500 on August 3, 2,570 on August 6 and 3,120 on August 10, then 2,580 seen on August 13 *with 1,700 on August 20, 1,060 on August 25 and 575 on August 27. The count of 3,120 was the highest count for Zellwood but the highest count is now (2014) that of 6,400 on September 16, 2004 (the hurricanes). There were 1,360 on August 31 with 895 on September 3 and 790 on September 6. There were 840 on September 8 with 900 on September 10, then 610 seen on September 17 with 373 on September 23. There were 825 on September 25 with 425 on September 30, 230 on October 2 and 135 on October 6. That closed the early fall passage.*

#### Green Heron (*Butorides virescens*)

Numbers were very low for most of the year; there were somewhat higher numbers for the summer passage. During the Breeding Bird Survey a total of nine pairs located. For the early fall passage there were ten on August 15 with 13 on September 2, then 11 seen on September 17 with ten on September 30 and five on October 6. That was the early fall passage. For the late fall passage there was one on October 16 with three on October 21 and six on October 29, then one seen on November 2. There were five on November 6 with ten on November 11, then one seen on November 13. Finally for the late fall passage there were two from November 18 to November 25. For the winter passage there were four on November 30 with six on December 8, then five seen to December 16. There were seven on December 18 with five to December 31 and four on January 1. That completed the winter passage. For the early spring passage there were six on January 7 with nine on January 8, 11 on January 11, 12 on January 12 and 24 on January 15, then ten seen to January 27 with nine on January 29. There were 14 on February 3 with eight on February 5 and four to February 10. There were also eight on February 17. That

was the end of the early spring passage. There was now a break in the sightings as the area was closed. There was no late spring passage as this species nests so early. So for the summer passage there was one on April 17 with two on April 20, then one seen on April 23. There were four on April 26 and May 1 with five on May 4, six on May 7, seven on May 10, ten to May 22 and 13 on May 25, then eight seen on May 29 with six on May 31. There were nine on June 5 with 12 to June 19, 13 on June 25, 16 on July 4 and 18 on July 6, then 12 seen on July 9 with six on July 12. That finished the summer passage. For the early fall passage there were 11 on July 14 with 19 on July 16, then ten seen on July 20 with seven on July 23. There were 13 on July 27 and August 3 with nine on August 6. There were ten on August 10 with 11 on August 13, then *nine seen to August 25 with two on August 27. There were three on August 31 and September 3 with six on September 6, then three seen to September 23. There were five on September 25 with four on September 30 and one on October 2. That concluded the early fall passage.*

#### Black-crowned Night-Heron (*Nycticorax nycticorax*)

Present for most of the year in very low numbers, numbers were higher whilst Unit Two flooded. For the early fall passage there was one on August 15 with 12 on September 17, then eight seen on September 30. That was the early fall passage. For the main fall passage there were 37 on October 21 with seven on October 29 and two on November 6. There were 26 on November 11 with 17 on November 18, five on November 25 and two on November 30. That closed the main fall passage. For the winter passage there were two on December 8 with singles to December 16. There were two on December 18 with 14 on December 20, then 11 seen on December 28 with five on December 31 and three to January 12. That completed the winter passage. For the early spring passage there were three on January 15 with 89 on January 27, then six seen on January 29 with three on February 5 and singles to February 17. The count of 89 was the highest count for Zellwood but the highest count is now (2014) that of 241 on March 20, 2011. There were no records for the late spring passage so for the summer passage there were singles on April 20 and May 7. Later there were three on May 29 with singles on May 31 and June 12. That was the extent of the summer passage. For the early fall passage there were singles on August 10, *August 27, August 31, September 3, September 17 and September 23; that finished the early fall passage.*

#### Yellow-crowned Night-Heron (*Nyctanassa violacea*)

This was a very rare passage migrant; although present during the summer there was no evidence of breeding. For the fall passage there was one on September 30. There were no winter records. For the early spring passage there was one on January 1 with two on January 27. There were no further sightings until the summer passage. There were four on June 5 with

three to June 19 and one on June 22. There were three on June 25 and July 4 with two on July 12 and one on July 14. That closed the summer passage. For the early fall passage there were three on July 16 with singles on July 23 and July 27. There were two on August 3 with one on August 10. There were no later records for the early fall passage.

#### White Ibis (*Eudocimus albus*)

A quite common resident; the greatest numbers were seen during the winter and early spring passages. For the early fall passage there were 1,000 on August 15 with 260 on September 11, 165 on September 17 and 14 to October 6. That was the early fall passage. For the late fall passage there were 60 on October 16 with 95 on October 21, then 40 seen on October 29. There were 43 on November 2 with 61 on November 6, 205 on November 11 and 215 on November 18, then 60 seen on November 25. That closed the late fall passage. For the winter passage there were 75 on November 30 with 150 on December 3, 167 on December 8, 225 on December 11, 340 on December 16 and 365 on December 18, then 200 seen on December 20. There were 305 on December 28 with 370 on December 31 and 400 on January 1, then 140 seen on January 7. That completed the winter passage. For the early spring passage there were 255 on January 8 with 390 on January 12, then 240 seen on January 19 with 215 on January 27. There were 430 on January 29 with 380 on February 5 and 260 on February 9. There were 385 on February 10 with 160 on February 17. As with all these species I have no idea how their spring passages would have developed if the fields had not been drained. From the borders for the late spring passage I saw singles on March 7 and March 13 with two on March 16, six on March 18, nine on March 19, 19 on March 23 and 25 on March 25, then 20 seen on March 30. There were 23 on April 1 with 31 on April 6, then 25 seen on April 14 with two on April 17 and one on April 20. Now the area was open again. That closed the late spring passage so for the summer passage there were three on April 23 and April 26 with 73 on May 1 and 262 on May 4, then 142 seen on May 7 with 105 on May 10. There were 237 on May 14 with 43 on May 22 and 42 on May 25. There were 55 on May 29 with 140 on May 31, then 137 seen on June 7 with 88 on June 14, 87 on June 19 and 70 on June 22. There were 165 on June 25 with 78 on June 29, 77 on July 4, 62 on July 9, 51 on July 12 and ten on July 14. That concluded the summer passage. For the early fall passage there were 56 on July 16 with 150 on July 20 and 231 on July 27, then 189 seen on August 3 with 106 on August 10, 32 on August 13, 23 on August 18, 17 on August 20 and three on August 25.. There were five on August 27 with 20 on August 31, 21 on September 6 and 33 on September 17, then one seen on September 23. That ended the early fall passage.

### Glossy Ibis (*Plegadis falcinellus*)

A common fall to early spring passage migrant; numbers were lower for the rest of the year. For the early fall passage there were 200 on August 15 with 20 on September 2. There were 24 on September 11 with 150 on September 17, then ten seen on September 30. That was the early fall passage. For the main fall passage there were 85 on October 6 with 210 on October 16, 260 on October 21 and 280 on October 29, then 245 seen on November 2 with 192 on November 6. There were 280 on November 11 with 450 on November 18, then 160 seen on November 25. That closed the main fall passage. For the winter passage there were 330 on November 30 with 505 on December 3, then 365 seen on December 8. There were 485 on December 11 with 525 on December 16 and 615 on December 18, then 490 seen on December 28 with 255 on December 31. There were 558 on January 1 with 90 on January 7. That completed the winter passage. For the early spring passage there were 1,010 on January 8 with 710 on January 12, 380 on January 19 and 309 on January 27. The count of 1,010 was the highest count for Zellwood but the highest count is now (2014) that of 3,825 on December 1, 2004. There were 390 on January 29 with 352 on February 5, 300 on February 10 and 32 on February 17. Again for the next two months I was restricted to the borders. For the late spring passage there were two on March 23 with one on March 30 that was it. For the summer passage there were two on April 20 with 40 on April 26, 90 on May 1 and 170 on May 7, then 105 seen on May 14 with 49 on May 22, 16 on May 25 and 11 on May 29. There were 39 on May 31 with 19 on June 5. There were 27 on June 7 with 80 on June 12 and 179 on June 14, then 132 seen on June 22 with 68 on June 25, 14 on June 29 and ten on July 4. There were 50 on July 6 and July 9 with 24 on July 12 and six on July 14. That finished the summer passage. For the early fall passage there were 66 on July 16 with 124 on July 20, 127 on July 23, 171 on July 27, 181 on August 3, 188 on August 6 and 278 on August 10, *then 111 seen on August 18 with 85 on August 20, 51 on August 25, 50 on August 27, ten to September 3, eight on September 6 and six on September 8. There were 14 on September 10 with 12 on September 17, five on September 23 and two on September 25. That ended the early fall passage.*

### Roseate Spoonbill (*Platalea ajaja*)

A fall passage migrant; there were no records from December to July. For the early fall passage there were three on August 15 with five on September 2, then three seen on September 17. That was the extent of the early fall passage. For the main fall passage there were two on October 21 with singles on October 29 and November 2. There were six on November 11 and November 13 with five on November 18, four on November 20 and singles on November 25 and November 30. That closed the main fall passage. There were no records until the following fall. *For the early fall passage (in the following survey year) there were singles on August 20, August 25 and August 31 that was it.*

### Wood Stork (*Mycteria americana*)

A very common fall passage migrant with limited sightings during the winter passage; there was also a strong early spring passage until the fields drained. For the rest of the year numbers were very low. For the early fall passage there were 30 on August 15 with 45 on September 2, 265 on September 11 and 546 on September 17, then 395 seen on September 30 with 245 on October 6. That was the early fall passage. For the main fall passage there were 590 on October 16 with 570 on October 21 and 290 on October 29. There were 1,030 on November 2 with 1,125 on November 11 and 1,130 on November 18, then 1,115 seen on November 25 with 495 on November 30 and 75 on December 3. The count of 1,130 is still (2014) the highest count for Zellwood. That closed the main fall passage. For the winter passage there were 105 on December 8 with 15 on December 11 and 12 on December 16. There were 42 on December 18 with 87 on December 28, 211 on December 31 and 550 on January 1, then 355 seen on January 7 with 110 on January 8. That completed the winter passage. For the early spring passage there were 235 on January 12 with 627 on January 15, then 595 seen on January 19 with 505 on January 27. There were 815 on January 29 with 533 on February 3 and 435 on February 5. There were 670 on February 9 with 730 on February 10, then 620 seen on February 17; the last day. That concluded the early spring passage. For the late spring passage from the borders there were ten on March 7 with three on March 13 and singles to March 18. There were three on March 19 with 13 on March 30, then five seen on April 6. That ended the late spring passage. For the summer passage there were singles on May 1 and May 7 with later two on May 22, eight on May 25 and 74 on June 5, then eight seen on June 7 with two on June 12. There were 15 on June 14 with three on June 19 and singles to June 25. That concluded the summer passage. For the early fall passage there were four on July 4 with 14 on July 12, then one seen on July 27. There were 19 on August 3 with 22 on August 6, *then singles seen to August 18. There were six on August 25 with 26 on August 27, 49 on August 31 and 106 on September 6, then 76 seen on September 8 with 74 on September 10, 47 on September 17, two on September 23 and one on September 30. That was the early fall passage.*

### Black Vulture (*Coragyps atratus*)

For some unknown reason I did not record this species until October 21; surely it was in the area. For the rest of the year it was seen in low numbers. So for the late fall passage there were ten on October 21 with seven on November 11, three on November 13 and one on November 18. There were 11 on November 20 with ten on November 23, four on November 25 and three on December 3. That closed the late fall passage. For the winter passage there were four on December 8 with two to December 20 and one on December 28. There were two on December 31 with 16 on January 7, then 12 seen on January 11 with two on January 15. That completed the winter passage. For the early spring passage there were five on January 19 with

12 on January 29, then four seen on February 9 with one on February 10. There were 11 on February 17 with two on February 19. That concluded the early spring passage. For the late spring passage there were three on March 13 with seven on March 16, then six seen on March 18 with four on March 19 and one on March 23. There were five on March 25 with nine on March 30 and 14 on April 1, then seven seen on April 6 with six on April 9, four on April 14, two to April 23 and one on April 26. That ended the late spring passage so for the summer passage there were four on May 1 with three on May 4 and singles to May 14. There were seven on May 18 with nine on May 29, then six seen on June 5 with one on June 7. There were two on June 12 and June 14 with nine on June 22 and 12 on June 25, then one seen on June 29. There were four on July 4 with 23 on July 6, then nine seen on July 9 with singles to July 14. That finished the summer passage. For the early fall passage there were 13 on July 16 with five on July 20 and three on July 23. There were five on July 27 with six on August 3, then three seen on August 6. There were four on August 10 with ten on August 13 *and 16 on August 18, then two seen on August 20. There were three on August 25 with nine on August 27, then three seen to September 3. There were 14 on September 6 with 12 on September 10, seven on September 17 and one on September 23. There were six on September 25 with 26 on September 30, then four seen on October 2 with three on October 6. That was the early fall passage.*

#### Turkey Vulture (*Cathartes aura*)

Seen in low numbers all year; there was no evidence that they bred in the survey area. For the early fall passage there was one on August 15 with two on September 11 and nine on September 17, then five seen on September 30. That was the early fall passage. For the main fall passage there were six on October 6 and October 16 with ten on October 21, 25 on November 2 and 36 on November 11, then 29 seen on November 18 with 17 on November 20. There were 80 on November 23 with 60 on November 25 and three on November 30. That closed the main fall passage. For the winter passage there were 16 on December 3 with 60 on December 4 and 138 on December 11, then 130 seen on December 16 with 55 on December 20, 50 on December 31, 30 on January 1 and 29 on January 7. That completed the winter passage. For the early spring passage there were 41 on January 8 with 50 on January 11, then 35 seen on January 12 with 32 on January 19 and 17 on January 27. There were 36 on January 29 with 46 on February 3, 54 on February 5 and 150 on February 10, then 56 seen on February 17 with 25 on March 6 and one on March 11. That ended the early spring passage. For the late spring passage there were 42 on March 13, March 16 and March 18 with 17 on March 19 and three on March 23. There were six on March 25 and March 30 with 19 on April 1, then ten seen on April 6 with seven on April 9 and six on April 14. There were 15 on April 20 with four on April 23 and two to May 1. That finished the late spring passage. For the summer passage there were six on May 4 with five on May 10 and three on May 14. There were 54 on May 18 with 16 on May 22, seven on May 25 and four on May 29. There were seven on May 31 with 66 on June 5

and 88 on June 12, then 68 seen on June 14 with 44 to June 22, 41 on June 25 and 20 on June 29. That ended the summer passage. For the early fall passage there were 43 on July 4 with 48 on July 6, then 40 seen on July 9 with 27 on July 12 and 17 on July 14. There were 64 on July 16 with 29 to July 23. There were 36 on July 27 and August 3 with 49 on August 10, then 27 seen on August 13 with 13 on August 18. Now the heavier passage started. There were 46 on August 20 with 86 on August 25 and 125 on August 27, then 70 seen on August 31. There were 103 on September 3 with 153 to September 10, 174 on September 17 and 214 on September 25, then 126 seen on September 30 with 89 on October 2. That was the early fall passage.

#### Black-bellied Whistling-Duck (*Dendrocygna autumnalis*)

This was a rare fall passage migrant. For the early fall passage there were two on August 15. For the late fall passage there were two on October 21. For the early fall passage in the following year there was one on July 12. Later there were two on August 25 and August 27 with three on August 31. That was the extent of the early fall passage.

#### Fulvous Whistling-Duck (*Dendrocygna bicolor*)

This species bred in 1998 but I do not have a count of the number of pairs. There was a significant late fall passage with another event during the winter passage. There were no February sightings; they left before the last fields drained. During the Breeding Bird Survey a total of 25 pairs located in 1999 with first dates for the broods ranging from June 25 to August 3. After the breeding season there was a strong post-breeding gathering. For the early fall passage there were 50 on August 15 with 46 on September 2 and 26 on September 11. There were 76 on September 17 with 51 on September 30 and seven on October 6. That was the early fall passage. For the main fall passage there were 238 on October 16 with 250 on October 21, then 227 seen on October 29 with 195 on November 2, 98 on November 6, 41 on November 11 and 27 on November 13. There were 67 on November 18 with 50 on November 20, 34 on November 30 and 21 on December 3. That closed the main fall passage. For the winter passage there were 180 on December 4 with 189 on December 8, then two seen to December 16. There were 82 on December 18 with 55 on December 31, 25 on January 1, four on January 7 and three on January 11. That completed the winter passage. For the early spring passage there were four on January 12 and January 15 that was it.....For the summer passage there were five on April 26 with ten on May 7, 22 on May 10 and 28 on May 14, then 17 seen on May 18 with 16 on May 22, 12 on May 25, ten to May 31 and three to June 7. That was the summer passage. For the post-breeding gathering there were 15 on June 12 with 52 on June 19, then 44 seen on June 25 with 19 on July 4 and 17 on July 6. There were 73 on July 9 with 18 on July 12. There were 22 on July 14 with 48 on July 16 and 85 on July 20, then 40 seen on July 23. There were 82

on July 27 with 119 on August 3, 302 on August 6 and 366 on August 10, then 294 seen on August 18 with 252 on August 20, 125 on August 25, 89 on August 27 and 26 on August 31. The count of 366 was the highest count for Zellwood but the highest count is now (2014) that of 840 on October 22, 2003. There were 61 on September 3 with 73 on September 6 and 109 on September 10, then 76 seen on September 17 with 61 on September 23, 55 on September 25 and two to October 6. That closed the post-breeding gathering.

#### Greater White-fronted Goose (*Anser albifrons*)

This was a vagrant. For the winter passage there was one on December 4, December 7, December 8 and December 11.

#### Snow Goose (*Chen caerulescens*)

Normally this is a rare migrant but with the flooded fields this was a passage migrant and winter visitor. For the fall passage there were singles on November 2 and November 11 with ten on November 13, 27 on November 18, 28 on November 20, 29 on November 23, 30 on November 25 and 33 on November 30. That was the fall passage. I can normally separate out two passages by a dip in the numbers but in this case it is by a sudden large jump in the numbers. So for the winter passage there were 89 on December 3 and December 4 with 88 on December 8 and 86 to December 16. There were 90 from December 18 to December 28 however none could be found in December 31. The counts of 90 are still (2014) the highest counts for Zellwood. That completed the winter passage. Very surprisingly for the early spring passage there was one on February 17.

#### Ross's Goose (*Chen rossii*)

This was a vagrant. With the Snow Geese there were two on December 7 and December 8 with singles on December 11 and December 16. These are (to 2014) the only records for Zellwood.

#### Canada Goose (*Branta canadensis*)

This was a vagrant. There was a party of three present from October 29 to February 17. As the area was closed after that date I do not know when they actually left. These are again the only records for Zellwood.

### Muscovy Duck (*Cairina moschata*)

This was although an exotic a vagrant. There was one in-flight over Canal Road on June 5 and June 12.

### Wood Duck (*Aix sponsa*)

An uncommon early fall passage migrant; in contrast there were no records for the late fall passage. There were light winter and early spring passages; however none seen whilst the area closed. This was also a summer visitor with in the early fall a significant post-breeding gathering. During the Breeding Bird Survey a single pair located. For the early fall passage there were three on August 15 and September 2 with two on September 11 and September 30. That was the early fall passage. For the winter passage there was one on December 4 with five on December 8, then three seen on December 16. There were also four on December 18. That completed the winter passage. For the early spring passage there were seven on January 12 (this just might be a winter record). Later there was one on February 3 with two on February 5 and four on February 9 and February 17. That ended the early spring passage; none were seen whilst the area closed until April. For the late spring passage there were two on April 1 with five on April 14, then two seen to April 23. That closed the late spring passage. For the summer passage there were two on May 4 and May 7 with ten on May 10, then two seen on May 14. There were also two on May 29 and June 5 with four on June 7 and nine on June 12, then five seen to June 25 with three on July 6. There were six on July 9 and July 12 with four to July 20 and two to July 27. That ended the summer passage. For the post-breeding gathering there were eight on August 3 and August 10 with 16 on August 13, 22 on August 18 and 31 on August 20, then 13 seen on August 25. There were 24 on August 27 with 25 on August 31, 34 on September 6, 51 on September 8 and 53 on September 10, then two seen on September 17 with one on September 23. That was the post-breeding gathering it took up all of the early fall passage from August 3. The count of 53 was the highest count for Zellwood but the highest count is now (2014) that of 316 on September 9, 2011.

### Gadwall (*Anas strepera*)

This was a late fall passage migrant, a winter visitor and an early spring passage migrant; the greatest numbers were seen during the early spring passage. For the fall passage there were two on October 16 with six on October 29, then three seen on November 11. There were six on November 13 with eight on November 18, then five seen on November 20. That was the fall passage. For the winter passage there were nine on November 23 with ten on November 25, 29 on November 30 and 41 on December 3, then 22 seen on December 8 with 17 on

December 11. There were 44 on December 16 with 14 on December 18. There were 27 on December 20 with 52 on December 28, then 33 seen on December 31. There were 47 on January 1 with 57 on January 7 and 66 on January 8, then 40 seen on January 11. That completed the winter passage. For the early spring passage there were 89 on January 12 with 67 on January 19, 40 on January 29 and two on February 3. That was the extent of the early spring passage. The area was closed for two months; when it opened again on April 20 there was one present. There were no later sightings.

#### American Wigeon (*Anas americana*)

There was a light late fall passage followed by a major winter passage; numbers were much lower during the early spring passage. For the fall passage there were seven on October 29 with two on November 2. There were five on November 6 with 61 on November 11, 63 on November 13 and 107 on November 25, then 37 seen on November 30. That was the fall passage. For the winter passage there were 63 on December 3 with 116 on December 8, 123 on December 11, 142 on December 16 and 186 on December 18, then 168 seen on December 28 with 154 on January 1, 97 on January 7, 78 on January 8 and 70 on January 11. That completed the winter passage. The count of 186 is still (2014) the highest count for Zellwood. For the early spring passage there were 88 on January 12 with 93 on January 15 and 113 on January 19, then 77 seen on January 29 with 26 on February 5 and four to February 10. That was the extent of the early spring passage. Exceptionally there was a female on May 18. There were no records for the early fall passage.

#### American Black Duck (*Anas rubripes*)

This is normally a vagrant; for this year with the flooded fields of Unit Two up to three present. For the winter passage there were two from November 25 to December 4 with three on December 7, then two seen to December 11 with singles to January 8. That completed the winter passage. The count of three was the highest count for Zellwood but the highest count is now (2014) that of six on December 26, 2010. For the early spring passage there were two on January 11 and January 12 that was it. There were no later records.

#### Mallard (*Anas platyrhynchos*)

Probably present all year in small numbers but for some reason I have no records prior to October 21. During the Breeding Bird Survey a total of three pairs located; the broods were first seen from May 22 to June 14. Please note that under "Mallard" I include any hybrids with

the Mottled Duck. For the fall passage there were eight on October 21 and November 2 with two on November 6. There were eight on November 11 with 12 on November 13, then 11 seen on November 18 with four on November 25. That closed the fall passage. For the winter passage there were six on November 30 with nine to December 11 and 21 on December 16, then five seen on December 18 with three on December 20. The 21 seen on the 16<sup>th</sup> will have been "wild" birds from the north. There were four on December 28 with six on December 31 and eight on January 1, then one seen on January 7. That completed the winter passage. For the early spring passage there were 15 on January 8 with 11 on January 12, four to January 19, three on January 27 and two to February 3. There were six on February 5 with three on February 10 and two on February 17. That was the early spring passage. Whilst the area was closed for the late spring passage there were two on March 13 and March 18. For the summer passage there were two on April 20 with four on April 26 and May 1, then two seen on May 4. There were three on May 7 with four on May 10 and six on May 14, then ten seen on May 22 and May 29 with seven on May 31 and four to June 7. There were six on June 12 with ten on June 14, then nine seen on June 19 with five to June 29 and two to July 6. That was the summer passage. For the early fall passage/post-breeding gathering there were five on July 9 with four on July 14, two on July 20 and one on July 23. There were four on July 27 and August 3 *with eight to August 18 and 12 on August 20, then 17 seen on August 25 and August 31 with nine on September 6, five to September 17, four on September 23 and two to September 30. That closed the early fall passage/post-breeding gathering.*

#### Mottled Duck (*Anas fulvigula*)

There was a marked post-breeding gathering with decreasing numbers to January; numbers were then low until the summer and the post-breeding gathering. During the Breeding Bird Survey a total of 12 pairs located; broods were first seen from May 22 to June 25. For the post-breeding gathering there were 20 on August 15 with 30 on September 2, 75 on September 11 and 104 on September 17, then 50 seen on September 30 with ten on October 6. That was the post-breeding gathering. For the late fall passage there were 26 on October 16 with 56 on October 21, then 55 seen on November 2 with 24 on November 6. There were 54 on November 11 with 63 on November 13, then 50 seen on November 20 with 22 on November 30 and 20 on December 3. That closed the late fall passage. For the winter passage there were 33 on December 8 with 82 on December 16, then 45 seen on December 20 with 22 on December 28 and 16 on December 31. There were 30 on January 1 with 26 on January 8 and 18 on January 11. That completed the winter passage. For the early spring passage there were 23 on January 12 with 20 on January 19, nine on January 29, six on February 5 and two on February 9. That was the extent of the early spring passage. For the late spring passage as seen from the borders there were four on March 16 with two on March 23; later there were three on April 9. That concluded the late spring passage. For the summer passage there were three on April 20 with

four on April 23, nine on April 26 and 12 on May 1, then ten seen on May 4 with nine on May 7. There were 11 on May 10 with four on May 14. There were 15 on May 18 with 28 on May 22, 29 on May 29 and 35 on May 31, then 29 seen on June 5. There were 39 on June 7, with 40 on June 12 and 72 on June 19, then 50 seen on June 22 with 24 on June 25 and six on June 29. There were 26 on July 4 with 12 on July 6. That closed the summer passage. For the post-breeding gathering there were 22 on July 9 with 35 on July 14, then 30 seen on July 16 with 27 on July 20 and nine on July 23. There were 24 on July 27 with 85 on August 3, 99 on August 6, 151 on August 10, 177 on August 13 *and 197 on August 20, then 148 seen on August 25 with 109 on August 27, 69 on August 31 and 61 on September 3. The count of 197 was the highest count for Zellwood but the highest count is now (2014) that of 397 on September 2, 2011. There were 77 on September 6 with 62 on September 8, 51 on September 10, 38 on September 17, 16 on September 25 and four on September 30. That ended the post-breeding gathering.*

#### Blue-winged Teal (*Anas discors*)

There was a minor passage in the early fall followed by a massive passage in the late fall. There was a separate very large winter passage with another separate but still large passage in the early spring. In the early fall of 1999 in contrast to 1998 there was a significant passage. For the early fall passage (1998) there were two on August 15 with 40 on September 2, 70 on September 11, 135 on September 17 and 1,250 on September 30, then 60 seen on October 6. That was the early fall passage. For the main fall passage there were 5,000 on October 16 and October 21 with 7,500 on October 29 and 10,500 on November 2, then 8,100 seen on November 6 with 4,250 on November 11, 890 on November 18 and 110 on November 25. That completed the main fall passage. The count of 10,500 is still (2014) the highest count for Zellwood. For the winter passage there were 1,800 on November 30 with 6,500 on December 8 and 6,580 on December 16, then 4,760 seen on December 18 with 1,550 on December 20, 510 on December 28, 335 on December 31, 320 on January 1 and 205 on January 7. That completed the winter passage. For the early spring passage there were 335 on January 8 with 450 on January 11, 2,490 on January 12, 2,980 on January 15, 3,500 on January 19, 4,190 on January 27 and 4,300 on January 29, then 2,450 seen on February 5 with 950 on February 9, 450 on February 10 and 50 on February 17. I wonder how high this count would have gone if the fields had not been drained. That concluded the early spring passage. For the late spring passage there were six on April 20 with singles to May 1. There were three on May 4 with two on May 18 and singles to June 7. Finally for the late spring passage there were two on June 12. There were no summer sightings. For the early fall passage there were three on June 25 with later singles on July 16 and July 27. There were two on August 6 and August 10 with 31 on August 13, *37 on August 18, 186 on August 20, 273 on August 25 and 908 on August 27, then 810 seen on August 31 with 440 on September 3 and 425 on September 6. There were 1,178 on September 8*

*with 1,515 on September 10 and 2,220 on September 17, then 155 seen on September 23 with 145 to September 30. That was the early fall passage.*

#### Cinnamon Teal (*Anas cyanoptera*)

This was a vagrant; at least it was in every other year. Only adult males were recorded. For the winter passage there were singles on November 30, December 11 and December 18. Those were the only sightings for the winter passage. For the early spring passage there was one on January 15 with three on January 19, then singles seen on January 20, January 27 and February 3. There were three on February 5 with two on February 9 and one on February 10. On February 9 there was a hybrid Cinnamon Teal/ Blue-winged Teal. The counts of three are still (2014) the highest counts for Zellwood.

#### Northern Shoveler (*Anas clypeata*)

There was a major presence from October to early February; there were light late spring and early fall passages. For the early fall passage there were 17 on September 11 with 20 on September 17, 35 on September 30 and 40 on October 6. That was the early fall passage. For the main fall passage there were 40 on October 16 with 170 on October 21, 216 on November 2, 228 on November 6, 388 on November 11 and 477 on November 13, then 400 seen on November 18 with 351 on November 25. That closed the main fall passage. For the winter passage there were 468 on November 30 with 575 on December 8 and 645 on December 16, then 540 seen on December 18 with 375 on December 20 and 145 on December 28. There were 630 on December 31 with 612 on January 1, 442 on January 7, 429 on January 8 and 410 on January 11. That completed the winter passage. For the early spring passage there were 515 on January 12 with 535 on January 15 and 770 on January 27, then 637 seen on January 29 with 540 to February 5, 394 on February 9, 370 on February 10 and 75 on February 17. The count of 770 is still (2014) the highest count for Zellwood. That concluded the early spring passage. With the area closed there were no further sightings until April 20. So for the remnants of the late spring passage there were 14 on April 20 with 18 on April 26, then 14 seen on May 1 with ten on May 7, four on May 10 and singles to May 18. That ended the late spring passage. *For the early fall passage there was one on September 8 with six on September 10 and ten on September 17, then six seen to September 30 with four on October 2. That was the early fall passage.*

### Northern Pintail (*Anas acuta*)

There was a light fall passage followed by a very strong winter passage; numbers were lower during the early spring passage. For the fall passage there were two on October 16 with 20 on October 21 and 29 on October 29, then ten seen on November 2 with eight on November 6, seven on November 13 and two on November 25. That closed the fall passage. For the winter passage there were 16 on November 30 with 65 on December 4, 180 on December 8, 316 on December 11 and 420 on December 16, then 334 seen on December 18 with 263 on December 28, 170 on December 31, 106 on January 1 and 64 on January 7. The count of 420 is still (2014) the highest count for Zellwood. That completed the winter passage. For the early spring passage there were 145 on January 8 with 180 on January 11 and 260 on January 12, then 184 seen on January 15 with 120 on January 19, 60 on January 27, 26 on January 29 and 12 on February 3. There were 80 on February 5 with 23 on February 10 and four on February 17. That closed the early spring passage. There were no later records.

### Green-winged Teal (*Anas crecca*)

There was what in other years would be a strong late fall passage; this was followed by a massive winter and still very strong early spring passage. There were also very light late spring and early fall passages in 1999. For the late fall passage in 1998 there were two on October 21 with 20 on October 29 and 700 on November 6, then 330 seen on November 11. There were 350 on November 13 with 1,300 on November 18, then 350 seen on November 25. That closed the late fall passage. For the winter passage there were 2,100 on November 30 with 3,050 on December 3 and 7,700 on December 8, then 7,350 seen on December 11 with 2,400 on December 16. There were 12,565 on December 18 with 8,550 on December 20, 5,695 on December 28, 5,640 on December 31, 4,600 on January 7, 2,950 on January 8 and 2,250 on January 11. The count of 12,565 is still (2014) the highest count for Zellwood. That completed the winter passage. For the early spring passage there were 4,700 on January 12 with 5,970 on January 15, 6,950 on January 19 and 7,120 on January 27, then 6,200 seen on January 29 with 4,650 on February 5, 3,800 on February 9, 2,400 on February 10 and 450 on February 17. That ended the early spring passage. For the late spring passage whilst the area closed there were eight on March 13. When the area re-opened there were 41 on April 20 with five on April 26. There were six on May 1 with seven on May 4, then six seen on May 7 with five on May 10, two on May 14 and one on May 18. That was the late spring passage. *For the early fall passage there was one on August 20. Later there were three on September 17 with 11 on September 23, then three seen on September 25 with one on September 30. That was the extent of the early fall passage.*

### Canvasback (*Aythya valisineria*)

This was a passage migrant and winter visitor; only low numbers seen. For the fall passage there were singles on October 29, November 6, November 11 and November 18. That was the extent of the fall passage. For the winter passage there were three on November 30 and December 3 with five on December 7 and December 8, then three seen to December 16. There were four on December 18 with five on December 20 and December 28, then three seen on December 31. There were five from January 1 to January 8 with one on January 11. That completed the winter passage. For the early spring passage there were two on January 12 and January 15 with three on January 19, four on January 27 and five on January 29, then singles seen to February 10. That ended the early spring passage. These counts of five are still (2014) the highest counts for Zellwood.

### Redhead (*Aythya americana*)

This was an uncommon passage migrant and winter visitor. For the late fall passage there was one on November 18 with two on November 20, then one seen on November 23 that was it. For the winter passage there were two on November 30, December 3 and December 8 with singles to December 18. There were two on December 20 with three on January 1, then one seen on January 7. That completed the winter passage. For the early spring passage there was one on January 15 with eight on January 19, then four seen on January 20 with three on January 27. The count of eight was the highest count for Zellwood but the highest count is now (2014) that of 18 on January 3, 2002. There were four on January 29 with five on February 5. That ended the early spring passage; there were no later records.

### Ring-necked Duck (*Aythya collaris*)

There was a major late fall and winter passage; only small numbers seen during the early spring passage. For the fall passage there were two on October 16 with five on October 21, 190 on October 29 and 373 on November 6, then 343 seen on November 11 with 184 on November 13. The rest of the fall passage appears to have been hijacked by the winter passage. For the winter passage there were 527 on November 18 with 840 on November 20, 4,570 on November 25, 7,845 on November 30 and 11,900 on December 3, then 6,750 seen on December 8 with 2,250 on December 11, 1,850 on December 16 and 250 on December 18. The highest count for Zellwood is now (2014) that of 16,140 on January 1, 2014. There were 360 on December 20 with 380 on December 28, then 110 seen on January 1 with 100 on January 8, 40 on January 11 and 26 on January 12. That completed the winter passage. For the early spring passage there were 103 on January 15 with 96 on January 27, 72 on January 29, 70 on February

3, 61 on February 5, 25 on February 9, eight on February 10 and four on February 17. That was the early spring passage. There were no later records.

#### Greater Scaup (*Aythya marila*)

An uncommon passage migrant and winter visitor; this is really a coastal species so even that statement is exceptional. For the late fall passage there were two on November 6. Later there were singles on November 18, November 20 and November 25. That was the late fall passage. For the winter passage there were three on December 3 with five on December 8, then three seen to December 16 with singles to January 1. That completed the winter passage. For the early spring passage there were three from January 7 to January 12 with two on January 19. There were three from January 27 to February 3 with two on February 5. That closed the early spring passage. There were no later sightings.

#### Lesser Scaup (*Aythya affinis*)

There was a minimal late fall passage with significant passage during the winter and early spring. After the area reopened there was a limited late spring passage. For the late fall passage there were two on November 11 and November 13 with one on November 18. There were six on November 20 with nine on November 25, then four seen to December 3 with three on December 4. That was the late fall passage. For the winter passage there were 17 on December 8 with 25 on December 11, 93 on December 16 and 103 on December 18, then 81 seen on December 28 with 56 on December 31, 48 on January 1 and 34 on January 7. That completed the winter passage. For the early spring passage there were 132 on January 8 with 279 on January 12, then 250 seen on January 15 with 176 on January 27, 157 on January 29, 103 on February 5, 37 on February 10 and 34 on February 17. The count of 279 was the highest count for Zellwood but the highest count is now (2014) that of 3,300 on January 23, 2009. When the area opened up again for the late spring passage there were three on April 26 with two on May 1. There were three on May 4 and May 7 with two to May 14 and one on May 18. Finally for the late spring passage there were two on May 25 and May 29.

#### Bufflehead (*Bucephala albeola*)

This was an uncommon winter and early spring visitor. For the winter passage there were singles on November 30, December 3, December 4, December 16, December 18 and December 20 with five on December 28, then two seen to January 1 with one on January 7. That completed the winter passage. For the early spring passage there were two on January 11

with three on January 12 and five on January 15, then one seen on January 19. There were three on January 29 with four on February 3 and February 5. That closed the early spring passage; there were no later records. It seems strange but the 2<sup>nd</sup> year of the survey saw greater numbers and they were all at the 300 acre Sand Farm Cattail Marsh.

#### Hooded Merganser (*Lophodytes cucullatus*)

Seen from November to February; numbers gradually climbed to a peak in early January. For the late fall passage there were two on November 6 with three to November 18, then ten seen on November 20 and November 30 with nine on December 3. That closed the late fall passage. For the winter passage there were nine on December 8 with 12 on December 11, 15 on December 16, 18 on December 18, 32 on December 20, 36 on December 28, 40 on December 31 and 70 on January 7, then 57 seen on January 8. That completed the winter passage. For the early spring passage there were 61 on January 11 with 100 on January 12, then 85 seen on January 15 with 33 on January 19, 23 on January 27 and 20 on January 29. The count of 100 it still (2014) the highest count for Zellwood. There were 41 on February 3 with six on February 5 and three to February 17. That ended the early spring passage.

#### Red-breasted Merganser (*Mergus serrator*)

A rare fall to early spring passage migrant; there were also some summer sightings this year. For the late fall passage there was one on November 20. For the winter passage there were singles on November 30, December 3, December 4 and December 8. There were five on December 18 with later six on January 7 and January 11. That completed the winter passage. There were no sightings for either spring passage. For the summer passage there were two on May 31, June 5, June 7 and June 12.

#### Ruddy Duck (*Oxyura jamaicensis*)

Whilst the fields of Unit Two were flooded the counts relate to those fields; later the counts relate to the Sand Farm Cattail Marsh. The numbers in the fields will bear no relationship to the large flocks that will have been out on Lake Apopka. For the late fall passage there were 12 on October 16 with 22 on October 21, 100 on October 29, 139 on November 2 and 240 on November 11, then 114 seen on November 13. That closed the late fall passage. For the winter passage there were 164 on November 18 with 203 on November 20, 278 on November 25, 357 on November 30, 430 on December 3 and 517 on December 8, then 385 seen on December 11 with 315 on December 16 and 95 on December 18. There were 515 on

December 20 with 347 on December 28, 150 on January 1 and 132 on January 7. That completed the winter passage. For the early spring passage there were 322 on January 8 with 280 on January 11. There were 293 on January 12 with 377 on January 15, then 349 seen on January 19 with 274 on January 29, 147 on February 5, 64 on February 9 and 54 on February 17 when the area was closed. That concluded the early spring passage. For the summer passage there was one present from May 1 to August 3; a date that was part of the early fall passage. There were two on August 6, August 10 and August 13 *with singles to August 31. That was the early close of the early fall passage.*

### Osprey (*Pandion haliaetus*)

A non-breeding resident; there appeared to be a minor fall passage and numbers were somewhat higher during the summer months. For the early fall passage there were four on August 15 with 12 on September 2 and 18 on September 17, then 11 seen on September 30. That was the early fall passage. For the late fall passage there were 14 on October 6 with 21 on October 16, then 18 seen on October 21 with 17 on November 2 and five to November 11. There were ten on November 13 with seven on November 18. That closed the late fall passage. For the winter passage there were eight on November 25 and November 30 with six on December 3, three to December 11 and two on December 16. There were five on December 18 with singles to December 28. There were two on December 31 and January 1 with singles to January 8. That completed the winter passage. For the early spring passage there were two on January 11 with singles to January 15. There were two from January 19 to January 29 with four on February 3 and February 5, then one seen on February 9. There were four on February 10 with eight on February 17; I do not know what happened next so that was the end of the early spring passage. For the main spring passage there was one on March 7 with 18 on March 11, then 14 seen on March 13 with 11 on March 16, nine to March 23 and seven to March 30. There were 11 on April 1 with 12 on April 9, then eight seen on April 14. There were ten on April 17 with 11 on April 20, 12 on April 23 and 18 on May 1, then seven seen to May 7. That concluded the main spring passage. For the summer passage there were 14 on May 10 with 15 on May 14, then seven seen on May 18. There were ten on May 22 with 11 on May 25, 12 on May 29 and 19 on May 31, then 13 seen to June 14 with 12 on June 19 and nine on June 22. There were 13 on June 25 with nine to July 4 and eight on July 6. That finished the summer passage. For the early fall passage there were 12 on July 9 with nine to July 16, six on July 20 five on July 27 and three on August 3. There were seven on August 6 and August 10 with five on August 13, *two on August 18 and one on August 20. There were three on August 25 with nine on August 31, then six seen on September 3 with four on September 6, three on September 10 and one on September 17. That ended the early fall passage.*

### Swallow-tailed Kite (*Elanoides forficatus*)

There were no sightings in the fall of 1998; there was a minor summer passage together with a post-breeding gathering in 1999. Numbers were low compared to later years. For the summer passage there were three on April 23 with six on May 10, then three seen on May 18 with one on May 25. There were six on May 29 with nine on May 31, then three seen on June 5 with two on June 14 and one on June 19. That closed the summer passage. For the post-breeding gathering there were 15 on June 22 with 21 on June 25, 23 on July 4, 43 on July 6 and 44 on July 9, then 39 seen on July 12 with 16 on July 14. There were 64 on July 16 with 102 on July 20, then 75 seen on July 27 with 44 on August 3, 28 on August 6, 20 on August 10, five on August 13 and two on August 20. *The count of 102 was the highest count for Zellwood but the highest count is now (2014) that of 1,642 on August 3, 2012. Finally for the post-breeding gathering there were three on August 25.*

### Snail Kite (*Rostrhamus sociabilis*)

This was a vagrant. For the early fall passage a juvenile flew to the north on July 16.

### Bald Eagle (*Haliaeetus leucocephalus*)

With one exception seen in the fall from late October; numbers were highest from late November to mid-February. During the Breeding Bird Survey a pair located at the Sand Farm. For the early fall passage there were four on September 17. For the main fall passage there were three on October 29 with six on September 6, then seven seen on November 13 and November 20 with six on November 23. That closed the main fall passage. For the winter passage there were 12 on November 25 with seven on November 30, four on December 3 and three on December 8. There were 17 on December 11 with 19 on December 16, then two seen on December 18. There were three on December 20 with eight to January 1 and 18 on January 7, then 17 seen on January 8 with ten on January 11. That completed the winter passage. For the early spring passage there were 14 on January 12 with 11 on January 15, ten on January 19, eight on January 27 and seven on January 29. There were nine on February 3 with three on February 5. There were five on February 9 with ten on February 10, then seven seen on February 17. That was the early spring passage. For the late spring passage there were four on March 11 with one on March 13. There were two on March 16 and March 18 with three on March 19, then two seen to March 25. There were four on March 30 with two on April 1. There were three on April 6 with four from April 9 to April 23, then two seen to May 1. That ended the late spring passage. For the summer passage there were two from May 4 to May 10 with three on May 18, then singles seen to May 25. There were two on May 29 and May 31 with three on

June 5 and June 7, then two seen on June 12 with one on June 14. There were two on June 19 and June 22 with singles to July 4. That finished the summer passage. For the early fall passage there were three on July 6 and July 12 with singles to July 27. There were two on August 3 and August 6 with three on August 10, *then two seen on August 20 with singles to September 3. There were two on September 6 with three on September 8, then one seen on September 10. With the next influx numbers returned to more normal levels. There were two on September 17 with three on September 23 and four on September 25, then one seen on September 30. That was the early fall passage.*

#### Northern Harrier (*Circus cyaneus*)

A quite common passage migrant and winter visitor; the habitat had at this time still to develop to support the larger numbers of later years. For the early fall passage there was one on September 17. For the main fall passage there were four on September 30 and October 6 with 22 on October 16 and 24 on October 21, then 15 seen on October 29 with 11 on November 2. There were 24 on November 6 with 11 on November 11. There were 13 on November 13 with 24 on November 18 and 26 on November 20, then ten seen on November 30 with six on December 3. That closed the main fall passage. For the winter passage there were 13 on December 8 with 12 on December 11 and ten on December 16. There were 13 on December 18 with 27 on December 20, then nine seen to December 31. There were 17 on January 1 with 16 on January 7 and ten on January 8. That completed the winter passage. For the early spring passage there were 24 on January 11 with 15 on January 15, 12 on January 19, ten to February 5, seven on February 9 and six on February 10. There were eight on February 17 but I do not know what happened next. That concluded the early spring passage. For the late spring passage there were six on March 7 with eight on March 11 and ten on March 13, then 12 seen on March 16 and March 19 with nine on March 23, three on March 25 and two on March 30. There were ten on April 1 with 14 on April 6, then eight seen on April 14 with five on April 17, four on April 20 and two on April 23. There were five on April 26 and May 1 with two on May 4 and one on May 7. There were three on May 10 and May 18. That ended the late spring passage. *For the early fall passage there were singles on August 10 and August 18 with three on August 31, six on September 3, 11 on September 6, 12 on September 10, 14 on September 17, 17 on September 23, 26 on September 25 and 29 on September 30, then 21 seen on October 2 with 12 on October 6. That was the early fall passage.*

#### Sharp-shinned Hawk (*Accipiter striatus*)

A passage migrant and winter visitor; very exceptionally this species summered and may even have bred. For the early fall passage there was one on August 15. For the main fall

passage there were singles on October 16, October 29, November 2, November 6, November 11 and November 13. There were also two from November 18 to November 30. That closed the main fall passage. For the winter passage there were two on December 3 and December 4 with one on December 8. There were two on December 11 with three on December 16, then four seen on December 20 and December 31 with two on January 7 and one on January 11. That completed the winter passage. For the early spring passage there were two on January 12 with singles to January 20. There were three on January 27, January 29 and February 5 with four on February 10, then one seen on February 17. That ended the early spring passage. For the late spring passage there were two on March 7 with singles to March 16. There were two on March 18 with three on March 23 and four on March 25, then two seen to April 14. That finished the late spring passage. For the summer passage there was one on May 4 with two on May 10 and May 14, then singles seen to June 14. There were two on June 22 with singles to July 12. There were two on July 16 with singles to July 23. There were two on July 27 and August 3 with six on August 6, then three seen on August 10 *with two to August 20 and singles to August 27. The count of six was the highest count for Zellwood but the highest count is now (2014) that of 26 on November 30, 2007. There were two on August 31 with three on September 3, then singles seen to September 8. There were two on September 10 with singles to October 6. I tend to believe that a pair stayed for the summer and bred leading to a mini post-breeding gathering in early August. I therefore treat all these sightings to this date as part of the summer passage.*

#### Cooper's Hawk (*Accipiter cooperii*)

If the records really do tell the story then this species was all but absent during the first year after which it was seen on nearly every visit. No pairs were located during the Breeding Bird Survey. For the early fall passage there was one on September 17. For the late fall passage there was one on November 13. For the winter passage there was one on December 18. For the early spring passage there were singles on January 12 and February 5. For the late spring passage there was one on March 13. There were no further sightings until July. For the minimal post-breeding gathering there was one on July 23 with two to August 3, three on August 6 and four on August 13, *then one seen on August 18. There were three from August 20 to August 27 with five on August 31, then two seen on September 3 with one on September 6. That closed the post-breeding gathering. For the early fall passage there were two on September 10 with three on September 23, then two seen to September 30 with one on October 2. That was all that was left of the early fall passage.*

### Red-shouldered Hawk (*Buteo lineatus*)

Numbers were highest from mid-November to early February but even then the counts only just reached double figures. During the Breeding Bird Survey a total of four pairs located. For the early fall passage there were two on August 15, September 2 and September 17. For the main fall passage there were five from September 30 to October 16 with four on October 21. There were five on October 29 and November 2 with six on November 6, seven to November 18, nine on November 20 and 11 on November 30, then six seen on December 3 with four on December 4. That closed the main fall passage. For the winter passage there were ten on December 8 with six to December 16 and four on December 18. There were five on December 20 with six on December 28, then eight seen on December 31 and January 1 with five on January 7, three on January 8 and one on January 11. That completed the winter passage. For the early spring passage there were five on January 12 with nine from January 15 to January 29, then six seen on February 3 with four on February 5. There were nine on February 9 with seven on February 10 and six on February 17. That ended the early spring passage. Numbers were now lower so for the late spring passage there were singles on March 13, March 16 and March 18 with two on March 19, then three seen on March 23 and March 25 with two on March 30 and singles to April 20. That finished the late spring passage. For the summer passage there were two from April 26 to May 7 with three on May 10 and May 14, then two seen on May 18. There were three from May 22 to May 31 with five on June 5, then three seen on June 7 with two on June 12. There were four on June 14 with one on June 19. There were three on June 22 with five on June 25 and June 29 then four seen on July 4 with two on July 6. There were eight on July 9 with four to July 14. That concluded the summer passage. For the early fall passage there were eight on July 16 with six on July 20 and four on July 23. There were eight on July 27 with 11 on August 3, then five seen on August 6. There were seven on August 10 with 12 on August 13, then four seen on August 18. There were six on August 20 with 12 to August 27, 13 on August 31 and 16 on September 3, then 14 seen on September 6 with ten to September 10. There were 17 on September 17 with 20 on September 25 and 26 on September 30, then 20 seen on October 6 with 16 on October 8. That was the early fall passage.

### Broad-winged Hawk (*Buteo platypterus*)

This was a vagrant. For the late fall passage there was one on October 6. More unusually for the late spring passage there was one on March 16.

### Short-tailed Hawk (*Buteo brachyurus*)

This was a vagrant. *There were no records for this year but for the early fall passage there was one on September 30, 1999.*

### Red-tailed Hawk (*Buteo jamaicensis*)

Present from late October in low numbers; counts were a little higher during the early spring passage. For many birds of prey we have become used to often very high numbers whereas in the first years numbers were often very low. During the Breeding Bird Survey a total of six pairs located; the first brood was seen on July 9. For the late fall passage there were singles on October 21 and October 29 with two on November 2, then one seen on November 6. There were also two from November 11 to November 30. That closed the late fall passage. For the winter passage there were three on December 3 with four to December 7 and six on December 8, then four seen on December 16 with three on December 18. There were six on December 20 with four to December 31. There were eight on January 1 with six on January 7. That completed the winter passage. For the early spring passage there were ten on January 8 with seven on January 11 and six to January 15. There were 11 on January 19 with 12 on January 27, then ten seen on January 29 with nine on February 3. There were also 12 on February 5 with eight on February 9. There were nine on February 10 with 12 on February 17; then the area was closed. That ended the early spring passage. For the late spring passage there were four on March 7 with nine on March 11 and 11 on March 13, then ten seen on March 16 with seven on March 19, six on March 23 and five on March 25. There were seven on March 30 and April 6 with five on April 9, four on April 14 and two on April 17. There were six on April 20 with seven on April 26, then six seen on May 1. That concluded the late spring passage. For the summer passage there were seven on May 4 with six to May 10, five on May 14 and three on May 18. There were five on May 22 with six on May 25, then four seen to June 7. There were five on June 12 with six on June 14, seven on June 19, eight to July 4 and 11 on July 9, then nine seen on July 12 with eight to July 16 and seven on July 20. That was the end of the summer passage. For the early fall passage there were eight on July 23 and July 27 with 11 on August 3, 16 on August 9 and 24 on August 10, then 20 seen on August 13 *with 18 on August 20 and 15 to August 27. There were 18 on August 31 with 23 on September 6, then 12 seen on September 8. There were 16 on September 10 with 18 on September 17, then ten seen on September 23. There were 17 on September 25 and September 30 with 21 on October 2, then ten seen on October 6. That was the early fall passage.*

### Golden Eagle (*Aquila chrysaetos*)

This was a vagrant. For the early spring passage there was an adult on January 8 and January 12.

### Crested Caracara (*Caracara cheriway*)

This was also a vagrant. For the early fall passage there was an adult at the Sod Farm on July 27.

### American Kestrel (*Falco sparverius*)

A quite common passage migrant and winter visitor; the greatest numbers were seen during the early spring passage. There were no summer sightings. For the fall passage there were two on September 30 with one on October 6. There were three on October 16 with seven on October 21, then three seen on October 29 with two on November 2. There were six on November 6 and November 13 with five to November 20. There were seven on November 25 with four on November 30. That was the fall passage. For the winter passage there were seven on December 3 with ten on December 8, then four seen on December 11. There were five on December 16 with seven on December 18 and eight on December 20, then five seen to January 1. There were eight on January 7 with seven on January 8 and five on January 11. That completed the winter passage. For the early spring passage there were nine on January 12 with eight on January 15. There were nine from January 19 to January 29 with ten on February 3 and 11 on February 5, then seven seen on February 9. There were eight on February 10 with 13 on February 17; again I do not know what happened next. That closed the early spring passage. For the late spring passage there were two on March 7 with four on March 11 and six on March 13, then seven seen on March 16 and March 19 with five on March 23. There were six on March 25 with nine on March 30, then two seen to April 6 with one on April 14. There were four on April 17 with one on April 20. That ended the late spring passage. *For the early fall passage there were singles on August 31 and September 3 with three on September 6, then two seen on September 8 with one on September 10. There were eight on September 17 with 11 on September 23, then nine seen on September 25 with six on September 30. That was the end of the early fall passage.*

### Merlin (*Falco columbarius*)

This was an uncommon spring passage migrant and winter visitor. For the winter passage there were singles on December 11, December 18, December 20, December 28,

December 31 and January 1. For the early spring passage there were singles on January 12 and February 3. For the main spring passage there were singles on March 25, April 26, May 4 and May 18. Normally this is a fall passage migrant with a few records for the winter and spring passages; not so this year. *For the early fall passage there were singles on September 25 and September 30.*

#### Peregrine Falcon (*Falco peregrinus*)

A fall and early spring passage migrant; there was a single record for the winter passage. For the early fall passage there were singles on September 11, September 17 and September 30. For the main fall passage there were singles on October 6, October 16, November 6, November 13, November 25 and November 30. For the winter passage there was one on December 16. For the early spring passage there were singles on January 12, January 15, January 19, February 3 and February 5. That was the end of the early spring passage, there were no later sightings.

#### Northern Bobwhite (*Colinus virginianus*)

A resident; during the Breeding Bird Survey a total of 40 pairs located with the first brood being seen on July 4. Initially I suspect I just concentrated on the flooded areas of Unit Two and that is why for a range of species the sightings do not start until the late fall or even the winter. For the early fall passage there were six on September 30. For the main fall passage there were singles on November 20 and November 25. For the winter passage there was one on December 18 with two on December 20 and seven on January 1. For the early spring passage there was one on January 29 with 12 on February 5 and February 17. That was the early end of the early spring passage. For the late spring passage there were two on March 19 and March 23 with one on March 25. There were two on April 1 with four to April 14, five on April 17 and six on April 20, then three seen on April 23. That finished the late spring passage. For the summer passage there were six on April 26 with nine on May 1 and 12 on May 7, then five seen on May 10 with three on May 14. There were nine on May 18 and May 22 with 14 on May 29, then 17 seen from May 31 to June 12 with 14 on June 19, 13 on June 25 and 11 on June 29. There were 24 on July 4 with 30 on July 6, then six seen to July 12 with four on July 14. There were nine on July 16 with five on July 20 and two to July 27. There were six on August 3 with one on August 6. There were three on August 10 with four on August 13, *then two seen to August 27. In reality that was probably the end of the summer "passage". For the early fall passage the only sighting was of one on September 23.*

### King Rail (*Rallus elegans*)

An uncommon passage migrant and winter visitor; there was a single record for the late spring passage. There was no evidence of breeding this year. For the late fall passage there were singles on November 11, November 18, November 25 and November 30. For the winter passage there were two on December 3 with one on December 16. There were also two on December 20. That completed the winter passage. For the early spring passage there were singles on January 11, January 12, January 15 and February 10. For the late spring passage there was one on April 26. Remember the area had been closed for two months. For the summer passage there were singles on June 5 and July 4. There were no early fall sightings.

### Virginia Rail (*Rallus limicola*)

This was a very rare passage migrant. For the late fall passage there was one on November 18. For the winter passage there was one on December 3. For the early spring passage there were singles on January 7 and February 9. There were no further sightings.

### Sora (*Porzana carolina*)

A passage migrant and winter visitor in small numbers; the highest numbers were seen from mid-December to early February. For the main fall passage there was one on September 2. For the late fall passage there was one on November 11 with five to November 25 and six on November 30, then two seen on December 3. That closed the main fall passage. For the winter passage there were two on December 4 and December 7 with seven on December 8, ten on December 16 and 14 on December 20, then 13 seen on December 28 with ten on December 31 and eight on January 1. There were 16 on January 7 with 18 on January 8, then four seen on January 11. That completed the winter passage. For the early spring passage there were 18 on January 12 with 20 on January 15, then seven seen on January 19 with five on January 27. There were six on January 29 with ten on February 3, then eight seen on February 5 with six on February 9 and five on February 10. There were also eight on February 17. That ended the early spring passage. For the late spring passage there were singles on March 19 and March 30. There were two on April 20 with one on April 26. There were singles on May 10 and May 14 with two on May 18. Finally for the late spring passage there was one on May 31. There were no records for the early fall passage.

### Purple Gallinule (*Porphyrio martinica*)

A summer visitor; there were either indications of a post-breeding gathering or an early fall passage. A single individual stayed through the winter. During the Breeding Bird Survey a total of 21 pairs located; broods were first seen from June 7 to July 12. For the early fall passage there were two on September 2. For the main fall passage there was one on October 6 with four on October 21, then one seen on November 2. From November 6 an individual was seen regularly through to February 17 i.e. for half of the main fall passage, the winter passage and the early spring passage. It may well have been present for the next two months but I had no access until April 20. For the late spring passage there were five on April 20 with nine on April 26, then five seen on May 1. That closed the late spring passage. For the summer passage there were seven on May 4 with 14 on May 7, then 13 seen on May 10 with 11 on May 14 and two on May 18. There were seven on May 22 and May 25 with 13 to June 7, 17 on June 12 and 22 on June 14, then 13 seen on June 19 with five on June 22. There were 22 on June 25 with 16 on July 4 and five on July 6. There were six on July 9 with eight on July 12, then four seen to July 16. There were seven on July 20 with six to July 27. That was the summer passage. For the early fall passage there were 15 on August 3 with two on August 6. There were six on August 10 with 14 on August 13, *then 12 seen to August 27 with eight on August 31, seven to September 17, five to September 30 and singles to October 19. They just drifted away at the end of the breeding season.*

### Common Gallinule (*Gallinula galeata*)

A common resident; there was a major passage in the fall. During the Breeding Bird Survey a total of 104 pairs located; broods were first seen from May 31 to July 4. For the early fall passage there were 20 on August 15 with 600 on September 2 and 1,100 on September 11, then 685 seen on September 17 with 230 on September 30. That was the early fall passage. For the main fall passage there were 815 on October 6 with 740 on October 16. There were 1,890 on October 21 with 625 on November 2 and 90 on November 6. The count of 1,890 was the highest count for a number of years but the highest count is now (2014) that of 6,600 on September 18, 2011. There were 256 on November 11 with 275 on November 13, then 221 seen on November 18 with 185 on November 25, 65 on November 30, 55 on December 3 and 40 on December 8. That closed the main fall passage. For the winter passage there were 45 on December 11 with 65 on December 16, then 55 seen on December 18 with 36 on December 20. There were 55 on December 28 with 80 on December 31, then 50 seen on January 1 with 35 to January 8 and 30 on January 11. That completed the winter passage. For the early spring passage there were 80 on January 12 with 130 on January 15 and 137 on January 27, then 90 seen on February 3 with 65 to February 10 and 60 on February 15. That ended the early spring passage. Whilst the area closed I did manage to see one on April 9. For the remainder of the

late spring passage there were 105 on April 20 with 95 on May 1, 85 on May 4, 75 on May 7 and 70 on May 10. That finished the late spring passage. For the summer passage there were 130 on May 14 with 75 on May 18. There were 105 on May 22 with 150 on May 25, then 145 seen on May 29 with 128 on May 31. There were 260 on June 5 with 135 on June 7 and 123 on June 12. There were 138 on June 14 with 109 on June 19, 90 on June 22, 80 on June 25, 72 on July 4 and 65 on July 6. That was the summer passage. For the post-breeding gathering there were 90 on July 9 with 75 on July 12 and 55 to July 16. There were 75 on July 20 with 145 on July 27, 225 on August 3, 645 on August 10, 787 on August 13, 925 on August 20 and 1,003 on August 25, then 816 seen on August 27 with 758 on August 31. There were 943 on September 3 with 1,102 on September 6, 1,245 on September 10 and 1,310 on September 17, then 686 seen on September 25 with 515 on September 30, 435 on October 6, 300 on October 8, 260 on October 12, 223 on October 14, 210 on October 19 and 115 on October 23. That closed the post-breeding gathering. As there was no incoming fall influx this event kept on going. Whilst it is circumstantial it does appear that the American Coots pushed the Common Gallinules out in the fall of 1998; this same pattern occurred in later years.

#### American Coot (*Fulica americana*)

There was a massive late fall passage with still very high numbers being seen until the fields drained in February. Counts remained high into the summer (these birds were using the Sand Farm Cattail Marsh); numbers then lower. During the Breeding Bird Survey a total of five pairs located at the Sand Farm Cattail Marsh. For the early fall passage there were 35 on September 11 with 57 on September 17 and 100 on September 30, then 90 seen on October 6. That was the early fall passage. For the main fall passage there were 1,130 on October 16 with 3,620 on October 21, 4,250 on October 29, 7,450 on November 2, 12,750 on November 11 and 16,720 on November 18, then 6,630 seen on November 25 with 5,700 on November 30, 5,050 on December 8 and 3,800 on December 11. The count of 16,720 was the highest count for Zellwood but the highest count is now (2014) that of 24,900 on November 7, 2010. As often happens with these mega events they over-run; in this case the declining numbers swamped half of the winter passage. For the remains of the winter passage there were 6,050 on December 16 with 3,750 to December 20, 2,400 on December 28 and 2,210 on December 31. There were 3,050 on January 1 with 1,910 on January 7. That completed the winter passage. For the early spring passage there were 3,055 on January 8 with 3,000 to January 12, 2,960 on January 15, 2,665 on January 19, 1,785 on January 27 and 1,700 on January 29. I could have interpreted these records differently i.e. there were 3,050 on January 1 with 3,055 on January 8 then declining numbers seen to January 29. This would have meant that the winter passage continued to this point. In any case there were 2,365 on February 3 with 1,950 on February 5, 1,810 on February 10 and 470 on February 17. As with many other species they only left when forced to by the drying up of the previously flooded fields of Unit Two. That was the end of the

early spring passage. There was no discernible late spring passage so for the summer passage there were 260 on April 20 and May 1 with 252 on May 4, 210 on May 10, 165 on May 14, 120 on May 18, 119 on May 22 and 99 on May 25. There were 123 on May 29 with 133 on June 5, then 94 seen on June 12 with 87 on June 14, 71 on June 19, 25 on June 22, 23 on June 29 and 16 to July 6. That was the end of the summer passage. For the early fall passage there were 24 on July 9 with 20 on July 12, ten on July 14 and nine on July 16. There were 13 on July 20 with 46 on July 31, 108 on August 3 and 143 on August 6, then 116 seen on August 13 *with 109 on August 18, 74 on August 20, 70 to August 31 and 53 on September 3. There were 103 on September 6 with 97 on September 8 and 92 on September 10. There were 134 on September 17 with 56 on September 23. That was the early fall passage.*

#### Limpkin (*Aramus guarauna*)

An irregular passage migrant during the late fall and the early spring; there were no winter sightings. For the late fall passage there were singles on November 13, November 20 and November 25. For the early spring passage there were two on January 8, January 12 and January 15 with three on January 19 and January 27, then one seen on January 29. There were two on February 3 with three on February 5, then two seen on February 9. That closed the early spring passage. There were no further sightings until the early fall when one seen on July 23 that was it.

#### Sandhill Crane (*Grus canadensis*)

A passage migrant and winter visitor; there were only two migrating flocks noted. For the late fall passage a total of 97 flew to the south on November 13. There were two in the area on November 18. A total of 89 flew to the south on November 20; all the later sightings relate to birds in the area. That was probably the end of the late fall passage. For the winter passage there were five on November 25 with 33 on November 30 and December 3, then ten seen on December 8. There were 25 on December 11 with 28 on December 16, then nine seen to December 28. There were 20 on December 31 with nine on January 1, four to January 8 and three on January 12. That completed the winter passage. For the early spring passage there were six on January 15 with eight on January 19 and January 29, then one seen later on February 19. Finally for the late spring passage there were two on May 7.

### Whooping Crane (*Grus americana*)

This was a vagrant (from re-introduced populations). For the early fall passage there were three on July 6.

### Black-bellied Plover (*Pluvialis squatarola*)

The early fall passage was light but there was a major event from the end of October to early February. During the spring passage numbers low although there was a significant passage in late April and early May. For the early fall passage there were 35 on August 15 with 55 on September 2, then 12 seen on September 11 with four on September 17. There were 16 on September 30 with four on October 6. That was the early fall passage. For the main fall passage there were 14 on October 16 with 24 on October 21, 97 on October 29, 155 on November 2 and 183 on November 6, then 175 seen on November 11 with 63 on November 13. There were 218 on November 18 with 315 on November 25, then 248 seen on November 30. That closed the main fall passage. For the winter passage there were 346 on December 3 with 186 on December 8 and 145 on December 11. The count of 346 is still (2014) the highest count for Zellwood. There were 295 on December 16 with 129 on December 28 and 75 on December 31. There were 82 on January 1 with 84 on January 7, 100 on January 8 and 236 on January 12, then 221 seen on January 15 with 109 on January 19. That would appear to be a late running winter passage influx. For the early spring passage there were 262 on January 27 with 122 on January 29 and 45 on February 3. There were 54 on February 5 with 175 on February 9, then 172 seen on February 10 with 31 on February 17. That ended the early spring passage. For the late spring passage there were 12 on March 11 with 13 on March 13 and 16 on March 18, then eight seen on March 23 with one on March 25. There were 25 on March 30 with 18 on April 1 and six on April 6. There were 25 on April 9 with two on April 14. There were five on April 17 with ten on April 20, 14 on April 23, 44 on April 26 and 65 on May 1, then 56 seen on May 7 with 33 on May 10, 14 on May 14 and eight on May 18. That concluded the late spring passage. For the summer passage there were 20 on May 22 with 14 on May 25, eight to June 12, six on June 14, three to June 25 and two to July 9. That closed the summer passage. Later for the early fall passage there was one on July 27 with three on August 3, five to August 10 and 14 on August 13, *then two seen on August 18 with singles to August 31. There were two on September 6 with singles to September 10. That was the early end of the early fall passage.*

### American Golden-Plover (*Pluvialis dominica*)

An uncommon passage migrant; there was a single winter record. For the early fall passage there were two on September 2 with four on September 11 and September 17, then

one seen on September 30. That was the early fall passage. For the late fall passage there were singles on October 29, November 6 and November 18. For the winter passage there was one on December 16. There were no records for the early spring passage. For the main spring passage there was one on April 23 with two on May 1, then one seen on May 7. *Finally for the early fall passage there was one on September 8.*

#### Semipalmated Plover (*Charadrius semipalmatus*)

A quite common passage migrant; the fall passage was the heavier event. For the early fall passage there were 60 on August 15 with 70 on September 2, then 65 seen on September 11 with 26 on September 17. That was the end of the early fall passage. For the late fall passage there was one on October 21 with eight on November 2, then three seen on November 11 with two on November 13 and one on November 20. There were no winter or early spring records. For the late spring passage there was one on March 30. Later there were two on April 20 and April 26 with five on May 1 and 22 on May 4, then five seen on May 7 with singles on May 10 and May 25. That completed the late spring passage. For the early fall passage there was one on July 23 with three on August 6, then two seen on August 10 *with one on August 20. Finally for the early fall passage there were two on August 25.*

#### Killdeer (*Charadrius vociferus*)

Numbers were light in the early fall but there was a heavy passage from mid-November to at least mid-February. Counts then low until the post-breeding gathering started in late June. During the Breeding Bird Survey a total of six pairs located. For the early fall passage there were 90 on August 15 with 45 on September 2, 12 on September 17 and six on September 30. That was the early fall passage. For the main fall passage there were 52 on October 21 with 26 on October 29, six on November 6 and five on November 11. Now the passage started there were 90 on November 13 with 161 on November 20, 278 on November 25 and 311 on November 30, then 236 seen on December 3. That closed the main fall passage. For the winter passage there were 278 on December 8 with 176 on December 11. There were 215 on December 16 with 220 on December 20, 385 on December 28, 566 on December 31 and 756 on January 1, then 525 seen on January 7 with 290 on January 8 and 116 on January 12. The count of 756 was a very high count but the highest count is now (2014) that of 2,815 on January 1, 2009. That completed the winter passage. For the early spring passage there were 275 on January 15 with 484 on January 27 and 615 on February 3, then 606 seen on February 9 with 494 on February 17. This was another species that just did not want to leave. That concluded the early spring passage. For the late spring passage there were eight on March 7 with 20 on March 11 and 47 on March 13, then ten seen to March 18. There were 37 on March 19 with 23 on March 23, ten

on March 30 and singles to April 6. There were five on April 9 with two on April 14 and one on April 17. That finished the late spring passage. For the summer passage there were eight on April 20 with 11 on April 26, then four seen on May 4 with three to May 14. There were five on May 18 with four on May 22 and three on May 25. That ended the summer passage so for the post-breeding gathering there were seven on May 29 with eight on May 31, 11 to June 1, 27 on June 14, 36 on June 22 and 142 on June 25, then 103 seen on July 4 with 46 on July 6. There were 215 on July 9 with 107 on July 12, 78 on July 14, 40 on July 16 and 39 on July 20. There were 57 on July 23 with 28 to August 3, 23 on August 6, 19 on August 10, *11 on August 18 and one on August 31. That was the post-breeding gathering. For the remainder of the early fall passage there were five on September 3 with ten on September 6, then five seen on September 8 with three on September 17, two to September 25 and one on September 30. That ended the early fall passage.*

#### Black-necked Stilt (*Himantopus mexicanus*)

There was a major early fall passage with only a few records for the late fall passage. There were up to ten a day seen through the winter and the early spring passages. There was also a marked late spring passage with a short-lived post-breeding gathering. During the Breeding Bird Survey a total of six pairs located; broods were first seen from June 22 to July 23. For the early fall passage there were 300 on August 15 with 70 on September 2. There were 150 on September 11 with 368 on September 17, then 220 seen on September 30 with 55 on October 6 and 21 on October 16. The count of 368 was a very high count but the highest count is now (2014) that of 432 on August 4, 2010. That was the end of an extended early fall passage. For the late fall passage there were six on November 13 with eight on November 20, then three seen on November 30. That closed the late fall passage. For the winter passage there were ten on December 3 with nine on December 4 and five on December 8. There were ten from December 11 to January 1 with three on January 12. That completed the winter passage. For the early spring passage there were ten on January 19, January 29 and February 3 with eight to February 10 and four on February 17. That ended the early spring passage. When access granted again the main spring passage was in full swing. There were 32 on April 20 with 55 on April 26, 66 on May 1 and 70 on May 4, then 64 seen on May 7 with 34 on May 10, 33 on May 14 and 30 on May 18. That concluded the main spring passage. For the summer passage there were 30 on May 22 and May 25 with 26 on May 29. There were 33 on May 31 with 51 on June 5 and 54 on June 7, then 28 seen on June 12 with 12 on June 14 and four on June 19. There were 15 on June 22 with seven on June 25, two on June 29 and one on July 4. There were six on July 6 with five to July 20 and three on July 23. That ended the summer passage. For the post-breeding gathering there were seven on August 3 and August 6 with 13 on August 10, *40 on August 18, 51 on August 20 and 65 on August 25, then 52 seen on August 27 with 12 on September 3 and eight to September 8. That was the post-breeding gathering. For the*

*remainder of the early fall passage there were nine on September 10 and September 17 that was it.*

#### American Avocet (*Recurvirostra americana*)

There was a large population present from late September to early February as with many other species they would have stayed longer if the fields had not been drained. There were also singles records for the summer and early fall passages. For the fall passage there were three on September 2 and September 17 with 17 on September 30, 23 on October 16, 24 on October 21, 25 on October 29, 33 on November 2, 34 on November 11, 37 to November 20 and 63 on November 25, then 59 seen to December 4. That closed the main fall passage. For the winter passage there were 61 on December 7 with 56 on December 8 and 51 on December 11. There were 62 on December 16 with 56 on December 18 and 54 on December 20. There were 66 on December 28 with 64 to January 7. That completed the winter passage. For the early spring passage there were 66 on January 8 with 75 on January 11 and January 12, then 73 seen on January 15 with 53 on January 19 and 11 on January 27. The count of 75 is still (2014) the highest count for Zellwood. There were 27 on January 29 with 30 on February 3 and 33 on February 5, then 14 seen to February 10 with seven on February 17. That ended the early spring passage. For the summer passage there was one on May 29. *For the early fall passage there was one on August 27.*

#### Greater Yellowlegs (*Tringa melanoleuca*)

There was a light early fall passage but this was followed by a major series of events until the fields drained. Only small numbers seen for the late spring and early fall passages; there was only a two week break between these events. For the early fall passage there were ten on August 15 with 40 on September 2 and 80 on September 11, then 70 seen on September 17 with 17 on September 30. That was the early fall passage. For the main fall passage there were 82 on October 6 with 160 on October 16, 305 on October 21, 380 on October 29 and 400 on November 2, then 210 seen on November 11 with 190 on November 18, 125 on November 30 and 55 on December 3. That closed the main fall passage. In this case the winter passage was a totally separate event. For the winter passage there were 105 on December 8 with 115 on December 11 and 415 on December 16, then 370 seen on December 28 with 340 on December 31, 150 on January 1, 115 on January 7 and 80 on January 8. That completed the winter passage. The count of 415 is still (2014) the highest count for Zellwood. Again the early spring passage was a separate event as there were 130 on January 12 with 125 on January 15 and 100 on January 19. There were 160 on January 27 with 240 on January 29 and 295 on February 5, then 290 seen on February 9 with 230 on February 10 and 40 on February 17. That

ended the early spring passage. For the late spring passage there were 23 on April 20 with 11 on May 1, three on May 4, two to May 10 and one on May 14. There were two on May 22 with five on May 25, then three seen to June 7 with two on June 12. That finished the late spring passage. For the early fall passage there were singles on June 29 and July 6 with two from July 14 to July 23, *then singles seen to August 18. There were three on August 20 with nine on August 25, then five seen on August 27 with three on September 3 and one on September 10. That was the early close to the early fall passage.*

#### Lesser Yellowlegs (*Tringa flavipes*)

There was a very heavy series of events from September to February. There was also a late spring passage however numbers for the early fall passage of 1999 were low. For the early fall passage there were 140 on August 15 with 290 on September 2 and 570 on September 11, then 370 seen on September 17 with 212 on September 30. That was the early fall passage. For the main fall passage there were 370 on October 6 with 945 on October 16, then 815 seen on October 21 with 700 on October 29. There were 995 on November 2 with 680 on November 6 and 520 on November 11. There were 755 on November 13 with 830 on November 25, then 755 seen on November 30 with 415 on December 3. That closed the main fall passage. For the winter passage there were 540 on December 8 with 625 on December 11 and 1,195 on December 16, then 620 seen on December 20 with 490 on December 28. The count of 1,195 is still (2014) the highest count for Zellwood. There were 910 on December 31 with 450 on January 1, 215 on January 7 and 185 on January 8. That completed the winter passage. For the early spring passage there were 510 on January 12 with 270 on January 15. There were 415 on January 19 with 550 on January 27, then 430 seen on January 29 with 235 on February 3. There were 720 on February 5 with 680 on February 10 and 70 on February 17. That finished the early spring passage. For the late spring passage there were eight on March 13. Later there were 90 on April 20 with 100 on May 1, then 32 seen on May 4 with four on May 7. There were five on May 10 with 29 on May 14, then seven seen on May 25 with one on May 29. There were two on May 31 with three on June 5 and June 7, then one seen on June 12. That closed the late spring passage. For the early fall passage there were four on June 25 with two on July 4 and one on July 6. There were 61 on July 14 with nine on July 20, two on July 23 and singles to August 3. There were four on August 6 with five on August 10 *and 21 on August 20, then two seen on August 25 with singles to September 3. There were six on September 6 with 18 on September 10. Later there were singles on September 25 and October 2. That was the early fall passage.*

### Solitary Sandpiper (*Tringa solitaria*)

This was a very uncommon passage migrant. For the early fall passage there was one on September 17. There were no records for the late fall passage. For the spring passage there was one on April 26 with three on May 4, then one seen on May 7. There were also two on May 10. That was the spring passage. *Finally for the early fall passage there were singles on August 31 and September 6.*

### Willet (*Tringa semipalmata*)

This was a rare early fall passage migrant. For 1998 there were two on August 15 with three on September 2, then one seen on September 11. In 1999 there were eight on July 27 *with one on August 20.* The count of eight is still (2014) the highest count for Zellwood.

### Spotted Sandpiper (*Actitis macularius*)

An uncommon passage migrant; the greatest numbers were seen during the spring passage. For the early fall passage there were two on August 15 with one on September 2. There were no further sightings until the spring passage. For the spring passage there were singles on April 6 and April 20 with two on April 26 and May 1, then nine seen on May 4 with two on May 7 and singles on May 10, May 14, May 18 and May 22. That closed the spring passage. For the early fall passage there were singles on July 16, July 23 and August 3 with two on August 10 *and August 20, the singles seen to September 8.*

### Upland Sandpiper (*Bartramia longicauda*)

A spring and early fall passage migrant; there were up to six a day seen during both the fall and spring passages. For the early fall passage there were two on September 2. For the spring passage there were six on April 20 and April 23 with singles on May 10, May 14 and May 18. For the early fall passage in 1999 there were singles on July 9 and July 20 with five on July 23 and July 27, then six seen on August 3 with one on August 10. That was the extent of the early fall passage. The counts of six are still (2014) the highest counts for Zellwood.

### Whimbrel (*Numenius phaeopus*)

This was a vagrant. For the spring passage there was one on May 1.

Long-billed Curlew (*Numenius americanus*)

This was a vagrant. For the early fall passage there was one at the Sod Farm on June 25. There is a description in Appendix B. There have been no later sightings (to 2014).

Marbled Godwit (*Limosa fedoa*)

A rare passage migrant and winter visitor; the greatest number of records were from the fall passage. For the late fall passage there were singles on November 2, November 6, November 11, November 13, November 18 and November 20 with two on November 25. For the winter passage there was one on December 28. For the early spring passage there were singles on January 27, February 5, February 9 and February 10.

Ruddy Turnstone (*Arenaria interpres*)

A rare passage migrant; surprisingly there were fewer records than for the last species. For the early fall passage there were two on August 15 with singles on September 2 and September 11. For the spring passage there was one on May 4.

Red Knot (*Calidris canutus*)

This was another rare passage migrant. For the early fall passage there was one on September 17. For the main fall passage there were singles on October 16 and October 21. Finally for the spring passage there was one on May 25.

Sanderling (*Calidris alba*)

A rare passage migrant; there were no records for the following survey year. For the early fall passage there was one on September 11 with three on September 17. For the spring passage there was one on May 1 that was it.

Semipalmated Sandpiper (*Calidris pusilla*)

A common passage migrant; the spring passage was the heaviest event. For the early fall passage there were 200 on August 15 with 170 on September 11, 40 on September 17 and two on September 30. That was the early fall passage. For the late fall passage there were 20 on

October 16 with two on November 2 and November 6. That closed the late fall passage. For the spring passage there was one on April 20 with five on April 26, 12 on May 1 and 130 on May 4, then 85 seen on May 7 with ten on May 10 and eight on May 14. There were 12 on May 18 with 26 on May 22 and 94 on May 25, then 31 seen on May 29 with 30 on May 31, 11 on June 5 and eight on June 7. That completed the spring passage. For the early fall passage there were singles on July 14, July 20 and July 27 with 18 on August 6. *Later there were five on August 20 with seven on August 25, then six seen on August 31 with one on September 3. That was the extent of the early fall passage.*

#### Western Sandpiper (*Calidris mauri*)

A common early fall passage migrant with lesser numbers through to the spring. For the early fall passage there were 400 on August 15 with 480 on September 2 and 965 on September 11, then 420 seen on September 17 with one on September 30. That was the early fall passage. The count of 965 was the highest count until 2011; the highest count for Zellwood is now (2014) that of 1,250 on September 7, 2011. For the late fall passage there were 50 on October 16 and October 21 with 20 on October 29, ten on November 2 and two on November 6. There were 32 on November 13 with 15 on November 20, ten on November 30 and three on December 3. That closed the late fall passage. For the winter passage there were four on December 8 with singles to December 16. There were five on December 18 and December 20 with 20 on December 28 and 50 on December 31, then seven seen on January 1 with four on January 7. That completed the winter passage. For the early spring passage there were 20 on January 8 with 95 on January 19, then 45 seen on January 27 with six on January 29, five on February 5 and three to February 17. That ended the early spring passage. For the late spring passage there were 18 on April 20 with singles on May 4 and May 7; that was the extent of this passage. For the early fall passage there were three on July 14. *Later there were singles on August 20 and August 25 with four on September 6. Later again there was one on September 17 with ten on September 23. That was the early fall passage.*

#### Least Sandpiper (*Calidris minutilla*)

A very common passage migrant and winter visitor whilst the fields of Unit Two flooded; numbers were then much lower although there was a marked late spring passage. For the early fall passage there were 800 on August 15 with 1,290 on September 11, then 350 seen on September 17 with three on September 30. That was the early fall passage. For the main fall passage there were 1,340 on October 16 with 1,530 on October 29, 1850 to November 6 and 2,400 on November 13, then 1,400 seen on November 18 with 1,150 on November 25 and 550 on November 30. That closed the main fall passage. It always surprises me how these various

passages stay as separate events. For the winter passage there were 1,150 on December 3 with 2,400 on December 8, then 2,050 seen on December 16 with 1,800 on December 20 and 1,285 on December 28. There were 2,450 on December 31 with 1,850 on January 1, 1,200 on January 7 and 800 on January 8. That completed the winter passage. The count of 2,450 is still (2014) the highest count for Zellwood. For the early spring passage there were 1,150 on January 12 with 1,500 on January 19, then 1,250 seen on January 29 with 1,000 on February 3. There were 1,150 on February 5 and February 9 with 1,210 on February 10, then 90 seen on February 17. That ended the early spring passage. For the late spring passage there were 20 on March 7 with 40 to March 13 and 130 on March 16, then 70 seen to March 23 with 30 on March 30 and 15 on April 1. There were 30 on April 6 with 70 on April 9. Later when access again granted there were 245 on April 20 with 450 on May 1, then 103 seen on May 7 with 20 on May 14, ten on May 18 and two to May 25. There were four on May 29 with eight on May 31, then five seen on June 5 with one on June 7. That finished the late spring passage. For the early fall passage: there were singles on July 4 and July 6 with three on July 12 and 31 on July 14, then five seen on July 16. There were 11 on July 20 with 21 on July 23, 27 on August 3 and 29 on August 6, then 14 seen on August 13 *with 13 on August 18, three on August 20, two to August 27 and one on August 31. There were two on September 3 with six on September 6 and 11 on September 10, then one seen on September 17. There were three on September 23 with six on September 25 and 13 on September 30, then two seen on October 8 with one on October 12. There were 22 on October 14 with eight to October 23 and one on October 26. Perhaps the early fall passage ran to this point this year.*

#### White-rumped Sandpiper (*Calidris fuscicollis*)

An uncommon late spring passage migrant; there were no records for the fall passage. For the late spring passage there were three on May 4 with one on May 7. There were four on May 25 and May 29 with two on May 31 and June 5. There was a late individual on June 12. In sharp contrast there was only one record for 2000.

#### Baird's Sandpiper (*Calidris bairdii*)

This was a vagrant. For the spring passage there was one on May 7. That was exceptional as nearly all the sightings have been of juveniles in the fall.

### Pectoral Sandpiper (*Calidris melanotos*)

This was a common early fall passage migrant in 1998 but otherwise it was just an uncommon passage migrant. For the early fall passage there were 35 on August 15 with 450 on September 2, then 350 seen on September 11 with 130 on September 17 and two on October 6. That was the early fall passage. For the late fall passage there were 82 on October 16 with 72 on October 21 and six on October 29. There were 12 on November 2 with three on November 6, two to November 18 and one on November 25. That ended the late fall passage. There were no sightings for the winter passage. There were singles on February 9 and February 10 just as the last fields were drained; those were the only sightings for the early spring passage. For the main spring passage there was one on April 20 with three on May 1, then singles seen on May 4 and May 10. That was the extent of the main spring passage. For the early fall passage there was one on July 12 with two on July 14, seven on July 20, eight on July 23 and 12 on July 27, then two seen on August 3 and August 10 *with singles to August 18. There were 11 on August 20 with three on August 25 and one on August 27. There were five on September 6 with nine on September 17, then one seen on September 25. That was the early fall passage.*

### Dunlin (*Calidris alpina*)

A common late fall to early spring passage migrant; this species is not meant to winter inland in Florida in numbers. Exceptionally for the early fall passage there was one on August 15. For the late fall passage there were six on October 16 with 80 on October 29 and 155 on November 2, then one seen on November 6. There were 70 on November 11 with 210 on November 13, then 70 seen on November 20 with 50 on November 25, 36 on November 30 and 21 on December 3. The count of 210 is still (2014) the highest count for Zellwood. That closed the late fall passage. For the winter passage there were 75 on December 8 with 90 on December 16, 125 on December 20 and 145 on December 31, then 54 seen on January 1. That may be the end of the winter passage but as happens from time to time I find it hard to say to which passage an influx belongs. In this instance the next influx could be a winter or early spring influx. There were 60 on January 7 with 130 on January 8, then 27 seen on January 12 with 25 on January 15. In any case for the early spring passage there were 175 on January 19 with 118 on January 27, 40 on February 3, 28 on February 9 and 21 on February 10. There were also 64 on February 17; with the area closed I have no idea how that influx would have developed. That ended the early spring passage. *Again for the early fall passage there was one on August 20; this species is meant to be a late fall migrant.*

### Curlew Sandpiper (*Calidris ferruginea*)

This was a vagrant. For the early fall passage there was one on September 2. Later for the late fall passage there was one on November 11.

### Stilt Sandpiper (*Calidris himantopus*)

This was a common fall passage migrant with still high numbers through to February. The late spring and early fall passages in 1999 were by comparison minor events. For the early fall passage there were 150 on August 15 with 340 on September 2, then 150 seen on September 11 with 84 on September 17, 48 on September 30 and 45 on October 6. That was the early fall passage. For the main fall passage there were 320 on October 16 with 490 on October 21, then 195 seen on October 29 with 31 on November 2 and one on November 6. The count of 490 is still (2014) the highest count for Zellwood. There were 28 on November 11 with 108 on November 13, then 57 seen on November 18 with 24 on November 20. There were 60 on November 25 with 88 on November 30, then 32 seen on December 3. That closed the main fall passage. For the winter passage there were 53 on December 4 with 83 on December 8 and 103 on December 16, then 54 seen on December 20 with 42 on December 28. There were 80 on December 31 with 138 on January 1, then 85 seen on January 7. That completed the winter passage. For the early spring passage there were 95 on January 8 with 123 on January 12 and 156 on January 19, then 101 seen on January 27 with 43 on February 3 and 14 on February 5. There were 78 on February 9 with 42 on February 17 after which the area was closed. That ended the early spring passage. For the late spring passage after access granted again there were five on April 20 with three on April 26. There were 23 on May 4 with nine on May 14 and singles to May 31. *That closed the late spring passage.* For the early fall passage: there were two on July 14. Later there were 14 on August 3 with eight on August 6 and three on August 10. *There were seven on August 20 and perhaps surprisingly there were no later records for the early fall passage.*

### Buff-breasted Sandpiper (*Tryngites subruficollis*)

A common early fall passage migrant as the Sod Farm still existed; there was a single spring record. For the early fall passage there were 15 on September 2 with 23 on September 11, then eight seen on September 17. That was the early fall passage. The count of 23 is still (2014) the highest count for Zellwood. For the spring passage there was one on May 7. For the early fall passage there were two on August 6 with 12 on August 13, *then two seen on September 10.*

Ruff (*Philomachus pugnax*)

This was a vagrant. There was a female present from October 29 to January 19 with two on November 25. These sightings were to the east of Pole Road extension. Even more unexpectedly there was a female at the Sand Farm Cattail Marsh from May 25 to June 5. This is one of the latest spring records for Florida.

Short-billed Dowitcher (*Limnodromus griseus*)

A very common fall passage migrant; there were no winter or early spring records. There were minor late spring and early fall passages in 1999. For the early fall passage there were 350 on August 15 with 450 on September 2, then 320 seen on September 11 with 315 on September 17 and 72 on September 30. That was the early fall passage. For the main fall passage there were 95 on October 6 with 350 on October 16 and 670 on October 29, then 615 seen on November 6 with 270 on November 11, 210 on November 13, 120 on November 18 and 30 on November 25. That closed the main fall passage. The count of 670 is still (2014) the highest count for Zellwood. There were no further sightings until the late spring passage. With the re-opening of the property there were 75 on April 20 with 80 on April 26, then 20 seen on May 4 with five on May 7. Later there were two on May 25 and May 29. That concluded the late spring passage. For the early fall passage there were five on July 14 with two on July 16. There were also four on July 20 with later one on August 10. *There were four on August 20 with singles to August 27. That closed the early fall passage.*

Long-billed Dowitcher (*Limnodromus scolopaceus*)

A very common late fall to early spring passage migrant; the highest numbers were seen from late December to early February. There was a single early fall sighting this year. For the main fall passage there was one on September 30 with 35 on October 6, then five seen on October 16. There were 31 on October 21 with 65 on October 29, 400 on November 2 and 640 on November 11, then 610 seen on November 13. There were 630 on November 18 with 1,275 on November 25, then 750 seen on November 30 with 485 on December 3. That closed the main fall passage. For the winter passage there were 1,160 on December 8 with 1,230 on December 11, then 1,070 seen on December 16 with 920 on December 20. There were 1,485 on December 28 with 1,545 on December 31 and 1,855 on January 1, then 835 seen on January 7. That completed the winter passage. For the early spring passage there were 1,595 on January 8 with 1,890 on January 12, then 1,760 seen on January 15 with 1,725 on January 19, 1,270 on January 27 and 105 on January 29. The count of 1,890 is still (2014) the highest count for Zellwood. This is also one of the highest counts ever for the State of Florida. There were 1,450

on February 3 and February 9 with 1,610 on February 10, then 184 seen on February 17. If the fields had not been drained there might have been an even higher count. That concluded the early spring passage. For the late spring passage there were four on May 4 with one on May 14. Finally for the early fall passage there was an adult in breeding plumage on July 20.

#### Wilson's Snipe (*Gallinago delicata*)

A very common late fall and winter passage migrant; numbers were lower for the following spring and early fall passages. For the early fall passage there were three on September 17 that was it. For the main fall passage there were five on October 21 with two on October 29. There were three on November 2 with five on November 6, 58 on November 11, 150 on November 13 and 402 on November 18, then 280 seen on November 30 with two on December 3. That closed the main fall passage. For the winter passage there were 82 on December 8 with seven on December 11. There were 37 on December 16 with 115 on December 20 and 898 on December 28, then 72 seen on January 1 with 40 on January 8 and 11 on January 12. That completed the winter passage. The count of 898 was the highest count for some time but the highest count for Zellwood is now (2014) that of 1,090 on January 4, 2004. For the early spring passage there were 17 on January 15 with 30 on January 19, then 26 seen on January 27 with nine on January 29. There were 18 on February 3 with 27 on February 5 and 28 on February 9, then eight seen on February 10 with one on February 17. That finished the early spring passage. For the late spring passage there were two on March 7 with six on March 11, then singles seen to March 30. There were also two on April 6. Finally there was a very late individual on May 1; that ended the late spring passage. *For the early fall passage there were singles on September 8 and September 17 with four on September 23, then singles seen to October 2. That was the early fall passage.*

#### American Woodcock (*Scolopax minor*)

This was a vagrant in so far as I only saw one on December 20. There were almost certainly others present from October to January.

#### Wilson's Phalarope (*Phalaropus tricolor*)

A common early fall passage migrant in 1998 with lesser numbers during the late fall passage. There were just two records for the early fall of 1999. For the early fall passage there were 17 on August 15 with 21 on September 2, then six seen on September 11. The count of 21 is still (2014) the highest count for Zellwood. As with many other species I would like to have

known what was going on before August 15. That was the early fall passage. For the late fall passage there were four on October 16 with three on October 21, October 29 and November 2. Later there was one on November 20 with two on November 25, then one seen on December 3. That closed the late fall passage. There were no winter or spring records so for the early fall passage of 1999 *there were singles on August 20 and August 25.*

#### Red-necked Phalarope (*Phalaropus lobatus*)

This was a vagrant. There were no records for this survey year. *There was however for the early fall passage in 1999 a juvenile on September 23.*

#### Laughing Gull (*Larus atricilla*)

Seen in very low numbers with the exception of one count in April; there were no records for July. The highest numbers with the one exception were seen during the early fall passage. For the early fall passage there were four on August 15 with ten on September 2, 12 on September 11 and 17 on September 17, then 15 seen on September 30 with two on October 6. That was the early fall passage. For the late fall passage there were five on October 16 with six on October 29 and November 6, then two seen to November 18. There were five on November 25 with two to December 3. That closed the late fall passage. For the winter passage there were five on December 4 with singles to December 11. There were two on December 18 with one on December 20. That was the extent of the winter passage; sightings were now more sporadic. For the early spring passage there was one on January 12. Later there was one on January 27 with three on January 29, then one seen on February 10. That completed the early spring passage. For the main spring passage there were two on March 30 with 65 flying to the north on April 1, then one seen on April 9. Later experience showed that adults in breeding plumage would cross Lake Apopka from south-west/west to north-east/north in April. There was one on April 23 with two on April 26 and four on May 4, then singles seen to May 10. That ended the main spring passage. For the summer passage there were nine on May 14. Later there was one on June 5 with two on June 7 and five on June 12, then one seen on June 14. There were no later records for the summer passage. For the early fall passage there were three on August 13 with *two on August 18 and one on August 20. Later there was one on September 8. That was the extent of the early fall passage.* It is likely that sightings from May 14 to June 14 relate to individuals in first-summer plumage. The August records probably relate to juveniles.

### Franklin's Gull (*Larus pipixcan*)

This is normally a vagrant but with the flooded fields there was a strong winter passage. For the winter passage there was one on November 20 with six on November 25, 14 on December 3 and 21 on December 4, then 19 seen on December 8 with three on December 11. Later there was one on December 28. That completed a very exceptional winter passage. There were two records that I omitted from the above: there were three on November 30 with 13 on December 7. The count of 21 is still (2014) the highest count for Zellwood.

### Bonaparte's Gull (*Larus philadelphia*)

A quite common late winter and early spring passage migrant, there were also sightings for the late fall, the early winter and the late spring passages. For the late fall passage there was one on November 20 with two on November 23 and four on November 25, then two seen on November 30 with one on December 3. That was the late fall passage. For the winter passage there were three on December 4 with two to December 8 and one on December 11. There were six on December 16 with five on December 18 and one on December 20. Now the main event started there were eight on December 28 with 58 on December 31, 63 on January 1, 111 on January 7 and 157 on January 8, then 35 seen on January 11. That completed the winter passage. For the early spring passage there were 93 on January 12 with 29 on January 15, 20 on January 19, 15 on January 27 and six on January 29. There were 27 on February 3 with 148 on February 5, then 97 seen on February 9 with 35 on February 17. With the area closed that was the end of the early spring passage. For the late spring passage there were two on March 11 with singles on March 13 and March 16. There were two on April 1 with later one on April 26.

### Ring-billed Gull (*Larus delawarensis*)

A common late fall to early spring passage migrant; the greatest numbers were seen during the early spring passage. Exceptionally a few stayed for the summer. For the fall passage there were five on September 30 with four on October 6, three on October 16 and two on October 21. There were 52 on October 29 with 50 on November 2 and 39 on November 6. There were 193 on November 11 with 196 on November 13, 346 on November 18 and 471 on November 20, then 250 seen on November 30. That closed the fall passage. For the winter passage there were 350 on December 3 with 450 on December 4, then 300 seen on December 8 with 188 on December 11. There were 420 on December 16 with 310 on December 20 and 305 on December 28. There were 380 on December 31 with 498 on January 1 and 910 on January 7, then 850 seen on January 8 with 650 on January 11. That completed the winter passage. For the early spring passage there were 850 on January 12 with 1,140 on January 15,

then 1,022 seen on January 19 with 480 on January 27. There were 1,603 on January 29 with 565 on February 3, 204 on February 5, 86 on February 9 and 75 on February 10. The count of 1,603 was the highest count for Zellwood but the highest count is now (2014) that of 18,000 on February 8, 2005. There were also 133 on February 17 but I do not know what happened next. That was the early spring passage. For the late spring passage there were three on March 7 and March 11 with four on March 13 and 20 on March 16, then five seen on March 18 with two on March 19 and one on March 23. There were 51 on March 25 with 327 on April 12, then six seen on April 6 with four on April 9, three on April 14 and one on April 17. There were 17 on April 20 with 133 on April 26, then 98 seen on May 1 with 55 to May 10, 26 on May 14, 21 on May 18, nine on May 22, eight on May 25, seven on May 29, five to June 5, four to June 12 and three on June 14. That concluded the late spring passage. For the summer passage there were four that stayed for the summer of 1999 but two were killed by Bald Eagles on or after June 25. The remaining two stayed to August 3 with one being seen on August 6. That was the end of the summer passage. There was no early fall passage.

#### Herring Gull (*Larus argentatus*)

This is normally a very uncommon species inland in Florida so it was a surprise to find it quite a common winter and early spring passage migrant this year. For the fall passage there were two from October 29 to November 13 with singles to November 20. That was the fall passage. For the winter passage there were two on November 30 with 14 on December 3 and 80 on December 4, then 65 seen on December 11 with 49 on December 16, seven on December 18 and five on December 20. There were 27 on December 28 with 21 on December 31. There were 23 on January 1 with 33 on January 7, then ten seen on January 8. That completed the winter passage. For the early spring passage there were 12 on January 11 with 22 on January 12, then 16 seen on January 15 with 11 on January 19. There were 76 on January 27 with 88 on February 3, then 69 seen on February 5 with 21 on February 9. The count of 88 is still (2014) the highest count for Zellwood. There were 44 on February 10 with 54 on February 17 but what came next? That ended the early spring passage. For the late spring passage there were 37 on March 7 with seven on March 11, two on March 16 and singles to March 25. There were also three on March 30. Later there were five on April 20 with singles to May 14. That finished the late spring passage.

#### Lesser Black-backed Gull (*Larus fuscus*)

This was an uncommon winter and early spring passage migrant. For the winter passage there were singles on December 3, December 4, December 7 and December 8 with two on December 11, then one seen on December 16. There were also two on December 18. There

were two on December 28 and January 7 with one on January 11. That completed the winter passage. For the early spring passage there were singles on January 12 and January 15 with two on January 27 and February 3, then singles seen on February 3 and February 17. That ended the early spring passage. Finally for the late spring passage there was one on April 20.

#### Gull-billed Tern (*Geochelidon nilotica*)

An uncommon late spring passage migrant; there were no summer or fall sightings. For the late spring passage there was one on April 14 with four on April 20, then two seen on April 23 with singles on April 26 and May 1. The count of four is still (2014) the highest count for Zellwood. It has been equaled but not exceeded.

#### Caspian Tern (*Hydroprogne caspia*)

Numbers increased through the fall and the winter to reach their peak in February; just before the area closed. There was also a strong passage in late April and early May. For the early fall passage there were 30 on August 15 with 45 on September 2, then 42 seen on September 11 with 35 on September 17. There were 47 on September 30 with two on October 6. That was the early fall passage. For the main fall passage there were four on October 16 with 33 on October 21 and 56 on October 29, then 29 seen on November 2. There were 42 on November 6 with 74 on November 11 and 111 on November 18, then 44 seen on November 30. That closed the main fall passage. For the winter passage there were 92 on December 3 with 106 on December 8 and 135 on December 16, then 94 seen on December 18 with 89 on December 20 and 77 on December 28. There were 93 on December 31 with 92 to January 8 and 45 on January 11. That completed the winter passage. For the early spring passage there were 100 on January 12 with 180 on January 19, then 160 seen on January 29 with 89 on February 3. There were 168 on February 5 with 208 on February 10, then 69 seen on February 17; the area was then closed. The count of 208 is still (2014) the highest count for Zellwood. It is likely that these counts would have gone higher if the fields had not been drained. That was the end of the early spring passage. For the late spring passage there were 57 on March 7 with four on March 11. There were six on March 13 with 17 on March 16, then four seen to March 19. There were five on March 23 with six on March 30, then four seen on April 1. There were five on April 6 with seven on April 9, then five seen on April 14. There were six on April 17 with 154 on April 20, then 122 seen on April 26 with 74 on May 1, 55 on May 4, 36 on May 7, 28 on May 10, four on May 14 and singles to May 22. The count of 154 on April 20 really suggests that the counts were much higher whilst I had no access. There were two on May 25 and June 5 with 11 on June 7, then one seen on June 12. That finished the late spring passage. There was now a short gap in the sightings. For the early fall passage there were two on July 4. *There was one on*

*August 31 with two on September 3 and September 10. Later again there were seven on September 25 with two on October 2. That was the extent of the early fall passage.*

#### Royal Tern (*Thalasseus maxima*)

This was a vagrant. For the winter passage there was one on December 16. *For the early fall passage of the following survey year there was one on September 8.*

#### Forster's Tern (*Sterna forsteri*)

A common fall and winter passage migrant; numbers were lower during the spring passages. There was also a very light early fall passage in 1999. For the early fall passage in 1998 there were 90 on August 15 and 500 on September 2, then 145 seen on September 11 with 47 on September 17 and 20 to October 6. The count of 500 was the highest count for Zellwood but the highest count is now (2014) that of 611 on January 16, 2008. That was the early fall passage. For the main fall passage there were two on October 16 with five on October 21, 33 on October 29, 39 on November 2, 125 on November 6, 132 on November 11, 255 on November 13 and 342 on November 18, then 240 seen on November 30 with 220 on December 3. That closed the main fall passage. For the winter passage there were 260 on December 8 with 120 on December 11. There were 235 on December 16 with 280 on December 18, then 125 seen on December 20 with 90 on December 28, 62 on December 31, 60 on January 1 and 45 to January 11. That completed the winter passage. For most species the higher rate of passage continued until the fields drained but this species had much lower numbers during the early spring passage as there were 90 on January 12 with 36 on January 15. There were 60 on January 19 with 80 on January 27, then 31 seen on January 29 with 21 on February 3. There were 50 on February 5 with 85 on February 10, then 11 seen on February 17. That ended the early spring passage. For the late spring passage there were three on March 19 with two on March 23 and one on April 1. There were two on April 6 and April 14 with six on April 20 (when the area reopened), then one seen on April 26. There were also two on May 4 with later one on June 5. That concluded the late spring passage. There were no summer sightings. For the early fall passage there were singles on July 14, August 3 and August 6. *There were two on August 31 with one on September 3. That was the extent of the early fall passage.*

#### Least Tern (*Sternula antillarum*)

This was a non-breeding summer visitor. For the early fall passage there was one on August 15. For the spring passage there were two on April 26 with three on May 1, then two

seen on May 4. For the summer passage there were seven on May 25 and May 29 with ten on May 31 and June 5, then one seen on June 7. There were two on June 19 with three on June 22 and June 25, then two seen on June 29. That was the summer passage. For the early fall passage there were two on July 20.

#### Black Tern (*Chlidonias niger*)

A very common early fall passage migrant in 1998. It was a minimal non-breeding summer visitor with a light early fall passage in 1999. For the early fall passage there were 240 on August 15 with 500 on September 2, then 305 seen on September 11 with 78 on September 17 and one on October 6. The count of 500 was the highest count for Zellwood but the highest count is now (2014) that of 532 on August 24, 2008. That was the early fall passage. There were no later 1998 records. For the spring passage there was one on May 10. For the summer passage there were two on June 14 with one on June 19. There were also four on June 22. That closed the summer passage. For the early fall passage there were three on July 12 with singles to July 20. There was one on August 3 with two on August 10 and August 13. *There were 26 on August 31 with three on September 3. That was the extent of the early fall passage.*

#### Black Skimmer (*Rynchops niger*)

A late winter and spring passage migrant; the greatest numbers were seen during the early spring passage. For the early fall passage there was one on September 11. For the late fall passage there was one on November 6. For the winter passage there was one on December 20 with three on December 28, then four seen on January 7 and January 8 with two on January 11. That completed the winter passage. For the early spring passage there were four on January 12 with 14 on January 15, 48 on January 27, 60 on January 29 and 120 on February 3, then 80 seen on February 5 with 14 on February 9. The count of 120 was the highest count for Zellwood but the highest count is now that of 137 on May 5, 2013. There were 17 on February 10 with 52 on February 17. Again I wonder just what would have developed if the fields had not been drained. That closed the early spring passage. For the late spring passage there was one on April 20 with six on April 26, 12 on May 1 and 28 on May 4, then 18 seen on May 7 with one on May 10. There were also two on May 18. That ended the late spring passage. For the summer passage there were two on June 22. There were no later sightings.

### Rock Pigeon (*Columba livia*)

A non-breeding visitor in all months; there was a major invasion in the spring with another in the early fall of 1999. For the early fall passage there were 35 on August 15. In 1998 there were no records for the late fall passage. For the winter passage there were 42 on December 18 with three to January 8. For the early spring passage there were 20 on January 11 with seven on January 15, four on January 19 and three on January 27. There were 42 on January 29 with eight on February 3. There were 13 on February 9 with 31 on February 10, then five seen on February 17. That was the early spring passage. For the main spring passage there were 36 on March 7 with 45 on March 13 and 95 on March 16, then 30 seen on March 18. There were 35 on March 19 with 40 on March 23, 41 on March 25, 55 to April 1 and 105 on April 6, then 27 seen on April 9 with ten on April 14. There were 30 on April 17 and April 30 with nine on May 1 and two on May 4. That closed the main spring passage. For the summer passage there were eight on May 7 with 14 on May 14, 15 on May 18 and 28 on May 22, then three seen on May 25. There were six on May 29 with 16 on May 31, then nine seen to June 7. That completed the summer passage so for the post-breeding gathering there were 25 on June 12 with 47 on June 14, 96 on June 22 and 106 on June 25, then 58 seen to July 14 with 54 on July 16, 53 on July 20, 26 on July 27, 13 on August 3 and one on August 13. *The count of 106 is still (2014) the highest count for Zellwood. That was the end of the post-breeding gathering; numbers were now very low by comparison. For the early fall passage there were three on August 31 with eight on September 3, then four seen on September 6 with three on September 8 and two on September 10. Finally for the early fall passage there were four on September 17.*

### Eurasian Collared-Dove (*Streptopelia decaocto*)

A resident especially on the northern border; there was no evidence of breeding. Exceptionally there were single day major influxes in June and July. Initially there were no sightings and this will have been due to the fact that I never checked the Workshops area during the first months of the survey. For the late fall passage there was one on October 29 with four on November 13. For the winter passage there were seven on December 16 with four on December 18 and one on December 20. There were two on December 28 and December 31 with one on January 7. That completed the winter passage. For the early spring passage there were five on January 8 with singles to January 20. There were two on January 27 with six on January 29, then singles seen to February 9. There were five on February 10 with three on February 17. That was the early spring passage. For the late spring passage there were two on March 7 with three on March 11, five on March 16 and six on March 19, then four seen on March 25 with three on March 30 and two on April 1. There were four on April 6 with three to April 20 and two on April 23. There were four on April 26 with two on May 1 and singles to May 10. That ended the late spring passage. For the summer passage there were six on May 14 with

two on May 22 and one on May 25. There were two on May 29 with three on June 5 and 36 on June 7, then singles seen to June 14. The count of 36 is still (2014) the highest count for Zellwood. There were two on June 19, June 22 and June 29 with 31 on July 6, then three seen on July 9 with one on July 12. That was the end of the summer passage. For the early fall passage there were four on July 14 and July 20 with two on July 23 and one on July 27. There were three from August 3 to August 25 with seven on August 31, then two seen on September 3 with singles to September 17. There were two on September 23 and September 30 with one on October 2. That ended the early fall passage even though the "passage" really ended on August 31. The counts of 36 on June 7 and 31 on July 6 are exceptional; just where did these birds come from and why?

#### White-winged Dove (*Zenaida asiatica*)

An uncommon visitor; the majority were seen during the early fall passage in 1999. For the winter passage there were singles on December 18, December 31 and January 8. For the early spring passage there was one on February 5. For the summer passage there were two on June 7 (the Eurasian Collared-Dove day). For the early fall passage there were singles on June 25, July 9 and July 20 with three on August 13 and August 18, then one seen on August 31. Finally for the early fall passage there were two on September 25.

#### Mourning Dove (*Zenaida macroura*)

A resident in the wooded borders, there were variable numbers out in the fields until May when a massive post-breeding gathering started. During the Breeding Bird Survey a total of 32 pairs located. For the early fall passage there were 60 on August 15 with ten on September 2. There were 15 on September 11 with 16 on September 17, then 12 seen on September 30 with three on October 6. That was the early fall passage. For the main fall passage there were seven on October 16 with eight on October 21, then three seen on October 29. There were four on November 2 with 11 on November 6, 24 on November 11, 40 to November 20 and 240 on November 25, then 42 seen on November 30. That closed the main fall passage. For the winter passage there were 51 on December 3 with 93 on December 11 and 145 on December 18, then 23 seen on December 20. There were 36 on December 28 with 122 on December 31, then 64 seen on January 7 with 24 on January 8. That completed the winter passage. For the early spring passage there were 70 on January 11 with 121 on January 12, then 74 seen on January 15 with 47 on January 19. There were 85 on January 27 with 96 on January 29, then 82 seen on February 5 with 58 on February 9 and 54 on February 10. There were 111 on February 17 but once again I have no idea how this influx would have developed. That ended the early spring passage. As this species nests so early we go straight to the summer passage there were 35 on

March 7 with 59 on March 11, 128 on March 16 and 182 on March 19, then 23 seen on March 23. There were 82 on March 25 with 211 on March 30 and 214 on April 6, then 70 seen on April 9. There were 80 on April 14 with 98 on April 17 and 134 on April 20, then 48 seen on April 23. That finished the summer passage. For the post-breeding gathering there were 82 on April 26 with 125 on May 1, 145 on May 4, 267 on May 10, 555 on May 18, 1,035 on May 22, 1,405 on May 29 and 1,760 on June 5, then 1,145 seen on June 12 with 965 on June 14, 875 on June 22, 805 on June 25, 730 on July 4 and 445 on July 6. The count of 1,760 was a very high count but the highest count is now (2014) that of 2,370 on July 30, 2008. There were 960 on July 9 with 1,340 on July 12, then 1,025 seen on July 16, with 605 on July 20, 510 on July 23, 430 on July 27, 165 on August 3 and 61 on August 6. That was the post-breeding gathering. For the remainder of the early fall passage there were 62 on August 10 with 100 on August 13, *then 97 seen on August 20 with 56 on August 25. There were 113 on August 27 with 90 on August 31 and 64 on September 3. There were 74 on September 6 with 139 on September 8, then 50 seen on September 17 with 45 to September 30 and 25 on October 2. That was the early fall passage.*

#### Common Ground-Dove (*Columbina passerina*)

A common summer visitor at the very least they were present all year but hid away except during the summer. During the Breeding Bird Survey a total of 40 pairs located. For the early fall passage there were two on September 2 with one on September 11. For the main fall passage there were singles on October 16, October 21, November 2 and November 11 with three from November 13 to November 20, then two seen on November 25. That closed the main fall passage. For the winter passage there were four on November 30 with 14 on December 7 and 15 on December 8, then four seen on December 16. There were seven on December 18 with eight on December 20, then six seen on December 28 with three on December 31. There were six on January 1 with nine on January 7, then five seen on January 8. That completed the winter passage. For the early spring passage there were ten on January 11 with 16 on January 12, then ten seen on January 15 with five on January 19. There were seven on January 27 with eight on January 29, 15 on February 3, 16 on February 9 and 21 on February 10, then nine seen on February 17. That concluded the early spring passage. For the main spring passage there was one on March 11 with four on March 13, six to March 19 and eight on March 25, then three seen on March 30. There were five on April 1 with seven on April 6, 11 on April 9, 12 on April 14, 13 on April 20, 16 on April 23 and 28 on April 26, then ten seen on May 1. That finished the main spring passage. For the summer passage there were 21 on May 4 with 23 on May 7, 33 on May 10, 41 on May 18, 43 on May 22, 45 on May 29 and 52 on May 31, then 33 seen on June 5 with 22 on June 7. There were 55 on June 12 with 38 on June 19 and 36 on June 22. There were 44 on June 25 with 46 on June 29 and 50 on July 6, then 43 seen on July 12 with 37 on July 16, 23 on July 23, 19 on July 27, 12 on August 3 and eight on August 6. That was the summer passage. For the early fall passage there were 20 on August 10 with 14 on August 13,

*eight on August 18 and five on August 20. There were 11 on August 25 with ten on August 27 and nine on August 31. There were 12 on September 3 with 25 on September 6, then 17 seen on September 10 with 11 on September 17. There were 15 on September 23 with 24 on September 25, then 20 seen on September 30 with five on October 2, four on October 6 and one on October 8. That was the early fall passage.*

#### Budgerigar (*Melopsittacus undulatus*)

This was an exotic; an escaped cage bird. For the early fall passage there was a female by Lust Road on July 23, July 27, August 3 and August 6. It was initially with Brown-headed Cowbirds but later it was on its own. The plumage was that of a wild female in Australia.

#### Black-billed Cuckoo (*Coccyzus erythrophthalmus*)

This was a vagrant. For the spring passage there was one on May 10. *For the early fall passage in the following survey year there was one on September 30.*

#### Yellow-billed Cuckoo (*Coccyzus americanus*)

There were no 1998 sightings; this was a minor summer visitor in 1999. During the Breeding Bird Survey a total of seven pairs located. For the summer passage there were two on May 10 with three on May 18, then one seen on May 22. There were two on May 25 with four on May 29 and June 5, then singles seen to June 12. There were three on June 14 with two to July 4 and one on July 12. That closed the summer passage. For the early fall passage there was one on August 3. *Later there were singles on August 25 and September 8. There was also one on September 25 with two on September 30.*

#### Barn Owl (*Tyto alba*)

I do not now (2014) understand it but there were no sightings prior to July 12, 1999. During the Breeding Bird Survey one pair located; on July 12 an adult and three young seen; the three young continued to be seen to July 27. There was also one on September 23. That was the early fall passage.

### Eastern Screech-Owl (*Otus asio*)

Status unknown, I have to say that as I do not use recordings. For the winter passage there were two on December 20. For the early spring passage there was one on February 17. For the main spring passage there was one on March 19 with two on March 23, then one seen on March 25. For the summer passage there were singles on May 4 and May 10. Finally for the early fall passage there was one on July 6 with two on July 23.

### Great Horned Owl (*Bubo virginianus*)

During the Breeding Bird Survey a total of two pairs located, that says it all. Recorded on 18 dates from November 2 to September 17; only singles seen.

### Barred Owl (*Strix varia*)

During the Breeding Bird Survey a total of three pairs located. For the early fall passage there was one on September 17. For the late fall passage there was one on November 6. For the winter passage there were two on December 3 with one on December 11. There were two on December 20 with later two on January 8. That completed the winter passage. For the early spring passage there were two on February 3 with two on February 17. For the summer passage there were two on May 29, June 5 and June 25. Finally for the early fall passage there was one on July 20 with two on September 6.

### Short-eared Owl (*Asio flammeus*)

For this year there were three winter sightings. There were singles on November 30, December 3 and December 20.

### Lesser Nighthawk (*Chordeiles acutipennis*)

This was a vagrant. For the winter passage there was one on the northern border of the Sod Farm on December 16.

### Common Nighthawk (*Chordeiles minor*)

Summer visitor; during the Breeding Bird Survey a total of five pairs located. For the spring passage there were five on April 17 and April 20 with four on April 23, two on April 26 and one on May 1. There were three on May 4 with two to May 10. That was the spring passage. For the summer passage there were four on May 14 with two on May 18 and singles to May 29. There were three from June 12 to June 22 with four on June 25, then two seen to July 4 with one on July 6. That closed the summer passage so for the early fall passage there were two on July 12 and July 16 with singles on four dates to August 3. Later there was one on September 8. That was the extent of the early fall passage; there were no later records.

### Chuck-will's-widow (*Caprimulgus carolinensis*)

Status uncertain; there were only two records which surprises me. I used to start each morning in the dark at Canal Road which is at the center of the breeding population. This species bred in the following years so why did I not see/hear them regularly? For the spring passage there were two on April 1. For the summer passage there were five on June 29 and it is this figure that I used to give a breeding population of 5 pairs for this year.

### Eastern Whip-poor-will (*Caprimulgus vociferus*)

This was a vagrant. For the spring passage there was one on April 1 that was it.

### Chimney Swift (*Chaetura pelagica*)

A non-breeding summer visitor; it will have bred in the township of Zellwood. There was also a significant fall passage. For the early fall passage there was one on August 15 that was it; there were no later fall records. Again I do not now understand how I failed to see the fall passage in 1998. For the spring passage there were two on April 6 with singles to April 14. There were 52 on April 17 with two on April 20. There were five on April 23 with 102 on May 1, then six seen on May 7 with five on May 10. That was the spring passage. For the summer passage there were six on May 14 with ten on May 18 and 12 on May 22, then seven seen on May 25 with four on May 29. There were 17 on May 31 with 38 on June 7, then four seen on June 12 with two on June 14. There were 12 on June 19 with four on June 22, three on June 25 and two to July 4. That closed the summer passage. For the early fall passage there were three on July 14 with singles to July 27. There were six on August 3 with three on August 10 and two on August 13. *There were 66 on August 18 with nine on August 20 and three on August 27. There were 165 on August 31 with 173 on September 6, then three seen on September 8 with*

*two on September 10. There were 151 on September 17 with 270 on September 23, then 60 seen on September 25 with 26 on September 30. That was the early fall passage.*

#### Ruby-throated Hummingbird (*Archilochus colubris*)

This was a rare passage migrant; these birds do not like open country. For the spring passage there were singles on April 1 and May 14. For the early fall passage there were singles on July 4 *and September 17.*

#### Belted Kingfisher (*Megaceryle alcyon*)

A quite common passage migrant and winter visitor, the greatest numbers were seen during the main fall passage. For the early fall passage there was one on August 15 with three on September 2, eight on September 11 and 13 on September 17, then six seen on September 30. That was the early fall passage. For the main fall passage there were seven on October 6 and October 16 with nine on October 21 and 14 on November 2, then seven seen to November 25 with three on November 30 and two on December 3. The count of 14 was the highest count for Zellwood but the highest count is now (2014) that of 45 on November 1, 2009. Note the closeness in the dates. That closed the main fall passage. For the winter passage there were three from December 8 to December 18 with two to December 31. There were four on January 1 with three on January 8 and two on January 11. That ended the winter passage. For the early spring passage there were two on January 12 with five on January 15, then four seen on January 19 with one on January 27. There were three on January 29 with four from February 3 to February 10, then three seen on February 17. That ended the early spring passage. For the late spring passage there were was one on March 16; there were no later records. For the early fall passage there were singles on June 25 and July 14 with three on July 27, *then singles seen to August 18. There were two on August 20 with five on September 6, then one seen on September 8. There were three on September 17 with four on September 23, then two seen to September 30. That was the early fall passage.*

#### Red-headed Woodpecker (*Melanerpes erythrocephalus*)

This was a vagrant. Very exceptionally there was for the winter passage one on December 16 with one for the late spring passage on April 14. It is more normal for all the sightings to relate to the early fall passage.

### Red-bellied Woodpecker (*Melanerpes carolinus*)

A common resident in the wooded borders; during the Breeding Bird Survey a total of 27 pairs located. I clearly did not look at the wooded borders until November. For the late fall passage there was one on November 6 with two to November 13, three on November 18 and five on November 25, then three seen on November 30 with two to December 4. That closed the late fall passage. For the winter passage there were four on December 8 with three on December 11 and two on December 16. There were five on December 20 with three on December 28. There were four on December 31 with eight on January 1 and January 8, then one seen on January 11. That completed the winter passage. For the early spring passage there were four on January 12 with nine on January 15, then 11 seen on January 27 and January 29 with five on February 3. There were eight on February 5 with 13 on February 9 and 14 on February 17 but once again I do not know what happened next. That concluded the early spring passage. For the late spring passage there were three on March 7 with six to March 16, seven to March 23 and eight on March 25, then five seen on March 30. There were six on April 1 with ten on April 6, then eight seen on April 9 with seven to April 20 and six on April 23. There were ten on April 26 with eight on May 4 and five on May 7. That finished the late spring passage. For the summer passage there were nine on May 10 with four on May 14. There were eight on May 18 with ten to May 25, then 14 seen on May 29 and May 31 with 11 on June 5 and six on June 7. There were 17 on June 12 with seven on June 14 and five on June 19. There were nine on June 22 and June 25 with 11 on July 4 and 12 on July 9, then eight seen on July 12 with two on July 14. That was the summer passage. For the early fall passage there were six on July 16 with 15 on July 20, then 11 seen on July 23 with eight on July 27, seven to August 6, six on August 10 and three on August 18. There were five on August 20 with ten on August 25, then 11 seen on August 27 and September 3 with ten on September 6, nine on September 8 and six on September 10. There were 13 on September 17 with 14 from September 23 to September 30, then 11 seen on October 2 with eight on October 6. That ended the early fall passage.

### Yellow-bellied Sapsucker (*Sphyrapicus varius*)

This was an uncommon winter visitor and spring passage migrant. For the winter passage there were singles on December 16, December 20, December 28, December 31, January 1 and January 7. For the early spring passage there was one on January 15 that was it. For the main spring passage there were singles on March 13, March 16, March 19 and March 25.

### Downy Woodpecker (*Picoides pubescens*)

A resident in the wooded borders; during the Breeding Bird Survey a total of 12 pairs located (the first fledged young were seen on June 12). For the winter passage there was one on December 8 with four on December 31, then one seen on January 1. It seems that I have even less information for this species. That was the winter passage. For the early spring passage there were four on January 7 and January 8 with three on January 12 and two on January 15. There were three on January 19 with two to February 3. There were five on February 5 with six on February 9, then three seen on February 17. That closed the early spring passage. For the late spring passage there were two on March 7 with singles to March 13. There were two on March 16 with four on March 18 and March 19, then three seen on March 25 with two on March 30. There were four on April 1 with two on April 6 and one on April 9. There were four from April 14 to April 23 with six on April 26, then three seen to May 4 with two on May 7. That ended the late spring passage so for the summer passage there were three on May 10 with four on May 14, five on May 18 and six on May 22, then four seen on May 25 with three to May 31. There were eight on June 5 with 11 on June 12, then seven seen on June 19 with five on June 25 and three on June 29. That was the summer passage. For the early fall passage there were four on July 4 with five on July 6, then two seen to July 14. There were three on July 16 and July 20 with five on July 23, then two seen on August 3 with one on August 6. There were two from August 10 to August 25 with four on August 27 and six on August 31, then four seen on September 3 with two on September 8 and one on September 10. There were four on September 17 with six on September 23, then four seen on September 25. That was the early fall passage.

### Hairy Woodpecker (*Picoides villosus*)

This was a vagrant. For the spring passage there was one on March 13. *For the early fall passage (in the following survey year) there was one on August 27.*

### Northern Flicker (*Colaptes auratus*)

A resident in some of the larger pieces of woodland; during the Breeding Bird Survey a total of five pairs located. For the late fall passage there was one on September 30. Later there were singles from October 29 to November 13 with two from November 20 to November 30, then singles seen to December 4. That was the late fall passage. For the winter passage there were two on December 8 with three on December 20, then two seen to December 31. There were three on January 1 with four on January 7, then three seen to January 12. That completed the winter passage. For the early spring passage there were five on January 15 and January 27 with four on January 29 and one on February 3. There were two on February 5 with four on

February 9, then two seen on February 17. That ended the early spring passage. For the late spring passage there were three on March 7 with four on March 11, then one seen on March 13. There were two on March 16 and March 18 with three on March 19 and March 25, then two seen to April 9 with one on April 14. There were two on April 17 and April 23 with one on April 26. That finished the late spring passage. For the summer passage there were singles from May 4 to May 31 with two on June 5 and four on June 12, then three seen on June 14 with two on June 19 and singles to June 29. That was the summer passage. With the early fall passage the influxes started again (not sure why). There were seven on July 4 with five to July 12 and three to July 16. There were five on July 20 with two to July 27 and one on August 3. There were two on August 6 *with three to August 18, four to September 3 and five on September 6, then two seen on September 8. There were three on September 10 with four to September 23 and six on September 25, then two seen on September 30. That was the early fall passage.*

#### Pileated Woodpecker (*Dryocopus pileatus*)

Unlike the other woodpecker species there were no influxes. This was a resident in the largest pieces of woodland; during the Breeding Bird Survey a total of three pairs located. Seen in every month; there were normally one to three a day seen with higher counts of four on January 15, five on March 25, four on April 20 and four on April 26.

#### Eastern Wood-Pewee (*Contopus virens*)

This was a very uncommon passage migrant. For the spring passage there was one on April 20. *For the early fall passage there were two on August 31 and September 6.*

#### Acadian Flycatcher (*Empidonax virescens*)

There were no records for this survey year, *however for the early fall passage of 1999 there were singles on August 31, September 8 and September 23.*

#### Willow Flycatcher (*Empidonax traillii*)

This was a vagrant. For the early fall passage there was an adult male by Canal Road (now the Stormwater Ponds) on July 27, 1999; it was singing.

### Eastern Phoebe (*Sayornis phoebe*)

A quite common passage migrant and winter visitor; it surprises me just how low the numbers were in the first two years. The highest count for Zellwood is that of 416 on October 26, 2003. For the fall passage there were two on October 16 with 16 on October 21, then 14 seen on November 2 with 13 on November 6. There were 24 on November 11 with 41 on November 13, then 23 seen on November 18 with 21 on November 25. That closed the fall passage. For the winter passage there were 28 on November 30 with 31 on December 8, then 19 seen on December 16 with 17 on December 18. There were 32 on December 20 with 41 on December 31, then 19 seen on January 1. There were 21 on January 7 with 23 on January 8, then 13 seen on January 11. That completed the winter passage. For the early spring passage there were 30 on January 12 with 34 on January 15, then 33 seen to January 29 with 28 on February 3. There were 39 on February 5 with 49 on February 9, then 35 seen on February 17. That ended the early spring passage. For the late spring passage with sightings only from the border gates there were four on March 7 with seven on March 11, then six seen on March 13 with five on March 16, four on March 19 and two on March 23. That concluded the late spring passage.

### Great Crested Flycatcher (*Myiarchus crinitus*)

A spring passage migrant and summer visitor; there was also a winter record. During the Breeding Bird Survey a total of 17 pairs located. For the winter passage there was one in the wood between the Lake Level Canal and Lake Apopka on December 20. This is still (2014) the only winter record for Zellwood. For the spring passage there were two on March 30 with three on April 6, then two seen to April 14. There were three on April 17 with eight on April 20, then six seen to April 26 with four on May 1 and one on May 4. That may be the end of the spring passage but it is possible that some were still passing through whilst the local breeding birds were already nesting. So for the summer passage there were seven on May 7 and May 14 with eight on May 22 and May 29, then two seen to June 5. There were four on June 7 with seven on June 12, then four seen on June 14 with two on June 19. There were five on June 22 with one on June 25. There were four on June 29 with ten on July 4, then nine seen on July 6 with four on July 9, two on July 12 and singles to July 16. That ended the summer passage. For the early fall passage there were three on July 20 with four on July 23 and August 3, then two seen on August 6 *with singles to August 18. There were five on August 20 with two to August 31 and singles to September 10. That closed the early fall passage. There were no further sightings until the spring.*

### Western Kingbird (*Tyrannus verticalis*)

A spring passage migrant although there were sightings for the late fall and winter passages. For the fall passage there were two on November 11 and November 25. For the winter passage there was one on December 31. For the early spring passage there were 11 on January 11 with 15 on January 12, then 12 seen on January 15 with ten on January 20 and one on January 27. There were 11 on January 29 with nine on February 3 and six to February 9. There were 11 on February 10 with four on February 17. That concluded the early spring passage. For the main spring passage there were seven on March 7 with ten on March 11 and 16 on March 13, then 13 seen to March 18. There were 14 on March 19 with 16 on March 23, then 12 seen on March 25 with 11 on March 30. There were 16 on April 1 and April 6 with 21 on April 14, then two seen on April 17. There were 12 on April 20 with 16 on April 23 and May 1, then 11 seen on May 7 with four on May 10 and one on May 14. That finished the main spring passage.

### Eastern Kingbird (*Tyrannus tyrannus*)

A spring and early fall passage migrant; there was one major flight in the fall. For the spring passage there was one on April 6 with two on April 9, six on April 17 and 23 on April 20, then six seen on April 23 with three to May 1. There were 13 on May 4 with five on May 7 and three on May 10. There were four on May 14 with six on May 18, then two seen on May 29. That closed the spring passage. There were no summer sightings. For the early fall passage there were singles on June 22, July 6, July 14, July 20 and August 10. *There were five on August 25 with six on August 27 and a total of 347 flew to the south on August 31, then five seen in the area on September 3 with singles on September 6 and September 17. The count of 347 is still (2014) the highest count for Zellwood. There were two on September 23 with one on September 25. That completed the early fall passage; there were no later records.*

### Gray Kingbird (*Tyrannus dominicensis*)

Normally this would be a vagrant but for this year it was a rare passage migrant. For the fall passage there was one on October 16 with two on October 21. For the spring passage there were singles on April 9 and May 22. For the early fall passage there were singles on August 13 and August 18.

### Scissor-tailed Flycatcher (*Tyrannus forficatus*)

This was a winter visitor and spring passage migrant; no more than three a day seen. For the winter passage there were singles on December 3, December 4, December 20, January 8, January 11 and January 12. That was the winter passage. For the early spring passage there were singles on January 15, January 27, January 29 and February 3 with two on February 9 and three on February 10, then one seen on February 17. That closed the early spring passage. For the main spring passage there was one on March 11 with three on March 13, then two seen to March 23 with one on March 25. There were two from March 30 to April 9 with singles to April 20. Finally for the main spring passage there were two on April 23. Whilst I could not enter the property for two months in the spring I was able to check both Lust and Hooper Farms Road gates.

### Loggerhead Shrike (*Lanius ludovicianus*)

A resident along the border; during the Breeding Bird Survey a total of six pairs located. There also appeared to be an early fall passage in 1999. For the late fall passage there were two on October 16, October 21 and October 29 with singles to November 6. There were two from November 11 to November 18 with three on November 20, then two seen to November 30 with one on December 3. That was the late fall passage. For the winter passage there were four on December 4 with three on December 8 and two on December 11. There were three on December 16 with two on December 18 and singles to December 31. There were three on January 1 and January 8 with one on January 11. That completed the winter passage. For the early spring passage there were three on January 12 with two to January 19. There were three on January 27 with five on January 29, then four seen on February 3 with three on February 5 and two on February 9 and February 17. That closed the early spring passage. For the summer passage (this species nests very early so there is no late spring passage) there were two on March 7 with four on March 11, then three seen to March 16 with two on March 18. There were three on March 19 with four on March 23, then three seen to April 1 with two on April 9 and one on April 14. There were four on April 17 with three on April 20 and one on April 23. There were four on May 1 with singles to May 10. That ended the summer passage. For the early fall passage there were three on May 14 with five to May 25 and seven on May 31, then nine seen on June 7 and June 12 with four on June 14. There were six on June 19 and June 22 with eight on June 25 and nine on July 4, then ten seen on July 6 and July 12 with six on July 14. There were nine on July 16 with 11 on July 20 and 15 on July 23, then nine seen on July 27 with seven on August 3. There were ten on August 6 with 13 on August 10, then ten seen on August 13 with nine on August 18, seven on August 25 and five on August 27. There were 14 on August 31 with 16 on September 3, then ten seen on September 6. There were 11 on September 8 with

12 on September 10 and 13 on September 17, then ten seen to September 30 with nine on October 2 and three on October 6. That was the early fall passage.

#### White-eyed Vireo (*Vireo griseus*)

A resident in the scrub filled sections of the border; there appeared to be a minor fall passage. I say a resident but there were no summer records this year, I find it hard to believe that they were not present. For the late fall passage there was one on November 20. For the winter passage there was one on December 31. For the early spring passage there were two on January 12, January 15 and January 27, then singles seen to February 3. There were two on February 5 and February 17 with one on February 19. That completed the early spring passage. For the late spring passage there were singles from March 11 to March 30. Later there were singles on April 17 and April 20. That was the extent of the late spring passage. There were no summer records. For the early fall passage there were singles from June 25 to July 4. Later there were singles from July 23 to August 10. *There were also singles from August 27 to September 8 with two on September 10, three on September 17, four on September 23 and 13 on September 25, then six seen on September 30. That was the early fall passage.*

#### Yellow-throated Vireo (*Vireo flavifrons*)

This was a vagrant. For the late spring passage there were singles on March 23 and March 25. *For the early fall passage in the following survey year there was one on September 3.*

#### Blue-headed Vireo (*Vireo solitarius*)

An uncommon passage migrant and winter visitor; there were only singles seen. For the winter passage there were singles on November 25, November 30, December 20, January 8 and January 11. For the early spring passage there were singles on January 12, January 27, January 29 and February 5. For the late spring passage there were singles on March 19, March 30, April 9, April 14, April 17 and April 20.

#### Red-eyed Vireo (*Vireo olivaceus*)

An early fall passage migrant; there was a trace of a passage in the spring. For the late fall passage there were three on November 11. For the spring passage there were two on April 17 with singles on May 18 and May 22. For the early fall passage there were singles on July 9,

July 12, July 14 and August 10 with two to August 27 and four from August 31 to September 8, then three seen to September 17 with two on September 23. There were five on September 25 with six on September 30, then two seen on October 6. That closed the early fall passage.

#### Blue Jay (*Cyanocitta cristata*)

A resident in the wooded borders; as I did not start checking the border habitats until mid-October I missed any fall passage in 1998. During the Breeding Bird Survey a total of 26 pairs located. For the late fall passage there were singles on October 6, October 29 and November 2 with three on November 6, then singles seen to November 18. There were three on November 20 with five on November 30, then two seen on December 3. That was the late fall passage. For the winter passage there were four from December 8 to December 20 with eight on December 28, then six seen to January 1. There were nine on January 7 with seven on January 8 and two on January 11. That completed the winter passage. For the early spring passage there were 11 on January 12 with eight on January 15 and seven on January 19. There were 13 on January 27 with ten on January 29 and nine on February 3. There were 15 on February 5 with 16 to February 10 and 19 on February 17. As the area was now closed I do not know how this influx would have developed. That ended the early spring passage. For the late spring passage there were six on March 7 with seven on March 11, eight to March 18 and 17 on March 19, then ten seen on March 25 with nine on March 30 and eight on April 1. There were 13 on April 6 and April 9 with 12 on April 17, 11 on April 23, nine on April 26, eight on May 4 and five on May 7. That concluded the late spring passage. For the summer passage there were nine on May 10 with ten on May 14 and 14 on May 18, then nine seen on May 22 with eight on May 25. There were 12 on May 29 with 16 on May 31, then six seen on June 5. There were 12 on June 7 with 17 on June 12, then 13 seen on June 19 with 12 on June 22. There were 14 on June 25 with 11 on June 29. That finished the summer passage. For the early fall passage there were 13 on July 4 with 14 on July 6, then 13 seen on July 12 with five on July 14. There were ten on July 16 with 15 on July 20, then eight seen on July 23 with seven on July 27. There were 13 on August 3 with 14 on August 6, then 13 seen on August 10 with seven on August 13 and six on August 18. There were seven on August 20 with 12 on August 25, then ten seen to September 3 with nine on September 6. There were 11 on September 8 with 14 on September 10, 18 on September 17, 20 on September 23 and 21 on September 30, then 12 seen on October 2 with 11 on October 6. That was the early fall passage.

#### American Crow (*Corvus brachyrhynchos*)

There were no records for 1998 and in 1999 it was an uncommon spring passage migrant with a few records for other seasons. For the winter passage there were two on

January 1 with singles on January 7, January 8 and January 12. For the early spring passage there were singles on January 27, February 5 and February 10. For the late spring passage there were two on March 11 with one on March 16. Later there were singles on April 20 and May 10. That closed the late spring passage. There were no summer sightings *so for the early fall passage there was one on September 17 with two on September 23 that was it.*

#### Fish Crow (*Corvus ossifragus*)

A resident that was seen in low numbers for most of the year; whilst there appeared to be a minor winter passage there was a major passage during the early spring. During the Breeding Bird Survey a total of six pairs located. For the early fall passage there were three on September 2 with eight on September 11 and ten on September 30. That was the early fall passage. For the main fall passage there were two on October 16, October 21 and October 29 with one on November 2. In some ways the early fall passage appeared to run to this point. There were 37 on November 6 with 246 on November 13, then 18 seen on November 18 with five on November 20. That closed the main fall passage. For the winter passage there were 18 on November 25 with 41 on November 30, then 21 seen on December 3 with 20 on December 8. There were 43 on December 11 with 11 on December 16 and three on December 18. There were 50 on December 20 with 237 on December 28, then 65 seen on December 31. There were 76 on January 1 with 274 on January 7, then 23 seen on January 8 with five on January 11. That completed the winter passage. For the early spring passage there were 68 on January 12 with 182 on January 15, 283 on January 27, 1,270 on February 3 and 2,475 on February 5, then 875 seen on February 9 with 280 on February 10 and 29 on February 17. That ended the early spring passage. For the late spring passage there were nine on March 7 with 11 on March 11, 32 on March 13, 75 on March 16 and 137 on March 19, then 51 seen on April 23 with 49 on March 25 and 29 on March 30. There were 850 on April 1 with 72 on April 6, 28 on April 9, 22 on April 14 and 11 on April 17. There were 32 on April 20 with 37 on April 26, then 22 seen on May 1 with 20 on May 4 and 12 on May 7. That finished the late spring passage. For the summer passage there were 15 on May 10 with 18 on May 14, then 11 seen on May 18. There were 12 on May 22 and May 29 with 24 from May 31 to June 12, then ten seen on June 14. That closed the summer passage. For the minor post-breeding gathering there were 15 on June 19 with 21 on June 22 and 97 on June 29, then 22 seen on July 4. There were 53 on July 6 with 59 on July 9, then 34 seen on July 12. There were 132 on July 14 with 49 on July 16. There were 74 on July 20 with 16 on July 23, ten on August 3 and three on August 6. There were 12 on August 10 with three on August 13 *and two on August 18. That was the end of the post-breeding gathering. For the early fall passage; well what was left of it there was one on August 27 with two on August 31. Finally for the early fall passage there was one on September 17.*

### Purple Martin (*Progne subis*)

A non-breeding summer visitor with what was either a post-breeding gathering or a heavy early fall passage; I treat it as a post-breeding gathering. For what was probably the summer passage there were two on March 11 with three on March 16 and seven on March 18, then four seen on March 19 with three on March 23. There were nine on March 25 with four on April 1 and two on April 6. There were five on April 9 with six on April 17, then one seen on April 20. There were two on April 26 with 12 on May 1, then two seen to May 10. That closed the summer passage. For the post-breeding gathering there were 15 on May 14 with 13 on May 18 and four on May 22. There were 19 on May 25 and May 29 with 63 on May 31 and 700 on June 7, then 200 seen on June 12 with 50 on June 14. There were 1,935 on June 19 with 815 on June 25 and 575 on June 29. The count of 1,935 was the highest count for Zellwood but the highest count is now (2014) that of 2,850 on June 20, 2004. There were 1,795 on July 4 with 1,365 on July 6, 675 on July 12, 535 on July 16, 290 on July 20, 235 on July 23 and 28 on July 27. There were 34 on August 3 with 140 on August 6 and 436 on August 10, then 12 seen on August 13 with three on August 20. That was the end of the post-breeding gathering. For the early fall passage there were seven on September 3 with eight on September 8, then one seen on September 10. Exceptionally there were two on September 25. That was the early fall passage. There were no further sightings until the following spring passage.

### Tree Swallow (*Tachycineta bicolor*)

There was a noticeable late fall and early winter passage numbers were then very low to mid-February; there was in contrast a strong main spring passage. For the main fall passage there were six on October 16 with 55 on October 21 and 200 on November 2, then eight seen on November 6. There were 50 on November 11 with 450 on November 13 and 1,150 on November 18, then 30 seen on November 25. That was the main fall passage. For the winter passage there were 160 on November 30 with 865 on December 3, then 140 seen on December 8 with 55 on December 11 and six on December 18. There were 150 on December 20 with 12 on January 1, five on January 7 and one to January 12. That completed the winter passage. For the early spring passage there were eight on January 15 with 26 on January 19 and 27 on January 27, then 26 seen on January 29 with three on February 3. There were 32 on February 5 with 43 on February 10 and 278 on February 17. That was an influx I would like to have known more about. That concluded the early spring passage. For the main spring passage there were 300 on March 6 with 2,570 on March 11, then 1,910 seen on March 16 with 1,340 on March 18, 920 on March 19, 900 on March 23 and 350 on March 25. There were 450 on March 30 with 1,760 on April 1 and 350 on April 6. There were 640 on April 9 with 2,020 on April 17 and 2,340 on April 20, then 125 seen on April 23. There were 182 on April 26 with 1,300 on May 1, then 140 seen on May 4 with 70 on May 7, four on May 14 and two to May 25. There were four on

May 29 with two on May 31 and singles to June 12. That ended the main spring passage. For the early fall passage there were two on June 22 with singles on June 25, July 12, August 6 and September 10. *There were three on September 17 with six on September 23 and 42 on September 25, then ten seen on October 2 with six on October 6. That was the early fall passage.*

#### Northern Rough-winged Swallow (*Stelgidopteryx serripennis*)

A spring and fall passage migrant; there were records through the summer. For the early fall passage there were three on September 2 with one on September 11. Later there was one on September 30. That was the early fall passage. There were no further sightings until the spring. For the spring passage there were two on March 16 and March 19 with one on April 1. There were four on April 14 with seven on April 17, then one seen on April 20. There were two on April 23 with five on May 1, then two seen on May 4 with one on May 7. That may be the end of the spring passage if so for the summer passage there was one on May 22 with two on May 29 and five on June 5, then singles seen to June 14. That was the extent of the summer passage. For the early fall passage there were three on June 25 with singles to August 3. There were three on August 6 with singles to August 13. *There were three on August 18 and August 20 with two on August 31 and one on September 8. There were two on September 17 with five on September 30 then singles seen to October 6. That was the early fall passage.*

#### Bank Swallow (*Riparia riparia*)

An early fall and late spring passage migrant; the greatest numbers were seen during the early fall passage. For the early fall passage in 1998 there were singles on August 15 and September 2 with 35 on September 11, then seven seen on September 17 with one on September 30. That was the early fall passage. For the late fall passage there was one on October 16. For the spring passage there were three on March 30 with one on April 6. There were 11 on April 17 with 21 on May 1, then three seen on May 4 with two on May 7 and singles on May 10 and May 22. That closed the spring passage. For the early fall passage there were singles on July 20 and July 23 with two to August 3 and six on August 6, then one seen on August 10. There were two on August 13 *with five on August 18, 18 on August 25, 21 on August 31, 27 on September 3 and 29 on September 6, then 28 seen on September 8 with 13 on September 17 and 11 on September 23. There were 24 on September 25 with three on September 30 and one on October 2. There were two on October 6 with one on October 8. That closed the early fall passage.*

### Cliff Swallow (*Petrochelidon pyrrhonota*)

An uncommon early fall passage migrant; there were two records for the spring passage. For the early fall passage there was one on September 11 that was it. For the spring passage there was one on April 17 with two on May 1. For the early fall passage in 1999 there was one on August 3 with two on August 6 and three on August 13 *and August 18, then two seen to August 25 with singles to September 6. There were three on September 8 with one on September 10. There were three on September 17 with nine on September 23 and 68 on September 25, then three seen on September 30. That was the early fall passage. The count of 68 was the highest count for Zellwood but the highest count is now (2014) that of 71 on October 1, 2006.*

### Barn Swallow (*Hirundo rustica*)

There was a strong early fall passage in each year; the late fall passage was limited but there were winter sightings. The spring passage with two exceptions was light, the summer passage was stronger. During the Breeding Bird Survey a total of 25 pairs located. For the early fall passage there were 60 on August 15 with 410 on September 11, then 140 seen on September 30. That was the early fall passage. For the late fall passage there were 18 on October 16 with 80 on October 21, then ten seen on November 2 with six on November 6. That was an exceptionally under-recorded fall passage. So in sharp contrast there were winter sightings this year; there was one on December 16 with two on December 31 and January 1; there were no later records. For the spring passage there was one on March 11 with three on March 16 and five on March 23, then three seen on March 25. There were five on March 30 with six on April 1, then five seen on April 6 with four on April 9. There were 16 on April 14 with 2,200 on April 17, then 80 seen on April 20 with six on April 23. The count of 2,200 was the highest count but the highest count is now (2014) that of 19,500 on August 29, 2012. There were 30 on April 26 with 565 on May 1, then 90 seen on May 4 with 65 on May 10, 57 on May 14 and 52 on May 18. In later years it was clear that some were breeding locally whilst others were still migrating north. It is therefore likely that the spring passage continued for some to this date. For the summer passage there were 58 on May 22 with 33 on May 25. There were 35 on May 29 with 48 on May 31 and 77 on June 5, then 55 seen to June 12. There were 65 on June 14 and June 19 with 90 on June 25, then 80 seen on June 29 with 45 on July 4. There were 60 on July 6 with 100 on July 9, then 55 seen on July 12 with 35 on July 14. There were 40 on July 16 with 75 on July 20 and 85 on July 23, then 65 seen on July 27 with 43 on August 3. That completed the summer passage. For the early fall passage here were 85 on August 6 with 444 on August 10, then 270 seen on August 13 *with 170 on August 18. There were 832 on August 20 with 385 on August 25 and 129 on August 27. There were 515 on August 31 with 570 on*

*September 3 and 606 on September 8, then 410 seen on September 17 with 210 on September 25 and 43 on September 30. That was the early fall passage.*

Tufted Titmouse (*Baeolophus bicolor*)

A resident in the wooded borders; there was no suggestion of influxes. During the Breeding Bird Survey a total of three pairs located. Up to three a day seen regularly through the year; there was a higher count of four on July 23.

Carolina Wren (*Thryothorus ludovicianus*)

A resident in the wooded borders; there were the usual influxes but no real suggestion of passage. During the Breeding Bird Survey a total of 79 pairs located. Again the records do not start until the late fall I cannot have looked at anything other than the flooded areas initially. For the late fall passage there was one on November 6 with two on November 11, three on November 13, five on November 18 and six on November 25, then five seen on November 30 with four on December 3. That closed the late fall passage. For the winter passage there were four on December 8 with ten on December 20, then 11 seen from December 28 to January 8 with seven on January 11. That completed the winter passage. For the early spring passage there were 14 on January 12 with 15 on January 15 and 21 on January 27, then 17 seen on January 29 with 14 on February 3. There were 17 on February 5 with 22 on February 9, then 21 seen on February 17. I do not know what happened next. That was the early spring passage. For the main spring passage there were five on March 7 and March 11 with six on March 13, nine on March 16, 12 on March 19 and 13 on March 25, then ten seen on March 30 with eight on April 1. There were 14 on April 6, with 19 from April 9 to April 20, 23 on April 23 and 27 on April 26, then 21 seen on May 1 with 19 on May 4 and 17 on May 7. That ended the main spring passage. For the summer passage there were 41 on May 10 with 22 on May 18, 19 on May 22 and ten on May 25. There were 23 on May 29 with 34 on May 31, then 28 seen on June 7 with 23 on June 12, 22 on June 14 and 19 on June 19. There were 23 on June 22 with 18 on June 25, 17 on July 4 and 15 on July 6. That ended the summer passage. For the early fall passage there were 17 on July 9 with 19 on July 12, then seven seen on July 14. There were 15 on July 16 with 17 on July 20 and 20 on July 23, then 15 seen on July 27 with 11 on August 3 and nine on August 6. There were 11 on August 10 *with 16 to August 20 and 18 on August 25, then 12 seen to August 31. There were 19 on September 3 with 17 on September 6 and 11 on September 8. There were 15 on September 10 with 18 on September 17 and 19 on September 23, then 18 seen on September 25. That was the early fall passage.*

### House Wren (*Troglodytes aedon*)

A passage migrant and winter visitor; numbers were low this year. For the fall passage there was one on October 16 with 12 on October 21, then ten seen on October 29 with five on November 2. There were seven on November 6 with 18 on November 11, 23 on November 18 and 29 on November 20, then 19 seen on November 25. That was the fall passage. For the winter passage there were 25 on November 30 with 15 on December 3, nine on December 8, eight on December 11 and one on December 16. There were four on December 18 with eight on December 20, 12 on December 28 and 16 on January 1, then ten seen to January 8 with five on January 11. That completed the winter passage. For the early spring passage there were 13 on January 12 with 18 on January 15 and 20 on January 27, then 19 seen on January 29 with ten on February 3. There were 21 on February 5 with 26 on February 9, then 25 seen on February 10 with 20 on February 17. That closed the early spring passage. For the late spring passage there were four on March 7 with seven on March 11, nine to March 18, 13 to March 25, 16 on April 1, 17 on April 6 and 21 on April 9, then 19 seen on April 14. There were 20 on April 17 with 37 on April 20, then ten seen on April 26 with three on May 1 and one on May 4. That finished the late spring passage.

### Sedge Wren (*Cistothorus platensis*)

A passage migrant and winter visitor; the highest numbers were during the early spring passage. For the fall passage there were five on October 21 with two to November 2 and one on November 6. There were three on November 11 with seven on November 13, then six seen on November 20 with two to November 30 and one on December 3. That was the fall passage. For the winter passage there were two on December 4 with three on December 8, five to December 16 and 12 on December 20, then seven seen to December 31 with five on January 1. There were 13 on January 7 with ten on January 8 and five on January 11. That completed the winter passage. For the early spring passage there were nine on January 12 with 19 on January 19, then 12 seen on January 27. There were 13 on January 29 with 15 on February 3, 18 on February 5 and 20 on February 9, then 14 seen on February 17. That ended the early spring passage. For the late spring passage there were singles from March 13 to April 1 with three on April 6, then singles seen to April 17. There were four on April 20 with two on May 4. That concluded the late spring passage.

### Marsh Wren (*Cistothorus palustris*)

A passage migrant and winter visitor: the greatest numbers were seen during the winter passage. For the fall passage there was one on October 29 with two on November 2, then six

seen on November 6 and November 11 with five on November 13, three on November 18 and two on November 20. That was the fall passage. For the winter passage there were three on November 25 with five on November 30 and six on December 3, then nine seen on December 8 and December 16 with five on December 20, two on December 28 and singles to January 11. That completed the winter passage. For the early spring passage there two on January 12 and January 15 with singles to January 27. There were two on January 29 with one on February 9. That was the extent of the early spring passage. For the late spring passage there were two on May 4 with one on May 7. There were also two on May 14. That finished the late spring passage.

#### Ruby-crowned Kinglet (*Regulus calendula*)

A passage migrant and winter visitor; unlike the last species there was an extensive spring passage even if the numbers were very low. For the fall passage there were singles on November 6 and November 18 with four on November 20, then two seen to November 30 with one on December 3. That was the fall passage. For the winter passage there were three on December 11 with singles to December 18. There were four on December 20 with five on December 28 and January 1, then three seen on January 7. There were six on January 8 with two on January 11. That completed the winter passage. For the early spring passage there were three on January 12 with five on January 15 and January 19, then two seen to February 5. There were three on February 9, February 10 and February 17. That closed the early spring passage. For the late spring passage there was one on March 7 with two on March 11, then singles seen to March 18. There were two from March 19 to April 1 with four on April 6, then three seen on April 9 with two on April 17 and singles to May 1.

#### Blue-gray Gnatcatcher (*Polioptila caerulea*)

A passage migrant and winter visitor; the greatest numbers were seen during the early spring passage. For the fall passage there were two on October 6 with later one on October 21. There were two on October 29 with three on November 6, seven on November 13, eight on November 18, ten on November 25 and 11 on November 30, then five seen on December 3. That was the fall passage. For the winter passage there were four on December 8 with five on December 11, then four seen on December 16 with three on December 18. There were 12 on December 20 with eight on December 28. There were nine on December 31 and January 1 with 12 on January 7, then ten seen on January 8 with seven on January 11. That completed the winter passage so for the early spring passage there were 17 on January 12 and January 15 with nine on January 19. There were 11 on January 27 with 13 on January 29 and 24 on February 5, then 20 seen on February 10 with 14 on February 17. That closed the early spring passage. For

the late spring passage there were two on March 11 with three on March 16 and March 18, then two seen on March 19 with one on March 23. There were two on March 25 with three on April 9, then singles seen to April 23. That ended the late spring passage. For the early fall passage there were two on June 14 with singles on June 29, July 16 and July 23. There were three on August 3 with singles to August 13. *There were two on August 20 and August 27 with seven to September 6, then five seen on September 8. That was the very early end of the early fall passage.*

#### Veery (*Catharus fuscescens*)

This was a vagrant. For the spring passage there was one on May 1.

#### Swainson's Thrush (*Catharus ustulatus*)

This was a vagrant. For the spring passage there was one on April 9. It is unusual for there to be any spring sightings of these migrant thrushes.

#### Hermit Thrush (*Catharus guttatus*)

For this year a very rare winter visitor; there were singles on November 30, December 20 and January 7.

#### American Robin (*Turdus migratorius*)

There was a light fall passage followed by much stronger winter and early spring passages. For the fall passage there were five on November 6 with eight on November 13 and 12 on November 18, then nine seen on November 25. That was the fall passage. For the winter passage there 13 on November 30 with 23 on December 3, 140 on December 7 and 1,185 on December 11, then 205 seen on December 16 with 50 on December 18. There were 72 on December 20 with 265 on December 28, then 177 seen on January 1 with 41 on January 7. That completed the winter passage. For the early spring passage there were 165 on January 8 with 230 on January 11, 530 on January 12 and 860 on January 15, then 28 seen on January 19. There were 68 on January 27 with 140 on January 29, 575 on February 5 and 878 on February 9, then 543 seen on February 10 with 110 on February 17. That closed the early spring passage. For the late spring passage there were 16 on March 7 with 20 on March 11, then 11 seen on

March 16 with four on March 18 and two on March 19. There were 20 on March 25 with singles on March 30 and April 9. Finally for the late spring passage there was one on April 20.

#### Gray Catbird (*Dumetella carolinensis*)

A passage migrant and winter visitor; there were only small numbers seen in sharp contrast with later years. For the fall passage there were singles on October 29 and November 2 with two on November 6, four on November 13, five on November 18 and six on November 20, then one seen on November 25. That was the fall passage. For the winter passage there were three on November 30 with four on December 3, then three seen to December 11 with two on December 16. There were six on December 18 and December 20 with ten on December 31, 11 to January 7 and 14 on January 8, then three seen on January 11. That completed the winter passage. For the early spring passage there were eight on January 12 with 18 on January 15, then 12 seen on January 27 with ten on January 29. There were 13 on February 3 with 24 on February 9, then 21 seen to February 17. That closed the early spring passage. For the main spring passage there were ten on March 7 with six on March 11 and five on March 13. There were six on March 16 with ten on March 18 and 12 on March 19, then 11 seen on March 25 with eight on March 30. Now the heaviest passage started there were 14 on April 1 with 32 on April 9 and 42 on April 14, then 36 seen on April 17 with 26 on April 23, 24 on April 26, 12 to May 4 and one on May 7.

#### Northern Mockingbird (*Mimus polyglottos*)

A resident in the border habitats; numbers increased gradually through the year. During the Breeding Bird Survey a total of 55 pairs located. For the early fall passage there was one on September 2. For the main fall passage there was one on October 6 with five on October 16 and October 21, then one seen on October 29. There were two on November 2 and November 6 with six on November 11, then two seen on November 13 with one on November 18. There were two on November 20 with three on November 25, then two seen on November 30. That was the main fall passage. For the winter passage there were three on December 3 with four on December 8 and six on December 11, then two seen on December 16 with one on December 18. There were eight on December 20 with nine on December 28 and 13 on January 1, then ten seen on January 8 with four on January 11. That completed the winter passage. For the early spring passage there were 13 on January 12 with 14 to January 19 and 18 on January 27, then 11 seen on January 29. There were 14 on February 3 with 15 on February 5, then 21 seen on February 9 and February 17. Again because the area was now closed for two months I have no idea how this influx developed. That ended the early spring passage. For the main spring passage there were nine on March 7 with six to March 13. There were 14 on March 16 with 19

on March 18, then 13 seen on March 19 with six on March 23. There were 14 on March 25 with 24 on March 30, then 18 seen to April 14 with 12 on April 17. There were 14 on April 20 with 17 on April 23, 22 on April 26 and 30 on May 4, then 29 seen on May 10 with 18 on May 14. That closed the main spring passage. For the summer passage there were 20 on May 18 with 24 on May 22, 31 on May 29 and 47 on May 31, then 38 seen on June 7 with 25 on June 12, 23 on June 14 and 17 on June 19. There were 23 on June 22 with 33 on June 25 and 39 on July 4, then 24 seen on July 6 with 16 on July 12 and 13 on July 14. That finished the summer passage. For the early fall passage there were 19 on July 16 with 22 on July 20, then 20 seen on July 23 with 18 on August 3 and six on August 6. There were 19 on August 10 with six on August 13 *and five on August 18. There were 17 on August 20 with seven on August 25 and one on August 27. There were 12 on August 31 with ten to September 6 and six on September 8. There were ten on September 10 with 16 on September 17 and 19 on September 23, then 21 seen on September 30 and October 2 with 14 on October 6. That was the early fall passage.*

#### Brown Thrasher (*Toxostoma rufum*)

This is a secretive species so it is perhaps to be expected that there were only four records prior to March, 1999; from March onwards seen on most visits with the greatest numbers when the young fledged. During the Breeding Bird Survey a total of seven pairs located. For the late fall passage there were two on November 20. For the winter passage there was one on November 30. For the early spring passage there were singles on January 15 and February 17. With the main spring passage sightings became regular. There were singles on March 11 and March 13 with two on March 16 and three from March 18 to March 25, then one seen on March 30. There were two on April 1 with three on April 6, then singles seen to April 26. That was the main spring passage. For the summer passage there were two on May 1 and May 4 with one on May 7. There were two on May 10 and May 14 with three to May 22 and four on May 25, then three seen on May 29 with singles to June 7. There were three on June 12 and June 14 with singles to June 22. There were five on June 25 with eight on June 29 and 14 on July 4, then seven seen on July 6 with five to July 12 and three on July 14. That closed the summer passage so for the early fall passage there were five from July 16 to July 27 with seven on August 3, then four seen to August 10 with three on August 13. *There were nine on August 18 with eight on August 25, seven on August 27 and four on August 31. There were nine on September 3 and September 6 with ten on September 10, then seven seen on September 23 with three on September 25. That was the early fall passage.*

### European Starling (*Sturnus vulgaris*)

There was a minor early fall passage there were no further sightings until November. There was a passage during the late fall and winter passages; numbers then variable until the significant post-breeding gathering started. During the Breeding Bird Survey a total of 16 pairs located. For the early fall passage there were 25 on August 15 with ten on September 2 and two on September 17. That was the extent of the early fall passage. There were no further sightings until early November. For the main fall passage (even if very short) there were ten on November 2 with 35 on November 6, then 11 seen on November 11. There were 16 on November 13 with nine on November 18. That closed the main fall passage. For the winter passage there were 91 on November 20 with 150 on November 25, 158 on November 30 and 390 on December 3, then 120 seen on December 8 with 72 on December 16, 65 on December 20 and 30 on December 28. There were 40 on December 31 with 120 on January 1, then 18 seen on January 7 with 12 on January 8. That completed the winter passage. For the early spring passage there were 60 on January 11 with 110 on January 15, then 51 seen on January 19. There were 75 on January 27 with 109 on January 29, then 35 seen on February 3 with 28 on February 5. There were 225 on February 9 with 54 on February 10 and 46 on February 17. That ended the early spring passage. This is an early nester so that is probably the extent of the spring passage. For the summer passage there were 22 on March 7 with 27 on March 11, then five seen on March 13 with four on March 16. There were 20 on March 18 with six on March 19 and three on March 24. There were 150 on March 25 with 250 on March 30, then four seen on April 1. There were 72 on April 6 with 11 on April 9 and five on April 14. There were nine on April 17 with 33 on April 20, then 43 seen on April 26 and May 4 with 24 on May 7 and 14 on May 10. That concluded the summer passage. For the post-breeding gathering there were 17 on May 14 with 24 on May 18, 44 on May 25 and 157 on May 29, then 155 seen on May 31 with 145 on June 5. There were 275 on June 7 with 563 on June 12 and 680 on June 19, then 580 seen on June 22 with 540 on June 25. There were 770 on June 29 with 695 on July 6, 625 on July 12 and 275 on July 14. There were 735 on July 16 with 620 on July 20, 158 on July 23, 135 on July 27, 22 on August 3, seven on August 6, five on August 10 and one on August 13. *That was a very long post-breeding gathering. For the remainder of the early fall passage there were six on August 20 with seven on August 27, then three seen to September 10 with two on September 17. That ended the early fall passage.*

### American Pipit (*Anthus rubescens*)

A very common passage migrant and winter visitor from November to April; the highest counts were during the winter passage. For the fall passage there was one on October 21 with six on October 29, ten on November 2, 56 on November 6, 217 on November 11, 320 on November 18 and 370 on November 20, then 355 seen on November 25 with 35 on November

30. That closed the fall passage. For the winter passage there were 430 on December 3 with 570 on December 8, then 115 seen on December 11. There were 480 on December 16 with 570 on December 20, then 235 seen on December 31 with 170 on January 1. There were 395 on January 7 with 175 on January 8 and 157 on January 12. That completed the winter passage. For the early spring passage there were 220 on January 15 with 270 on January 19, 315 on January 27 and 335 on January 29, then 218 seen on February 3 with 35 on February 5 and 20 on February 9. There were 185 on February 10 with 75 on February 17. That was the early spring passage. For the late spring passage there were 150 on March 11 with 20 on March 13. There were 65 on March 16 with 115 on March 23 and 220 on April 6, then 210 seen on April 14 with 105 on April 17; there were no later records. The counts of 570 were the highest counts for Zellwood but the highest count is now (2014) that of 820 on January 2, 2009.

#### Cedar Waxwing (*Bombycilla cedrorum*)

A very common late spring passage migrant; there were a few records for the winter and early spring passages. For the winter passage there were 35 on December 11 with one on December 16. There were also 15 on December 20. That was the winter passage. For the early spring passage there were three on January 12 with five on January 19 and 76 on February 5, then four seen to February 10. Finally for the early spring passage there were 36 on February 17. Now to the main event the main spring passage there were eight on March 6 with three on March 13 and two on March 18. There were six on March 23 with 14 on March 25, 314 on March 30 and 615 on April 6, then 367 seen on April 9 with 248 on April 14 and 227 on April 17. The count of 615 was the highest count for Zellwood but the highest count is now (2014) that of 2,240 on April 8, 2007. There were 259 on April 20 with 178 on April 23. There were 201 on April 26 with 480 on May 1 and 570 on May 4, then 135 seen on May 7 with 90 on May 10 and 53 on May 14. There were 125 on May 18 with three on May 22. That completed the main spring passage. In later years they fed in the trees but for this spring passage they were feeding out in the fields.

#### Blue-winged Warbler (*Vermivora pinus*)

This was a vagrant. For the late spring passage there was one on April 26. *For the early fall passage in the following survey year there was one on August 27.*

### Tennessee Warbler (*Vermivora peregrina*)

A rare passage migrant; there were for the spring passage two on April 17 with one on May 1. For the early fall passage there were singles on August 31 and September 3 with three on September 17, then one seen on September 25.

### Orange-crowned Warbler (*Vermivora celata*)

An uncommon winter visitor and spring passage migrant; there was no particular peak to the passage. For the winter passage there was one on November 25 with two on November 30, then three seen on December 3 and December 8 with singles to December 28. There were two on December 31 and January 1 with three on January 7, then two seen on January 8 with one on January 12. That completed the winter passage. For the early spring passage there was one on January 19 with two on January 20 and three on January 27, then two seen to February 5. There were three on February 9 and February 10 with two on February 17. That ended the early spring passage. For the late spring passage there were two on March 7 and March 11 with singles to March 18. There were two on March 19 with one on March 23. That closed the late spring passage.

### Nashville Warbler (*Vermivora ruficapilla*)

This was a vagrant. For the spring passage there was one on January 11, January 15, February 5, March 13, March 16 and March 18. I believe just one bird involved in the above. This individual appeared to be of the western race *V.r.ridgwayi*.

### Northern Parula (*Parula americana*)

There were no fall records for 1998; seen during the spring, summer and early fall passages. During the Breeding Bird Survey a total of two pairs located; the first fledged young were seen on June 25. For the spring passage in 1999 there were singles on March 11, March 13 and March 16 with six on March 18 and eight on March 19, then five seen to March 30 with two on April 1 and singles to April 9. That closed the spring passage. For the summer passage there were three on April 14 with seven on April 17, then three seen to April 23 with two on May 1 and one on May 7. There were three on May 10 with two on May 22 and one on May 29. There were two on May 31 with singles to June 12. There were two on June 14 with four on June 25, then three seen on June 29 with two on July 4 and one on July 6. That was the end of the summer passage. For the early fall passage there was one on August 13 with three on

*August 25, then one seen on August 31. There were three on September 3 with four on September 17, then one seen on September 25. That was the early fall passage.*

#### Yellow Warbler (*Dendroica petechia*)

A passage migrant in low numbers in 1998 but with a very heavy early fall passage in 1999. For the early fall passage in 1998 there were 30 on August 15 with singles on September 2 and September 11. There were six on September 17 with one on September 30. That was the early fall passage; there were no later records. For the spring passage there was one on April 17; spring records are always a rarity. For the early fall passage in 1999 there were eight on August 3 with 49 on August 6, then 15 seen on August 13 *with ten on August 18. There were 27 on August 20 with 57 on August 25, then 53 seen on August 31 with 46 on September 3, 37 on September 6, 18 on September 8, 15 on September 10 and ten to September 23. There were 25 on September 25 with 16 on October 2, five on October 6 and one on October 14. That completed the early fall passage.*

#### Magnolia Warbler (*Dendroica magnolia*)

This was a vagrant. *For the following survey year there was one on September 23.*

#### Cape May Warbler (*Dendroica tigrina*)

A quite common spring passage migrant; there were no fall sightings this year. For the spring passage there were 13 on April 17 with two on April 20 and one on April 26. The count of 13 was the highest count for Zellwood but the highest count is now (2014) that of 16 on April 30, 2008. There were also five on May 1 with one on May 7.

#### Black-throated Blue Warbler (*Dendroica caerulescens*)

A passage migrant; the spring passage was the stronger event. For the spring passage there were three on April 20 with one on April 26. Later there were five on May 1. That was the spring passage. *For the early fall passage there was one on August 27.*

#### Yellow-rumped Warbler (*Dendroica coronata*)

A passage migrant and winter visitor; the greatest numbers were seen during the spring passages but there was no major invasion this year. For the late fall passage there were two on October 21 with four to November 2 and eight on November 6, then two seen on November 11. There were seven on November 13 with 13 on November 18, then five seen on November 30 with four on December 3. That was the late fall passage. For the winter passage there were 19 on December 8 with 24 on December 11, 39 on December 18, 53 on December 28 and 91 on December 31, then 64 seen on January 1 with 40 on January 7. That completed the winter passage. For the early spring passage there were 100 on January 8 with 110 on January 12, then 91 seen on January 15 with 70 on January 19 and 65 on January 27. There were 80 on January 29 with 190 on February 5, then 141 seen on February 10 with 70 on February 17. That concluded the early spring passage. There was now a two month gap whilst the area was closed to me and all I could do was check the various gates. For the late spring passage there were 80 on March 7 with 67 on March 13 and 60 on March 16. There were 113 on March 18 with 150 on March 23, then 100 seen on March 25 with 51 on April 1 and singles on April 6 and April 17. That ended the late spring passage.

#### Black-throated Green Warbler (*Dendroica virens*)

This was a vagrant. For the winter passage there were two on December 20. The count of two was the highest count for Zellwood but the highest count is now (2014) that of four on October 15, 2010. For the early spring passage there was also one on January 15.

#### Yellow-throated Warbler (*Dendroica dominica*)

This was a vagrant. For the spring passage there was one on April 1. *For the early fall passage in the following survey year there were singles on August 25 and September 25.*

#### Pine Warbler (*Dendroica pinus*)

This was a vagrant; at least for this year. For the spring passage there was one on April 20. *For the early fall passage there was one on September 30 that was it.*

### Prairie Warbler (*Dendroica discolor*)

There were very few records for this survey year, why I am not sure as this became from the second year a regular passage migrant and winter visitor. For the late fall passage there was one on October 6. There were no records for the winter passage. For the early spring passage there was one on January 15. For the main spring passage there were singles on March 18, March 19, March 25, March 30, April 1 and April 6 with two on April 14, six on April 17 and 12 on April 20, then three seen on April 23 with two on April 26. There were also four on May 4. That closed the main spring passage. For the summer passage there was one on June 12, such isolated summer sightings happen from time to time. For the early fall passage there were singles on July 23 and July 27 with three on August 3, then two seen on August 6. There were three from August 10 to August 18 with four on August 20 and August 25, then one seen on August 27. There were three on September 3 with six on September 6, then two seen on September 8 with one on September 10. There were 13 on September 17 with five on September 23, three on September 25, two to October 2 and one on October 6. That was the early fall passage.

### Palm Warbler (*Dendroica palmarum*)

A common passage migrant and winter visitor; the greatest numbers were seen from November to February. For the fall passage there were 14 on September 30 with 22 on October 6, 25 on October 21, 33 on October 29, 80 on November 6, 200 on November 11, 205 on November 13 and 240 on November 20, then 195 seen on November 25. That was the fall passage. For the winter passage there were 215 on November 30 with 255 on December 3 and 370 on December 8, then 180 seen on December 16 with 175 on December 20 and 105 on December 28. There were 220 on December 31 with 265 on January 1, then 260 seen on January 7 with 180 to January 12. That completed the winter passage. For the early spring passage there were 205 on January 15 with 235 to January 29, 245 on February 5 and 250 on February 9, then 235 seen on February 17. Then the area was closed and I do not know how that influx would have progressed. That ended the early spring passage. Numbers now much lower with the lack of access so for the late spring passage there were 14 on March 7 with 35 on March 11 and 40 on March 16, then 35 seen on March 18 with 25 on March 19 and 16 on March 23. There were 18 on March 25 with 32 on March 30, then 16 seen on April 1 with 13 on April 6 and 12 on April 9. There were 14 on April 14 with 51 on April 17 and 55 on April 20, then 25 seen on April 26 with nine on May 1 and three on May 10. That finished the late spring passage.

Blackpoll Warbler (*Dendroica striata*)

A quite common spring passage migrant; there were no fall records this year. For the spring passage there were four on April 17 and April 26 with 14 on May 1, then two seen on May 4 with one on May 7. There were 14 on May 10 with singles on May 14 and May 18.

Cerulean Warbler (*Dendroica cerulea*)

This was a vagrant. For the spring passage there was a female on May 10.

Black-and-white Warbler (*Mniotilta varia*)

An uncommon winter visitor and passage migrant, there were no records for the fall of 1998. For the winter passage there were singles on December 3, December 4, December 20 and January 7. For the early spring passage there were singles on January 15, February 3, February 5 and February 10. For the main spring passage there was one on April 1 with six on April 17, then two seen on April 20 with one on April 26. There were two on May 1 with one on May 10. That closed the main spring passage. *For the early fall passage if not for this survey year there was one on August 25 with two on August 31.*

American Redstart (*Setophaga ruticilla*)

A quite common spring and fall passage migrant; exceptionally there were winter records this year. For the winter passage there was one near Roach Road on December 11 and December 20 with two there on December 28. For the late spring passage there were singles on April 9 and April 14 with five on April 17, then three seen on April 20 with one on April 23. There were eight on April 26 and May 1 with four on May 4 and three on May 7. There were 22 on May 10 with 12 on May 18, two on May 22 and one on May 25. That closed the late spring passage. For the early fall passage there were singles on August 6 and August 13 *with two on August 18, then one seen on August 20. There were two on August 25 with seven on August 27, then three seen to September 3 with one on September 6. There were three on September 17 with four on September 23 and 11 on September 25, then two seen on September 30 that finished the early fall passage.*

Prothonotary Warbler (*Protonotaria citrea*)

This was a vagrant. For the spring passage there was one on March 18. *For the early fall passage in the following survey year there were singles on August 25 and September 17.*

Worm-eating Warbler (*Helmitheros vermivora*)

This was a vagrant. For the spring passage there was one on April 17.

Ovenbird (*Seiurus aurocapilla*)

An uncommon passage migrant and winter visitor; the greatest numbers were seen during the early fall passage in 1999. For the late fall passage in 1998 there was one on November 20. For the winter passage there were singles on December 20 and December 31. For the early spring passage there was one on January 12 with two on January 29, then one seen on February 17. For the late spring passage there were singles on April 17 and April 20 with two on May 1, then one seen on May 4. That was the end of these minor events. For the early fall passage in 1999 *there was one on August 27 with two on September 3 and four on September 6, then three seen to September 10 with one on September 17. There were nine on September 23 with eight on September 30 and four on October 2. That was the early fall passage.*

Northern Waterthrush (*Seiurus noveboracensis*)

Initially there were just three records for the winter passage with no further sightings until April; from that point on it became a normal passage migrant. For the winter passage there were singles on December 31, January 1 and January 7. That was the extent of the winter passage. There were no records for the early spring passage or for the first month of the late spring passage. For April there were singles on April 9 and April 17 with two on April 20 and four on April 23, then two seen on April 26 with singles to May 18. That was the late spring passage. For the early fall passage *there were two on August 27 with four on September 3, then two seen on September 6. There were three on September 8 with four to September 17, seven on September 23 and ten on September 25, then four seen on September 30 with three on October 2. That was the early fall passage.*

Louisiana Waterthrush (*Seiurus motacilla*)

This is another of the species where I do not understand now the lack of sightings early on. There were no records for the fall passage in 1998 and only one record for the late spring passage in 1999. Whilst numbers were low the early fall passage in 1999 was normal. For the late spring passage there was one on March 11 that was it. For the early fall passage there was one on August 10 with two on August 13, *four on August 20 and five on August 25, then two seen on August 27 with one on August 31. There were five on September 3 and September 6 with four on September 10, three on September 17 and one on September 23. That closed the early fall passage.*

Kentucky Warbler (*Oporornis formosus*)

This was a vagrant. For the spring passage there was one on April 14.

Common Yellowthroat (*Geothlypis trichas*)

A quite common passage migrant and winter visitor; there were no summer records. For the early fall passage there were seven on September 11 with nine on September 17, then one seen on September 30. That was the early fall passage. For the main fall passage there were ten on October 6. Later there were two on October 16 with 19 on October 21, then 15 seen on October 29 with ten on November 2. There were 20 on November 6 with 13 on November 11, eight on November 13 and seven on November 18. There were 12 on November 20 with nine on November 25. That closed the main fall passage. For the winter passage there were 15 on November 30 with 14 on December 8 and five on December 16. There were seven on December 18 with 21 on December 20, then 14 seen on December 28 with 11 on December 31 and six on January 1. That completed the winter passage. For the early spring passage there were ten on January 7 with 12 on January 8, 16 on January 12, 18 on January 15 and 20 on January 27, then 18 seen on January 29 with 16 on February 3. There were 23 on February 5 with 24 on February 10 and 28 on February 17 then the area was closed. That ended the early spring passage. For the late spring passage there were five on March 7 with three on March 11 and two on March 13. There were six on March 16 with five to March 19. There were six on March 23 and March 25 with five on March 30. There were six on April 1 with nine to April 14, 12 on April 17, 16 on April 20 and 36 on April 26, then 27 seen on May 4 with five on May 10, four on May 14 and three on May 22. Later there were singles on June 5 and June 7. That finished the late spring passage. There were no summer sightings. For the early fall passage there were *singles on August 6 and August 13 with two on August 25 and August 27, then one seen on August 31. There were 13 on September 3 with 23 on September 6, 27 on September 10,*

57 on September 17 and 176 on September 25, then 56 seen on September 30. That was the early fall passage.

#### Hooded Warbler (*Wilsonia citrina*)

This was a rare passage migrant. For the late spring passage there were singles on March 23 and March 30 with two on April 17.

#### Yellow-breasted Chat (*Icteria virens*)

This was a vagrant. For the spring passage there was one on April 17. It became a regular breeding species from the summer of 2000.

#### Summer Tanager (*Piranga rubra*)

This was a vagrant. *The only sighting came from the early fall passage of the following survey year; there was one on September 30.*

#### Eastern Towhee (*Pipilo erythrophthalmus*)

For some reason I did not record this species until mid-December after which it showed itself to be present all year; even if it was only seen in low numbers. During the Breeding Bird Survey a total of ten pairs located. For the winter passage there were singles on December 18, December 20 and December 28 with three from December 31 to January 8, then one seen on January 11. That completed the winter passage. For the early spring passage there were two on January 12 with three to January 29, four on February 5 and six from February 9 to February 17. For the main spring passage there were six on March 7 with three on March 11. There were five on March 13 and March 16 with seven on March 18 and ten on March 23, then nine seen on March 25 with eight on April 1 and six on April 6. There were nine on April 9 with seven on April 14, six on April 17, three on April 23 and one on April 26. That ended the main spring passage so for the summer passage there were two on May 1 with five on May 4 and May 10, then four seen on May 14. There were six from May 18 to May 25 with seven on May 29, eight on May 31 and nine on June 7, then five seen on June 12 with four on June 14. There were five on June 19 with six from June 22 to July 6, then five seen to July 12. That finished the summer passage. For the early fall passage there were eight on July 14 with four on July 16. There were five from July 20 to July 27 with six on August 3, then three seen to August 10. There were five on August 13

with six on August 18 and seven on August 20, then five seen to September 3 with four on September 6 and two on September 8. There were three on September 10 and September 17 with seven on September 23, then five seen on September 25 with two on September 30. That was the early fall passage.

#### Chipping Sparrow (*Spizella passerina*)

There was a limited winter passage with a single record for the early spring passage. For the winter passage there were two on December 3 with singles on December 8 and December 11. There were three on December 16 and December 20 with singles on January 1 and January 7. That completed the winter passage. For the early spring passage there was one on January 19.

#### Clay-colored Sparrow (*Spizella pallida*)

There was a major early spring passage which had been preceded by a minor winter passage. For the winter passage there were three on December 20 with two on December 31 and January 7. That was the extent of the winter passage. For the early spring passage there were seven on January 15 with 13 on January 19, 19 on January 27, 24 on January 29 and 46 on February 3, then 34 seen on February 5 with 21 on February 9, 16 on February 10 and three on February 19. With the closure of the area this was a premature end to this influx and passage. The count of 46 is still (2014) the highest count for Zellwood. Finally for the late spring passage there was one on April 23.

#### Field Sparrow (*Spizella pusilla*)

In sharp contrast this was a vagrant. For the late fall passage there was one on November 20. There were no winter records. For the early spring passage there were two on January 19. Finally for the late spring passage there was one on March 16.

#### Vesper Sparrow (*Pooecetes gramineus*)

There was a minor late fall passage but no winter passage; then there was a strong early spring passage followed by what appeared to be a weaker event whilst there was no access to the property. For the late fall passage there were singles on November 11, November 13 and November 20. There were no winter sightings. For the early spring passage there were singles

on January 7 and January 8 with four on January 11 and 11 on January 12, then eight seen on January 19 with six on January 29 and three on February 3. There were seven on February 5 with 17 on February 9 and 18 on February 17, then 12 seen on February 19. On February 17 I completed the last full survey; I had however started a survey on February 19 when I was told that the area was closed. That was the early spring passage. The count of 18 was the highest count for Zellwood but the highest count is now (2014) that of 45 on January 16, 2009. For the late spring passage there was one on March 11 with eight to March 18 and nine on March 19, then three seen on March 25. Later there was one on April 23. That completed the late spring passage.

#### Lark Sparrow (*Chondestes grammacus*)

This was a vagrant. For the early spring passage there was one on February 9, February 10 and February 17. *For the early fall passage but in the following survey year there was one on August 18.*

#### Savannah Sparrow (*Passerculus sandwichensis*)

A very common late fall to early spring passage migrant; numbers were much lower during the late spring passage. For the fall passage there were singles on October 6 and October 16 with 30 on October 21, 250 to November 2, 420 to November 13, 535 on November 18, 540 on November 20 and 715 on November 25, then 270 seen on November 30. That was the fall passage. For the winter passage there were 450 on December 3 with 860 on December 8, then 505 seen on December 20 with 410 on December 28. The count of 860 is still (2014) the highest count for Zellwood. There were 840 on December 31 with 405 on January 7. That completed the winter passage. For the early spring passage there were 420 on January 8 with 460 on January 12, 630 on January 15 and 700 on January 19, then 640 seen on January 29 with 610 on February 5, 540 on February 9, 465 on February 10 and 430 on February 17. That ended the early spring passage. For the late spring passage there were 100 on March 7 with 250 on March 11, then 210 seen on March 13 with 30 on March 16. There were 70 on March 18 with 90 on March 19, then 60 seen on March 23 with 30 on March 25, 25 on March 30, 12 on April 1, nine on April 6 and three on April 9. There were seven on April 20 with 55 on April 26, then eight seen on May 1 with two on May 4 and one on May 7. That finished the late spring passage.

Grasshopper Sparrow (*Ammodramus savannarum*)

A quite common passage migrant and winter visitor; there were only four records for the late spring passage. For the late fall passage there was one on November 6 with three on November 11, six to November 18 and ten on November 20, then five seen on November 25 with two on November 30. That was the fall passage. For the winter passage there were eight on December 3 with six on December 8, three on December 16, two on December 20 and one on December 28. There were seven on December 31 with two to January 7 and one to January 12. That completed the winter passage. For the early spring passage there were six on January 19 with one on January 20. There were two from January 27 to February 3 with three on February 5, four on February 9, five on February 10 and 12 on February 17, and then two seen on February 19 but that was a partial count. The count of 12 is still (2014) the highest count for Zellwood. That closed the early spring passage. For the late spring passage there was one on March 11 with two on March 13 and March 19. Finally there was an exceptionally late individual on May 31.

Henslow's Sparrow (*Ammodramus henslowii*)

This was a vagrant. For the late fall passage there were singles on November 20 and November 30. For the early spring passage there were singles on January 7 and January 19.

Le Conte's Sparrow (*Ammodramus leconteii*)

This was another vagrant. For the winter passage there were singles on December 16 and December 31. These sightings were by Pole Road extension.

Fox Sparrow (*Passerella iliaca*)

This was a vagrant. For the early spring passage there was one on February 17; this was near the Laughlin Road gate.

Song Sparrow (*Melospiza melodia*)

An uncommon late fall, winter and early spring passage migrant; this is one of the first sparrows to leave in the spring. For the late fall passage there was one on November 11. For the winter passage there was one on November 30 with two on December 3 and December 8, then singles seen to December 20. That was the winter passage. For the early spring passage

there were three on January 19 with five to January 29 and six on February 5, then five seen on February 9 with four on February 10 and three on February 17. That ended the early spring passage. There were no later sightings.

#### Lincoln's Sparrow (*Melospiza lincolnii*)

An early spring passage migrant; there were five winter records. For the winter passage there were singles on November 25, December 20, January 7, January 8 and January 12. For the early spring passage there were three on January 15 and January 19 with two on January 27 and one on January 29. There were four on February 3, February 5 and February 9 with two on February 17 and one on February 19. The counts of four were the highest counts for Zellwood but the highest count is now (2014) that of five on November 17, 2002. That completed the early spring passage; there were no later records.

#### Swamp Sparrow (*Melospiza georgiana*)

Unlike later years only small numbers were seen during the late fall, the winter and the spring passages. For the late fall passage there were two on October 29 with five on November 2, nine on November 6, 13 on November 11 and 23 on November 13, then 30 seen on November 20 and November 25 with 23 on November 30. That was the late fall passage. For the winter passage there were 24 on December 3 with 32 on December 8 and 100 on December 20, then 40 seen on December 28 with 31 on December 31 and 15 on January 1. That completed the winter passage. For the early spring passage there were 16 on January 7 with 23 on January 8 and 29 on January 12, then 26 seen to January 19. There were 31 on January 27 with seven to February 3. There were ten on February 5 with 11 on February 9 and 12 on February 10, then five seen on February 17. That concluded the early spring passage. For the late spring passage there were five on March 7 with two on March 11 and one on March 13. There were three on March 18 with four on March 19, then one seen on March 23. There were three on March 25 with four on March 30, then three seen on April 6 with two on April 9. There were four on April 14 with five on April 20, then two seen on April 26 with one on May 4. That finished the late spring passage.

#### White-throated Sparrow (*Zonotrichia albicollis*)

A rare winter visitor and early spring passage migrant; this species is exceptionally secretive so was probably under-counted. For the winter passage there were singles on

December 8, December 31 and January 7. For the early spring passage there were singles on January 19 and February 10 that was it.

#### White-crowned Sparrow (*Zonotrichia leucophrys*)

A surprisingly common passage migrant and winter visitor; the greatest numbers were seen during the early spring passage. For the late fall passage there was one on November 13 with two on November 18, seven on November 20 and ten on November 25, then three seen on November 30. That was the late fall passage. For the winter passage there were 21 on December 3 with 14 on December 8 and one on December 16. There were three on December 20 with 14 on December 31, then 11 seen on January 7 with seven on January 8 and one on January 11. That completed the winter passage. For the early spring passage there were 16 on January 12 with 28 on January 19, then 16 seen on January 27. There were 24 on January 29 with 51 on February 3, then 32 seen on February 9 with 24 on February 10 and 16 on February 17. The count of 51 is still (2014) the highest count for Zellwood. That concluded the early spring passage. For the late spring passage there was one on March 11 with three on March 16 and five on March 18, then singles seen to March 23. There were four on March 25 with one on March 30. Later there were two on April 20 with four on April 23 and eight on April 26, then three seen to May 4. That ended the late spring passage.

#### Lapland Longspur (*Calcarius lapponicus*)

This is a vagrant anywhere in central Florida; there should not be any records for the inland counties. So for the fall passage there was a male by Roach Road on October 16. There is a description in Appendix B.

#### Northern Cardinal (*Cardinalis cardinalis*)

A common resident that was seen in very low numbers whilst I concentrated on the birds using the flooded fields of Unit Two; during the Breeding Bird Survey a total of 179 pairs located. For the late fall passage there were three on October 21 with singles on October 29 and November 2. There were three on November 6 with one on November 11. There were two on November 13 and November 18 with four from November 20 to December 3, then one seen on December 8. That was the late fall passage. For the winter passage there were two on December 11 with singles to December 18. There were seven on December 20 with ten on December 28, then nine seen to January 1. There were 12 on January 7 with nine on January 8 and seven on January 11. That completed the winter passage. For the early spring passage

there were 13 on January 12 and January 15 with 14 on January 19, 23 to January 29 and 28 on February 5, then 23 seen on February 9. There were 26 on February 10 with 27 on February 17; again there was the void. That ended the early spring passage. For the main spring passage there were six on March 7 with ten on March 11, 14 on March 16, 17 on March 18, 27 on March 23 and 30 on March 25, then 25 seen on March 30. There were 26 on April 1 with 43 on April 6, then 42 seen on April 9 with 36 on April 14. There were 56 on April 17 with 42 on April 20 and 35 on April 23. There were 50 on April 26 with 42 on May 4 and 29 on May 7. That finished the main spring passage. For the summer passage there were 54 on May 10 with 50 on May 18, 36 on May 22 and 31 on May 25. There were 56 on May 29 with 77 on May 31, 80 on June 7 and 86 on June 12, then 44 seen to June 19. There were 49 on June 22 with 45 on June 25, 34 to July 9, 28 on July 12 and 20 on July 14. That was the end of the summer passage. For the early fall passage there were 24 on July 16 with 30 on July 20 and 31 on July 23, then 29 seen on July 27 with 22 to August 13 *and 12 on August 18. There were 27 on August 20 with 34 on August 25 and 35 on August 27, then 20 seen on August 31. There were 26 on September 3 with 30 on September 6, then 15 seen on September 8. There were 25 on September 10 with 29 on September 17, 34 on September 23, 35 on September 25, 41 to October 2 and 54 on October 6, then 44 seen on October 8. That closed the early fall passage.*

#### Blue Grosbeak (*Guiraca caerulea*)

A common summer visitor; there were records for the rest of the year bar a period from early February to mid-March. For some reason these buntings are often absent at this time. During the Breeding Bird Survey a total of 41 pairs located; fledged young were first seen from June 19 to August 18. For the late fall passage there were nine on October 16 with two on October 21 and singles on October 29, November 2, November 6, November 18 and November 20. That was the late fall passage. For the winter passage there was one on December 8 with three on December 16, then singles seen on December 20, January 1 and January 8. That completed the winter passage. This species is not meant to winter anywhere in the United States so these records are exceptional. For the early spring passage there were two on January 11 and January 12 with one on January 15. There were two on January 27 with singles on January 29 and February 5. That closed the early spring passage. There was now a gap of over a month in the sightings. For the main spring passage there were singles on March 19 and March 30 with two on April 1, then one seen on April 6. Now the passage really started. There were three on April 14 and April 17 with seven on April 20, eight on April 26, nine on May 1 and ten on May 4, then eight seen on May 10 with six on May 14. That ended the main spring passage. For the summer passage there were 12 on May 18 with 18 on May 22, then 11 seen on May 25. There were 15 on May 29 with 17 on May 31, 22 on June 5, 29 on June 7 and 32 on June 12, then 30 seen on June 14 with 24 on June 19 and 13 on June 22. There were 22 on June 25 with 18 on June 29, 17 to July 6, 16 on July 12 and six on July 14. That was the end of the summer

passage. For the early fall passage there were 11 on July 16 with 13 on July 20, then 11 seen on July 27 with six on August 3 and five on August 6. There were ten on August 10 with 18 on August 13, *then ten seen on August 18 with eight on August 20. There were 11 on August 25 with seven to September 3, three on September 6 and two to September 10. There were four on September 17 and September 25 with three on September 30; that finished the early fall passage.*

#### Indigo Bunting (*Passerina cyanea*)

Present all year with a noticeable spring passage; during the Breeding Bird Survey a total of 11 pairs located. I did not record any fledged young. For the late fall passage there was one on October 16 with three on October 21. There was one on November 11 with two on November 13, then singles seen to November 20. There were also two on November 25 with one on November 30. That was the late fall passage. For the winter passage there was one on December 11 with three on December 16, December 20 and December 31, four on January 1 and seven on January 8, then two seen on January 11. That completed the winter passage. For the early spring passage there were six on January 12 with seven on January 15, then five seen on January 19 with three on January 27 and one on January 29. There were two on February 5 with four on February 9, then two seen on February 10 with one on February 17. That finished the early spring passage. For the main spring passage there were singles on March 7, March 11 and March 13 with two on March 16, five on March 18 and six on March 19, then one seen on March 23. There were two on March 25 and March 30 with four to April 6, nine on April 14, 22 on April 17 and 26 on April 20, then 13 seen on April 23 with five on April 26, four on May 1 and three on May 4. That concluded the main spring passage so for the summer passage there were four on May 14 with six on May 22, then two seen on May 25. There were four on May 29 and May 31 with five to June 12 and seven on June 19, then five seen on June 25 with three on June 29. There were six on July 4 and July 6 with three to July 12 and two to July 20. That ended the summer passage. For the fall passage there were three from July 23 to August 10 with two on August 13 *and one on August 18. There were two on August 25 with singles to September 8. There was one on September 17 with six on September 25 and 22 on October 2, then 19 seen on October 8 with 11 on October 12. There were 16 on October 14 with 25 on October 19, then eight seen on October 23 with five on October 26, three on October 29, two on November 6 and singles to November 16. There were three on November 19 with singles to November 30. That closed what appeared to be a single fall passage.*

### Painted Bunting (*Passerina ciris*)

A non-breeding summer visitor; there were no sightings for 1998 but there were records from January 1 to August 10 in 1999. During the Breeding Bird Survey a total of eight adult or immature males were found on territory; no females were located. For the early spring passage there were two on January 1 with three on January 7, then two seen on January 8. There were three from January 11 to January 15 with two on January 19. There were three on January 27 with two on January 29 and one on February 5. There were two on February 9 with four on February 10 and February 17, then two seen on February 19. That was the early spring passage. For the late spring passage there were two from March 16 to March 25 with singles to April 14. There were two on April 20. That was the somewhat early closure of the late spring passage. There was a gap of a month before the summer passage started. For this passage there were singles on May 18 and May 22 with two to May 29, three to June 5 and four on June 12, then three seen to June 19 with two on June 25 and one on June 29. There were two on July 4 with three on July 6 and July 12, then singles seen to July 27. That ended the summer passage. For the early fall passage there were two on August 3 with singles to August 10. That was the very early end of the early fall passage.

### Dickcissel (*Spiza americana*)

A spring passage migrant and summer visitor; there were single records for the fall and winter passages. During the Breeding Bird Survey a total of 13 pairs located; now that is not the statement that one would expect for a species that is not meant to breed any nearer than northern Georgia. In 1999 females were seen on three dates with a brood of two being seen on June 29. For the fall passage there was one on November 20. For the winter passage there were three on December 8. For the early spring passage there were two on January 11 and January 15 with three on January 19. Later there were two on February 3 with one on February 10. That was the early spring passage. For the main spring passage there was one on March 16 with three on March 30 and April 9, then two seen on April 17 with one on April 20. There were two on April 23 with one on April 26. That closed the main spring passage. For the summer passage there were single male and females on May 31 with two males on June 12 and June 14, three on June 19, five on June 25 and eight on June 29, then five seen on July 6 with one on July 9. During this influx there was a female and the two juveniles on June 29 with a female on July 6. The count of 11 on June 29 was the highest count for Zellwood but the highest count is now (2014) that of 143 on May 22, 2005. That was the end of the summer passage. For the early fall passage there were three on July 12 with one on July 16. For these I did not note sex or age.

Bobolink (*Dolichonyx oryzivorus*)

A very common spring passage migrant; numbers in the fall were much lower. For the early fall passage there were 400 on September 11 with 700 on September 17, then 25 seen on September 30. That was the end of the early fall passage and also the end of all passage for 1998. For the spring passage there was one on April 9 with 105 on April 17, 110 on April 20, 1,600 on April 26 and 3,120 on May 1, then 1,920 seen on May 4 with 1,000 on May 7, 46 on May 14 and 15 on May 18. Whist the count of 3,120 is a high count the highest count is now (2014) that of 16,550 on April 30, 2008. Just one influx covered the whole of the spring passage. *For the early fall passage there were 24 on August 27 with 104 on August 31, then 93 seen on September 3 with ten on September 8 and six on September 10. There were 27 on September 17 with three on September 25 and two to October 2. That closed the early fall passage.*

Red-winged Blackbird (*Agelaius phoeniceus*)

This was a common resident; there were higher numbers during the early fall passage of 1998. During the Breeding Bird Survey a total of 545 pairs located. For the early fall passage there were 60 on August 15 with 3,000 on September 2, then 2,200 seen on September 17 with 1,020 on September 30 and 70 on October 6. That was the early fall passage. For the late fall passage there were 40 on October 16 with 185 on October 21, then 40 seen on October 29. There were 145 on November 2 with 500 on November 6, 550 on November 11 and 1,020 on November 13, then 720 seen on November 20 with 585 on November 25 and 300 to December 3. That closed the late fall passage. For the winter passage there were 560 on December 8 with 700 on December 16 and 1,750 on December 28, then 720 seen on January 1 with 350 to January 8 and 200 on January 11. That completed the winter passage. For the early spring passage there were 755 on December 12 with 1,005 on January 15, then 750 seen on January 27 with 480 on February 3, 410 on February 5, 360 on February 10 and 265 on February 17. That ended the early spring passage. For the late spring passage there were 20 on March 7 with 340 on March 11, 350 on March 13 and 1,080 on March 16, then 450 seen on March 19 with 350 on March 23 and 90 on March 25. There were 410 on March 30 with 305 on April 1, 100 on April 9, 83 on April 14 and 60 on April 17. There were 210 on April 20 with 82 on April 23. That concluded the late spring passage so for the summer passage there were 140 on April 26 with 220 on May 1, then 95 seen on May 7 with 85 on May 10 and 80 on May 14. There were 90 on May 18 and May 25 with 110 on May 29, 250 on May 31 and 350 on June 7, then 255 seen on June 14 with 250 on June 19 and 200 on June 22. That finished the summer passage. For the post-breeding gathering there were 370 on June 25 with 810 on July 4, then 405 seen on July 6 with 340 on July 9, 250 on July 12, 180 on July 14 and 130 on July 16. There were 165 on July 20 with 220 on July 23, then 170 seen on July 27 with 140 on August 3. There were 530 on August 6 with 155 on August 10, 150 on August 13 and 104 on August 18. *There were 340 on August 20*

*with 175 on August 25. There were 225 on August 27 with 835 on August 31, then 325 seen on September 3 with 110 on September 6. That finished the post-breeding gathering. For the remainder of the early fall passage there were 116 on September 8 with 146 on September 10, 340 on September 17 and 555 on September 23, then 125 seen on September 25. That ended the early fall passage.*

#### Eastern Meadowlark (*Sturnella magna*)

Normally singles seen from November to mid-January but there was a winter influx; numbers then higher for the rest of the year. During the Breeding Bird Survey a total of nine pairs located; the first fledged young were seen on July 4. For the late fall passage there was one on October 6 with singles from November 6 to November 30. That was the late fall passage. For the winter passage there was one on December 8 with three on December 16 and 11 on December 20, then four seen on December 28 with singles to January 11. That completed the winter passage. For the early spring passage there were two on January 12 with five on January 15, then two seen on January 19 with one on January 27. There were two on January 29 with nine on February 3, then four seen on February 5 with three on February 9 and one on February 10. There were also four on February 17. That finished the early spring passage. For the main spring passage there were five on March 7 with nine on March 11, then seven seen on March 13 with four to March 18. There were seven on March 19 with four on March 25 and one on March 30. There were four from April 1 to April 14 with six on April 20 and 12 on April 26, then five seen on May 1. That concluded the main spring passage. For the summer passage there were six on May 4 with nine on May 7 and ten on May 10, then nine seen on May 14 with six on May 18 and four on May 22. There were six on May 25 with nine on May 29, then seven seen on May 31 with six on June 5 and three on June 7. There were seven on June 12 and June 14 with eight on June 19, then four seen on June 22. There were six on June 25 with ten on June 29 and July 4, then six seen to July 14. That was the summer passage. For the early fall passage there were nine on July 16 and July 23 with eight to August 6, three to August 13 *and one on August 18. There were two on August 20 and September 3 with three from September 6 to September 23, then two seen on September 25. That was the early fall passage.*

#### Yellow-headed Blackbird (*Xanthocephalus xanthocephalus*)

This is normally a vagrant but it would be best described this year as a rare passage migrant and winter visitor. For the early fall passage there was one on September 2. For the late fall passage there were two on November 23. For the winter passage there was one on December 3 with three on December 8, then one seen on December 11. There were two on December 16 with five on December 31, then singles seen to January 8. The count of five is still

(2014) the highest count for Zellwood. That completed the winter passage. For the early spring passage there were two on January 11 with one on January 15. There were singles on January 27 and January 29 with two on February 2 and four on February 10. That closed the early spring passage. For the late spring passage there were singles on March 13, March 16 and March 18 with three on March 19, then two seen on March 30 and April 1. That ended the late spring passage.

#### Rusty Blackbird (*Euphagus carolinus*)

This was a vagrant. There was a flock of 13 by the Lake Level Canal on December 3 making this a winter record. The count of 13 is still (2014) the highest count for Zellwood.

#### Common Grackle (*Quiscalus quiscula*)

A common resident particularly in the wetter pieces of woodland; there were no large influxes this year. During the Breeding Bird Survey a total of 25 pairs located. For the late fall passage there were 105 on November 2 with 20 on November 6 and 11 on November 11. There were 22 on November 13 with 38 on November 18, then 28 seen on November 20 with 20 on November 30 and two on December 3. That was the late fall passage. For the winter passage there were five on December 4 with 20 on December 8 and 55 on December 11, then 39 seen on December 20 with 11 on December 31 and one on January 1. There were 67 on January 7 with singles to January 11. That completed the winter passage. For the early spring passage there were 11 on January 12 with 29 on January 19 and 64 on January 29, then 62 seen on February 5 with 12 on February 9 and six on February 10. There were also 15 on February 17. That closed the early spring passage. For the late spring passage there were two on March 7 with four on March 11 and five on March 16, then two seen on March 18. There were three from March 19 to March 25 with 13 on March 30, 18 on April 1 and 20 on April 6, then 14 seen on April 9 with 11 on April 14, seven on April 20, six on April 26 and four on May 1. That was the end of the late spring passage. For the summer passage there were 14 on May 4 with four on May 7. There were ten on May 10 with 16 on May 14, 31 on May 18 and 41 on May 22, then seven seen on May 25. There were 23 on May 29 with 29 on May 31, then 13 seen on June 5 with nine on June 7. There were 24 on June 12 with eight on June 14 and six on June 19. There were ten on June 22 with 19 on June 25, then 16 seen to July 6. There were 18 on July 9 with 13 on July 12 and six on July 14. That was the summer passage. For the post-breeding gathering there were 13 on July 16 with 34 on July 20 and 112 on July 23, then 26 seen on July 27 with 18 on August 3. There were 165 on August 6 with 238 on August 13 and 466 on August 18, then 414 seen on August 25 with 325 on August 27, 236 on August 31, 92 on September 3, 77 on September 8 and 72 on September 10. There were 98 on September 17 with 164 on September

23, then nine seen on September 25. There were 99 on September 30 with 72 on October 6, 16 on October 8 and three on October 12. That ended the post-breeding gathering.

#### Boat-tailed Grackle (*Quiscalus major*)

A common resident; there were higher numbers during the winter and early spring passages together with a significant post-breeding gathering. During the Breeding Bird Survey a total of 225 pairs located. For the early fall passage there were 500 on August 15 and September 11 with 170 on September 30 and 32 on October 6. That was the early fall passage. For the main fall passage there were 250 on October 16 with 260 on October 21 and 525 on November 2, then 240 seen on November 6. There were 400 on November 11 with 600 on November 13, then 560 seen on November 18 with 450 on November 20. That was the early closure of the main fall passage so for the winter passage there were 675 on November 25 with 1,140 on December 3 and 2,100 on December 4, then 760 seen on December 11 with 660 on December 16. There were 700 on December 20 with 1,250 on December 28, then 935 seen on January 1 with 350 on January 8 and 310 on January 11. That completed the winter passage. For the early spring passage there were 1,145 on January 12 with 830 on January 15. There were 970 on January 19 with 1,160 on January 27, then 1,070 seen on February 3 with 510 on February 5 and 320 on February 9. There were 390 on February 10 with 690 on February 17. It would be interesting to know what happened next; still that was the end of the early spring passage. This species nests very early so there was no late spring passage rather we go straight to the summer passage. For this event there were 20 on March 7 and March 11 with 26 on March 16 and 30 on March 18, then 25 seen on March 23 with 18 on March 30, 11 on April 1 and five on April 6. There were 23 on April 9 with 47 on April 14, 50 on April 17 and 160 on April 20, then 20 seen on April 23. I had access again from April 20 which led to the higher counts. There were 85 on April 26 with 415 on May 1, then 160 seen on May 4 with 110 on May 7. There were 250 on May 10 with 210 on May 18, 205 on May 25 and 115 on May 29. That ended the summer passage. For the post-breeding gathering there were 355 on May 31 with 425 on June 5, 640 on June 12, 1,350 on June 19, 2,015 on June 22 and 2,140 on June 25, then 1,190 seen on June 29 with 760 on July 4. There were 1,010 on July 6 with 2,050 on July 12, then 1,275 seen on July 16 with 1,090 on July 20 and 615 on July 23. There were 1,070 on July 27 with 2,170 on August 3, then 1,260 seen on August 6 with 670 on August 10, 550 on August 13 and 390 on August 18. That was the post-breeding gathering. For the early fall passage there were 550 on August 20 with 565 on August 25, then 335 seen on August 27. There were 480 on August 31 with 530 on September 3 and 885 on September 8, then 770 seen on September 17 with 440 on September 23 and 300 on September 25. There were 460 on September 30 with 195 on October 2. That was the early fall passage.

### Shiny Cowbird (*Molothrus bonariensis*)

This was a vagrant. For the early fall passage there was a male on July 12.

### Bronzed Cowbird (*Molothrus aeneus*)

This was a vagrant. For the late fall passage there was a male by Roach Road on November 23. This species has proved to be rarer than the Shiny Cowbird.

### Brown-headed Cowbird (*Molothrus ater*)

A complicated species that was present for most of the year in varying numbers. There was a noticeable winter passage followed by a heavy passage in the spring. Numbers were very low during the summer with another passage in the early fall. During the Breeding Bird Survey a single pair located; a juvenile was seen from June 5. For the early fall passage there were 50 on August 15 with 140 on September 11, then 110 seen on September 17 with 105 on September 30. That was the early fall passage. For the late fall passage the only sighting in October was that of 100 on October 16. There were six on November 6 with 26 on November 13 and 60 on November 18, then 23 seen on November 20 with ten to November 30. That closed the late fall passage. For the winter passage there were 34 on December 3 with 475 on December 8, then 456 seen on December 11 with 400 on December 16. There were 420 on December 18 with 1,170 on December 20, then 720 seen on December 31 with 430 on January 1, 95 on January 7 and one on January 8. That completed the winter passage. For the early spring passage there were 135 on January 11 with 240 on January 12, 980 on January 15, 1,025 on January 19, 1,900 on January 27, 2,880 on January 29 and 3,150 on February 5, then 1,600 seen on February 9 with 1,250 on February 17. The count of 3,150 was the highest count for Zellwood but the highest count is now (2014) that of 3,600 on February 27, 2009. That ended the early spring passage. For the late spring passage there were 100 on March 7 with 410 on March 11 and 1,545 on March 16, then 1,300 seen on March 19 with 900 on March 23, 31 on March 30 and four on April 1. That finished the late spring passage. For the summer passage there were ten on April 6 with 20 on April 9, then two seen to April 17. There were three on April 20 with four on April 23, then singles seen to May 7. There were no records for the next month; then a juvenile seen on June 5 and June 7. There were two females on June 22 with another juvenile on June 29. That concluded the summer passage. For the post-breeding gathering there were 46 on July 4 with 148 on July 9, 455 on July 12, 550 on July 14 and 1,005 on July 16, then 510 seen on July 20 with 330 on July 27, 95 on August 3, seven on August 6, three on August 10, two on August 13 and singles to August 25. That was the post-breeding gathering. For the early fall passage there were two on September 8 with one on September 10. There were two on

*September 17 with 61 on September 23, then 40 seen on September 25 with one on October 6. That was the early fall passage.*

#### Orchard Oriole (*Icterus spurius*)

A summer visitor; it is strange to see how things started as there was just one pair in 1999 and 2000 numbers then built to a peak count of 26 pairs in 2003. For the spring passage there was one on April 17. For the summer passage there were singles on May 25, May 29, May 31, June 5, June 7, June 14, June 19 and June 29. Whilst only singles seen these sightings involved both adult and first-summer males. There were three on July 6 with singles on July 20, July 23 and August 3. There does not appear to be a fall passage so it is perhaps best to treat all these records as relating to the summer passage.

#### Baltimore Oriole (*Icterus galbula*)

There were only six records for the period being dealt with here; three of the counts were for the early fall passage. For the winter passage there was one on December 31. For the early spring passage there was one on January 12 with two on January 20. *For the early fall passage there were singles on September 6 and September 8 with three on September 23.*

#### American Goldfinch (*Spinus tristis*)

A passage migrant and winter visitor; during this year very small numbers seen perhaps the vegetation had not developed enough. For the late fall passage there were six on November 18 with one on November 25. For the winter passage there were four on November 30 with one on December 3. There were also singles on December 20, December 28, December 31, January 1 and January 7. That completed the winter passage. For the early spring passage there were two on January 8 with four on January 12, then two seen on January 27. That was the extent of the early spring passage. For the main spring passage there were three on March 11 with two on March 18 and one on March 19. There were two on March 23 with three on April 1, then two seen on April 9. That ended the main spring passage.

#### House Sparrow (*Passer domesticus*)

Seemingly a winter visitor, a spring passage migrant and summer visitor; during the Breeding Bird Survey a single pair located on the northern border. For the winter passage there

were seven on December 8 with six on December 20 and one on December 31. These were all seen in a field by the Laughlin Road gate. The count of seven is still (2014) the highest count for Zellwood. There were also three on January 1 with four on January 7, then three seen on January 8. That completed the winter passage. For the early spring passage there were singles from January 12 to January 27 with two on January 29, then singles seen to February 9. There were also two on February 17. That ended the early spring passage. Sightings started again when access again granted there being for the late spring passage singles on April 20 and April 26. For the summer passage there were singles from May 10 to July 20 with counts of two on June 7, June 19 and July 6.

## **Table A**

### **The Spreadsheet - August 15, 1998 to August 14, 1999.**

This table gives full details of the species seen and the numbers counted on a daily basis during this survey year. Because of the number of visits the table had to be broken down into parts, they are in chronological order.

Table A. Part 1

Hab	SPECIES	8/15	9/2	9/11	9/17	9/30	10/6	10/16	10/21	10/29	11/2	11/6	11/11	11/13	11/18	11/20	11/23
1	Pacific Loon	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
1	Common Loon	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
1	Pied-billed Grebe	20	40	175	200	95	170	219	620	340	610	475	445	540	750	.	.
1	Horned Grebe	.	.	.	.	.	.	.	.	.	.	.	3	3	3	2	.
1	Red-necked Grebe	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
1	Eared Grebe	.	.	.	.	.	.	.	.	.	.	.	2	2	3	.	.
1	Sooty Shearwater	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
1	American White Pelican	.	.	.	216	1	190	140	105	87	160	186	163	640	920	.	.
1	Brown Pelican	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
1	Neotropic Cormorant	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
1	Double-crested Cormorant	.	5	1	2	7	10	58	137	322	442	196	280	79	115	162	.
1	"California" D-c Cormorant	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
1	Anhinga	4	1	11	12	6	.	6	31	29	12	21	33	23	20	.	.
2	American Bittern	.	.	.	.	.	1	.	.	.	.	.	1	1	2	1	.
2	Least Bittern	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
2	Gray Heron	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
2	Great Blue Heron	250	13	125	195	85	155	96	82	140	245	230	285	240	275	.	.
2	Great White Heron	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
2	Great Egret	750	400	315	670	300	495	845	860	975	1080	1950	1220	1420	1240	.	.
2	Snowy Egret	300	.	125	205	77	135	75	110	34	80	8	62	26	21	.	.
2	Little Blue Heron	70	6	19	6	9	2	3	4	4	5	13	2	6	6	.	.
2	Tricolored Heron	60	70	11	35	9	2	3	3	3	9	4	5	9	7	.	.
2	Reddish Egret	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
6	Cattle Egret	400	3000	1500	2800	840	85	2050	34	70	5	11	68	250	435	350	.
2	Green Heron	10	13	4	11	10	5	1	3	6	1	5	10	1	2	2	.
2	Black-crowned Night-Heron	1	.	.	12	8	.	.	37	7	.	2	26	12	17	.	.
2	Yellow-crowned Night-Heron	.	.	.	.	1	.	.	.	.	.	.	.	.	.	.	.
2	White Ibis	1000	40	260	165	14	14	60	95	40	43	61	205	70	215	.	.
2	Glossy Ibis	200	20	24	150	10	85	210	260	280	245	192	280	215	450	.	.
2	White-faced Ibis	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
2	Roseate Spoonbill	3	5	.	3	.	.	.	2	1	1	.	6	6	5	.	.
2	Wood Stork	30	45	265	546	395	245	590	570	290	1030	890	1125	750	1130	.	.
7	Black Vulture	.	.	.	.	.	.	.	10	.	.	3	7	3	1	11	10
7	Turkey Vulture	1	.	2	9	5	6	6	10	6	25	15	36	18	29	17	80
1	Black Swan	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.

Table A. Part 1

Hab	SPECIES	8/15	9/2	9/11	9/17	9/30	10/6	10/16	10/21	10/29	11/2	11/6	11/11	11/13	11/18	11/20	11/23
3	White-faced Whistling-Duck	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
3	Black-bellied Whistling-Duck	50	46	26	76	51	7	238	250	227	195	98	41	27	67	50	.
3	Fulvous Whistling-Duck	2	.	.	.	.	.	.	2	.	.	.	.	.	.	.	.
3	Greater White-fronted Goose	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
3	Egyptian Goose	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
3	Snow Goose	.	.	.	.	.	.	.	.	.	1	.	1	10	27	28	29
3	Ross's Goose	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
3	Canada Goose	.	.	.	.	.	.	.	.	3	3	3	3	3	3	3	3
3	Muscovy Duck	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
3	Wood Duck	3	3	2	.	2	.	.	.	.	.	.	.	.	.	.	.
3	Gadwall	.	.	.	.	.	.	2	.	6	.	.	3	6	8	5	9
3	Eurasian Wigeon	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
3	American Wigeon	.	.	.	.	.	.	.	.	7	2	5	61	63	12	.	.
3	American Black Duck	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
3	Mallard	.	.	2	.	4	.	.	8	.	8	2	8	12	11	.	.
3	Mottled Duck	20	30	75	104	50	10	26	56	2	55	24	54	63	37	50	.
3	Blue-winged Teal	2	40	70	135	1250	60	5000	5000	7500	10500	8100	4250	730	890	.	.
3	Cinnamon Teal	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
3	Northern Shoveler	.	.	17	20	35	40	40	170	154	216	228	388	477	400	.	.
3	Northern Pintail	.	.	.	.	.	.	2	20	29	10	8	7	7	.	.	.
3	Green-winged Teal	.	.	.	.	.	.	.	2	20	15	700	330	350	1300	.	.
3	Eurasian Green-winged Teal	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
1	Canvasback	.	.	.	.	.	.	.	.	1	.	1	1	.	1	.	.
1	Redhead	.	.	.	.	.	.	.	.	.	.	.	.	.	1	2	1
1	Ring-necked Duck	.	.	.	.	.	.	2	5	190	150	373	343	184	527	840	.
1	Greater Scaup	.	.	.	.	.	.	.	.	.	.	2	.	1	1	1	.
1	Lesser Scaup	.	.	.	.	.	.	.	.	.	.	.	2	2	1	.	.
1	Black Scoter	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
1	Bufflehead	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
1	Common Goldeneye	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
1	Hooded Merganser	.	.	.	.	.	.	.	.	.	.	2	.	3	3	10	.
1	Red-breasted Merganser	.	.	.	.	.	.	.	.	.	.	.	.	.	.	1	.
1	Ruddy Duck	.	.	.	.	.	.	12	22	100	139	136	240	114	164	203	.
5	Osprey	4	12	2	18	11	14	21	18	14	17	5	5	10	7	.	.
7	Swallow-tailed Kite	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.

Table A. Part 1

Hab	SPECIES	8/15	9/2	9/11	9/17	9/30	10/6	10/16	10/21	10/29	11/2	11/6	11/11	11/13	11/18	11/20	11/23
7	Mississippi Kite	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
7	White-tailed Kite	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
7	Snail Kite	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
5	Bald Eagle	.	.	4	4	.	.	.	.	3	1	6	5	7	3	7	6
7	Northern Harrier	.	.	1	1	4	4	22	24	15	11	24	11	13	24	26	.
8	Sharp-shinned Hawk	1	.	.	.	.	.	1	.	1	1	1	1	1	2	2	.
8	Cooper's Hawk	.	.	.	1	.	.	.	.	.	.	.	.	1	.	.	.
8	Red-shouldered Hawk	2	2	1	2	5	5	5	4	5	5	6	5	7	7	9	.
8	Broad-winged Hawk	.	.	.	.	.	1	.	.	.	.	.	.	.	.	.	.
8	Short-tailed Hawk	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
7	Swainson's Hawk	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
8	Red-tailed Hawk	.	.	.	.	.	.	.	1	1	2	1	2	2	2	.	.
8	Red-tailed dark-morph	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
8	Krider's Red-tailed Hawk	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
7	Rough-legged Hawk	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
7	Golden Eagle	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
6	Crested Caracara	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
7	American Kestrel	.	.	.	.	2	1	3	7	3	2	6	5	6	5	5	.
7	Eurasian Kestrel	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
7	Merlin	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
7	Peregrine Falcon	.	.	1	1	1	1	1	.	.	.	1	.	1	.	.	.
8	Common Peafowl	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
7	Gray Partridge	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
8	Wild Turkey	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
7	Ring-necked Pheasant	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
7	Northern Bobwhite	.	.	.	.	6	.	.	.	.	.	.	.	.	.	1	.
2	Yellow Rail	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
2	Black Rail	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
2	Clapper Rail	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
2	King Rail	.	.	.	.	.	.	.	.	.	.	.	1	.	1	.	.
2	Virginia Rail	.	.	.	.	.	.	.	.	.	.	.	.	.	1	.	.
2	Sora	.	1	.	.	.	.	.	.	.	.	.	1	.	5	2	.
2	Purple Gallinule	.	2	.	.	.	.	.	4	.	1	1	1	1	1	1	.
4	Common Moorhen	20	600	1100	685	230	815	740	1890	460	625	90	256	275	221	.	.
1	American Coot	.	.	35	57	100	90	1130	3620	4250	7450	6250	12750	11690	16720	.	.

Table A. Part 1

Hab	SPECIES	8/15	9/2	9/11	9/17	9/30	10/6	10/16	10/21	10/29	11/2	11/6	11/11	11/13	11/18	11/20	11/23
1	Caribbean Coot	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
2	Limpkin	.	.	.	.	.	.	.	.	.	.	.	.	1	.	1	.
2	Sandhill Crane	.	.	.	.	.	.	.	.	.	.	.	.	97	2	89	.
2	Whooping Crane	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
4	Black-bellied Plover	35	55	12	4	16	4	14	24	97	155	183	175	63	218	213	.
4	American Golden-Plover	.	2	4	4	1	.	.	.	1	.	1	.	.	1	.	.
4	Semipalmated Plover	60	70	65	26	.	.	.	1	.	8	.	3	2	.	1	.
4	Wilson's Plover	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
4	Piping Plover	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
6	Killdeer	90	46	1	12	6	.	.	52	26	5	6	5	90	67	161	.
4	Black-necked Stilt	300	70	150	368	220	55	21	.	.	.	.	.	6	5	8	.
4	American Avocet	.	3	.	3	17	10	23	24	25	33	32	34	31	37	37	.
4	Greater Yellowlegs	10	40	80	70	17	82	160	305	380	400	205	210	115	190	.	.
4	Lesser Yellowlegs	140	290	570	370	212	370	945	815	700	995	680	520	755	455	.	.
4	Solitary Sandpiper	.	.	.	1	.	.	.	.	.	.	.	.	.	.	.	.
4	Willet	2	3	1	.	.	.	.	.	.	.	.	.	.	.	.	.
4	Spotted Sandpiper	2	1	.	.	.	.	.	.	.	.	.	.	.	.	.	.
6	Upland Sandpiper	.	2	.	.	.	.	.	.	.	.	.	.	.	.	.	.
4	Whimbrel	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
4	Long-billed Curlew	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
4	Hudsonian Godwit	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
4	Marbled Godwit	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
4	Ruddy Turnstone	2	1	1	.	.	.	.	.	.	.	.	1	1	1	1	.
4	Red Knot	.	.	.	2	.	.	1	1	.	.	.	.	.	.	.	.
4	Sanderling	.	.	1	3	.	.	.	.	.	.	.	.	.	.	.	.
4	Semipalmated Sandpiper	200	20	170	40	2	.	20	.	.	2	2	.	.	.	.	.
4	Western Sandpiper	400	480	965	420	1	.	50	50	20	10	2	.	32	2	15	.
4	Least Sandpiper	800	480	1290	350	3	.	1340	750	1530	1850	1850	1450	2400	1400	.	.
4	White-rumped Sandpiper	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
4	Baird's Sandpiper	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
4	Pectoral Sandpiper	35	450	350	130	.	2	82	72	6	12	3	.	2	2	.	.
4	Sharp-tailed Sandpiper	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
4	Dunlin	1	.	.	.	.	.	6	1	80	155	1	70	210	51	70	.
4	Curlew Sandpiper	.	1	.	.	.	.	.	.	.	.	.	1	.	.	.	.
4	Stilt Sandpiper	150	340	150	84	48	45	320	490	195	31	1	28	108	57	24	.

Table A. Part 1

Hab	SPECIES	8/15	9/2	9/11	9/17	9/30	10/6	10/16	10/21	10/29	11/2	11/6	11/11	11/13	11/18	11/20	11/23
6	Buff-breasted Sandpiper	.	15	23	8	.	.	.	.	.	.	.	.	.	.	.	.
4	Ruff	.	.	.	.	.	.	.	.	1	1	.	1	.	.	.	.
4	Short-billed Dowitcher	350	450	320	315	72	95	350	255	670	360	615	270	210	120	.	.
4	Long-billed Dowitcher	.	.	.	.	1	35	5	31	65	400	250	640	610	630	.	.
4	Wilson's Snipe	4	.	.	3	.	.	.	5	2	3	5	58	150	402	.	.
4	American Woodcock	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
4	Wilson's Phalarope	17	21	6	.	.	.	4	3	3	3	.	.	.	.	1	.
4	Red-necked Phalarope	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
4	Red Phalarope	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
5	Pomarine Jaeger	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
5	Parasitic Jaeger	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
5	Laughing Gull	4	10	12	17	15	2	5	2	6	3	6	.	2	2	.	.
5	Franklin's Gull	.	.	.	.	.	.	.	.	.	.	.	.	.	.	1	.
5	Little Gull	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
5	Bonaparte's Gull	.	.	.	.	.	.	.	.	.	.	.	.	.	.	1	2
5	Ring-billed Gull	.	.	.	.	5	4	3	2	52	50	39	193	196	346	471	.
5	Herring Gull	.	.	.	.	.	.	.	.	2	2	2	2	2	1	1	.
5	Thayer's Gull	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
5	Great Black-backed Gull	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
5	Lesser Black-backed Gull	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
5	Gull-billed Tern	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
5	Caspian Tern	30	45	42	35	47	2	4	33	56	29	42	74	62	111	.	.
5	Royal Tern	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
5	Sandwich Tern	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
5	Roseate Tern	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
5	Common Tern	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
5	Arctic Tern	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
5	Forster's Tern	90	500	145	47	20	20	2	5	33	39	125	132	255	342	.	.
5	Least Tern	1	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
5	Black Tern	240	500	305	78	.	1	.	.	.	.	.	.	.	.	.	.
5	Bridled Tern	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
5	Sooty Tern	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
5	Black Skimmer	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
8	Rock Pigeon	35	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
8	Eurasian Collared-Dove	1	.	.	.	.	.	.	.	1	.	.	.	4	.	.	.

Table A. Part 1

Hab	SPECIES	8/15	9/2	9/11	9/17	9/30	10/6	10/16	10/21	10/29	11/2	11/6	11/11	11/13	11/18	11/20	11/23
8	Diamond Dove																
8	African Collared-Dove																
8	White-winged Dove																
8	Mourning Dove	60	10	15	16	12	3	7	8	3	4	11	24	40	26	40	
8	Common Ground-Dove		2	1				1	1		1		1	3			
8	Cockatiel																
7	Budgerigar																
8	Black-billed Cuckoo																
8	Yellow-billed Cuckoo																
8	Smooth-billed Ani																
8	Groove-billed Ani																
8	Barn Owl																
8	Eastern Screech-Owl																
8	Great Horned Owl										1						
8	Burrowing Owl																
8	Barrd Owl				1							1					
7	Long-eared Owl																
7	Short-eared Owl																
8	Northern Saw-whet Owl																
8	Lesser Nighthawk																
8	Common Nighthawk																
8	Chuck-will's-widow																
8	Eastern Whip-poor-will																
7	Chimney Swift	1															
8	Ruby-throated Hummingbird																
8	Black-chinned Hummingbird																
5	Belted Kingfisher	1	3	8	13	6	7	7	9	8	14	7	6	7	7		
8	Red-headed Woodpecker																
8	Red-bellied Woodpecker											1	2	2	3		
8	Yellow-bellied Sapsucker																
8	Downy Woodpecker																
8	Hairy Woodpecker																
8	Red-cockaded Woodpecker																
8	Northern Flicker					1				1	1	1	1	1		2	
8	Pileated Woodpecker																

Table A. Part 1

Hab	SPECIES	8/15	9/2	9/11	9/17	9/30	10/6	10/16	10/21	10/29	11/2	11/6	11/11	11/13	11/18	11/20	11/23
8	Olive-sided Flycatcher	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
8	Eastern Wood-Pewee	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
8	Yellow-bellied Flycatcher	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
8	Acadian Flycatcher	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
8	Alder Flycatcher	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
8	Willow Flycatcher	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
8	Least Flycatcher	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
7	Eastern Phoebe	.	.	.	.	.	2	2	16	11	14	13	24	41	23	.	.
8	Vermilion Flycatcher	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
8	Ash-throated Flycatcher	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
8	Great Crested Flycatcher	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
8	Brown-crested Flycatcher	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
8	Tropical Kingbird	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
8	Cassin's Kingbird	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
8	Western Kingbird	.	.	.	.	.	.	.	.	.	.	2	.	.	.	.	.
8	Eastern Kingbird	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
8	Gray Kingbird	.	.	.	.	.	1	2	.	.	.	.	.	.	.	.	.
8	Scissor-tailed Flycatcher	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
8	Fork-tailed Flycatcher	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
8	Loggerhead Shrike	1	.	.	.	.	2	2	2	2	1	1	2	2	2	3	.
8	White-eyed Vireo	.	.	.	.	.	.	.	.	.	.	.	.	.	.	1	.
8	Bell's Vireo	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
8	Yellow-throated Vireo	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
8	Blue-headed Vireo	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
8	Philadelphia Vireo	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
8	Red-eyed Vireo	.	.	.	.	.	.	.	.	.	.	.	3	.	.	.	.
8	Black-whiskered Vireo	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
8	Blue Jay	.	.	.	.	.	1	.	.	1	1	3	1	1	1	3	.
8	Florida Scrub-Jay	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
7	American Crow	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
7	Fish Crow	.	3	8	.	10	.	2	2	2	1	37	5	246	18	5	.
7	Purple Martin	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
7	Tree Swallow	.	.	.	.	.	.	6	55	50	200	8	50	450	1150	.	.
7	Northern Rough-winged Swallow	.	3	1	.	2	.	.	.	.	.	.	.	.	.	.	.
7	Bank Swallow	1	1	35	7	1	.	1	.	.	.	.	.	.	.	.	.

Table A. Part 1

Hab	SPECIES	8/15	9/2	9/11	9/17	9/30	10/6	10/16	10/21	10/29	11/2	11/6	11/11	11/13	11/18	11/20	11/23
7	Cliff Swallow	.	.	1	.	.	.	.	.	.	.	.	.	.	.	.	.
7	Cave Swallow	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
7	Barn Swallow	60	100	410	57	140	.	18	80	.	10	6	.	.	.	.	.
8	Carolina Chickadee	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
8	Tufted Titmouse	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
8	Brown-headed Nuthatch	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
8	Carolina Wren	.	.	.	.	.	.	.	.	.	.	1	2	3	5	2	.
8	Bewick's Wren	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
8	House Wren	.	.	.	.	.	1	12	10	5	7	18	17	23	29	.	
8	Winter Wren	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
7	Sedge Wren	.	.	.	.	.	.	5	2	2	1	3	7	5	6	.	
7	Marsh Wren	.	.	.	.	.	.	.	1	2	6	6	5	3	2	.	
8	Golden-crowned Kinglet	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
8	Ruby-crowned Kinglet	.	.	.	.	.	.	.	.	.	.	1	.	.	1	4	.
8	Blue-gray Gnatcatcher	.	.	.	.	.	2	.	1	2	.	3	2	7	8	.	.
8	Eastern Bluebird	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
8	Veery	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
8	Gray-cheeked Thrush	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
8	Bicknell's Thrush	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
8	Swainson's Thrush	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
8	Hermit Thrush	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
8	Wood Thrush	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
8	American Robin	.	.	.	.	.	.	.	.	.	.	5	.	8	12	.	.
8	Gray Catbird	.	.	.	.	.	.	.	.	1	1	2	1	4	5	6	.
8	Northern Mockingbird	.	1	.	.	.	1	5	5	1	2	2	6	2	1	2	.
8	Brown Thrasher	.	.	.	.	.	.	.	.	.	.	.	.	.	.	2	.
7	European Starling	25	10	.	2	.	.	.	.	.	10	35	11	16	9	91	.
7	Common Myna	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
6	American Pipit	.	.	.	.	.	.	.	1	6	10	56	217	55	320	370	.
8	Cedar Waxwing	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
8	Blue-winged Warbler	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
8	Tennessee Warbler	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
8	Orange-crowned Warbler	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
8	Nashville Warbler	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
8	Northern Parula	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.

Table A. Part 1

Hab	SPECIES	8/15	9/2	9/11	9/17	9/30	10/6	10/16	10/21	10/29	11/2	11/6	11/11	11/13	11/18	11/20	11/23
7	Yellow Warbler	30	1	1	6	1	.	.	.	.	.	.	.	.	.	.	.
8	Chestnut-sided Warbler	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
8	Magnolia Warbler	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
8	Cape May Warbler	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
8	Black-throated Blue Warbler	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
8	Yellow-rumped Warbler	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
8	"Audubon's Warbler"	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
8	Black-throated Gray Warbler	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
8	Black-throated Green Warbler	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
8	Blackburnian Warbler	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
8	Yellow-throated Warbler	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
8	Pine Warbler	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
7	Prairie Warbler	.	.	.	.	.	1	.	.	.	.	.	.	.	.	.	.
7	Palm Warbler	.	.	.	.	14	22	8	25	33	15	80	200	205	95	240	.
7	"Yellow Palm Warbler"	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
8	Bay-breasted Warbler	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
8	Blackpoll Warbler	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
8	Cerulean Warbler	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
8	Black-and-white Warbler	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
8	American Redstart	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
8	Prothonotary Warbler	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
8	Worm-eating Warbler	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
8	Swainson's Warbler	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
8	Ovenbird	.	.	.	.	.	.	.	.	.	.	.	.	.	.	1	.
7	Northern Waterthrush	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
7	Louisiana Waterthrush	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
8	Kentucky Warbler	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
7	Common Yellowthroat	.	.	7	9	1	10	2	19	15	10	20	13	8	7	12	.
8	Hooded Warbler	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
8	Wilson's Warbler	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
8	Canada Warbler	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
7	Yellow-breasted Chat	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
8	Summer Tanager	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
8	Scarlet Tanager	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
8	Western Tanager	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.

Table A. Part 1

Hab	SPECIES	8/15	9/2	9/11	9/17	9/30	10/6	10/16	10/21	10/29	11/2	11/6	11/11	11/13	11/1	11/2	11/2
7	Eastern Towhee	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
7	Bachman's Sparrow	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
8	Chipping Sparrow	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
7	Clay-colored	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
7	Field Sparrow	.	.	.	.	.	.	.	.	.	.	.	.	.	.	1	.
7	Vesper Sparrow	.	.	.	.	.	.	.	.	.	.	.	1	1	.	1	.
7	Lark Sparrow	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
7	Savannah Sparrow	.	.	.	.	.	1	1	30	250	250	90	420	420	535	540	.
7	Grasshopper	.	.	.	.	.	.	.	.	.	.	1	3	6	6	10	.
7	Henslow's Sparrow	.	.	.	.	.	.	.	.	.	.	.	.	.	.	1	.
7	Le Conte's Sparrow	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
7	Nelson's Sparrow	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
7	Fox Sparrow	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
7	Song Sparrow	.	.	.	.	.	.	.	.	.	.	.	1	.	.	.	.
7	Lincoln's Sparrow	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
7	Swamp Sparrow	.	.	.	.	.	.	.	.	2	5	9	13	23	16	30	.
7	White-throated	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
7	White-crowned	.	.	.	.	.	.	.	.	.	.	.	.	1	2	7	.
7	Dark-eyed Junco	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
7	Lapland Longspur	.	.	.	.	.	.	1	.	.	.	.	.	.	.	.	.
8	Northern Cardinal	.	.	.	.	.	.	.	3	1	1	3	1	2	2	4	.
8	Rose-breasted	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
8	Blue Grosbeak	.	.	.	.	.	.	9	2	1	1	1	.	.	1	1	.
8	Lazuli Bunting	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
8	Indigo Bunting	.	.	.	.	.	.	1	3	.	.	.	1	2	1	1	.
8	Painted Bunting	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
7	Dickcissel	.	.	.	.	.	.	.	.	.	.	.	.	.	.	1	.
7	Bobolink	.	3	400	700	25	.	.	.	.	.	.	.	.	.	.	.
7	Red-winged	60	3000	200	2200	1020	70	40	185	40	145	500	550	1020	605	720	.
6	Eastern Meadowlark	.	.	.	.	.	1	.	.	.	.	1	1	.	1	1	.
7	Yellow-headed	.	1	.	.	.	.	.	.	.	.	.	.	.	.	.	3
7	Rusty Blackbird	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
7	Brewer's Blackbird	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
7	Common Grackle	.	.	.	.	.	.	.	.	.	105	20	11	22	38	28	.
7	Boat-tailed Grackle	500	300	500	135	169	32	250	260	110	525	240	400	600	560	450	.

Table A. Part 1

Hab	SPECIES	8/15	9/2	9/11	9/17	9/30	10/6	10/16	10/21	10/29	11/2	11/6	11/11	11/13	11/18	11/2	11/2	
7	Shiny Cowbird	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
7	Bronzed Cowbird	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	1
7	Brown-headed	50	1	140	110	105	.	100	.	.	.	6	2	26	60	23	.	
8	Orchard Oriole	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
8	Baltimore Oriole	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
8	Bullock's Oriole	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
8	Pine Siskin	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
8	Purple Finch	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
8	House Finch	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
8	American	.	.	.	.	.	.	.	.	.	.	.	.	.	6	.	.	.
8	House Sparrow	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
8	Bronze Mannikin	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
8	Orange Bishop	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
8	Zebra Finch	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
8	Pin-tailed Whydah	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
	<b>TOTAL SPECIES</b>	<b>60</b>	<b>62</b>	<b>62</b>	<b>64</b>	<b>62</b>	<b>54</b>	<b>71</b>	<b>78</b>	<b>83</b>	<b>88</b>	<b>97</b>	<b>102</b>	<b>106</b>	<b>107</b>	<b>77</b>	<b>10</b>	
	<b>TOTAL</b>	<b>6,991</b>	<b>11,728</b>	<b>10,559</b>	<b>11,987</b>	<b>5,833</b>	<b>3,527</b>	<b>15,427</b>	<b>17,723</b>	<b>20,129</b>	<b>29,286</b>	<b>25,565</b>	<b>28,910</b>	<b>27,037</b>	<b>34,097</b>	<b>5,526</b>	<b>144</b>	

Table A. Part 2

Hab	SPECIES	11/25	11/30	12/3	12/4	12/7	12/8	12/11	12/16	12/18	12/20	12/28	12/31	1/1	1/7	1/8	1/11
1	Pacific Loon	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
1	Common Loon	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
1	Pied-billed Grebe	585	460	555	.	.	245	330	460	225	221	425	280	175	230	235	.
1	Horned Grebe	2	2	1	.	.	1	2	2	1	1	.	2	2	2	.	2
1	Red-necked Grebe	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
1	Eared Grebe	3	3	2	2	2	3	1	.	3	1	1	2	4	3	3	2
1	Sooty Shearwater	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
1	American White Pelican	1350	460	860	.	.	85	95	150	1440	400	3550	1570	695	2320	600	1700
1	Brown Pelican	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
1	Neotropic Cormorant	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
1	Double-crested Cormorant	186	170	141	.	.	130	150	117	138	79	58	47	27	17	8	5
1	"California" D-c Cormorant	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
1	Anhinga	27	16	22	.	.	22	24	25	35	22	33	17	17	17	16	22
2	American Bittern	1	2	3	2	2	1	2	1	1	1	.	1	.	.	.	.
2	Least Bittern	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
2	Gray Heron	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
2	Great Blue Heron	280	295	395	.	.	310	283	170	150	160	217	234	285	220	231	.
2	Great White Heron	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
2	Great Egret	1335	660	575	.	.	540	460	525	480	420	430	330	526	730	480	.
2	Snowy Egret	30	5	1	.	.	5	1	1	2	3	26	7	18	5	20	.
2	Little Blue Heron	1	3	6	.	.	6	7	22	4	6	9	3	6	16	3	3
2	Tricolored Heron	7	15	4	.	12	9	14	12	16	7	5	4	6	2	1	2
2	Reddish Egret	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
6	Cattle Egret	850	1540	705	1100	.	1950	1160	80	780	700	430	890	260	790	785	.
2	Green Heron	2	4	2	.	.	6	5	5	7	4	5	5	4	6	9	11
2	Black-crowned Night-Heron	5	2	.	.	.	2	1	1	2	14	11	5	3	.	.	3
2	Yellow-crowned Night-Heron	.	.	.	.	.	.	.	.	.	.	.	.	1	.	.	.
2	White Ibis	60	75	150	.	.	167	225	340	365	200	305	370	400	140	255	.
2	Glossy Ibis	160	330	505	.	.	365	485	525	615	335	490	255	558	90	1010	.
2	White-faced Ibis	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
2	Roseate Spoonbill	1	1	.	.	.	.	.	.	.	.	.	.	.	.	.	.
2	Wood Stork	1115	495	75	.	.	105	15	12	42	19	87	211	550	355	110	.
7	Black Vulture	4	.	3	.	.	4	.	2	.	2	1	2	1	16	.	12
7	Turkey Vulture	60	3	16	60	.	16	138	130	14	55	17	50	30	29	41	50
1	Black Swan	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.

Table A. Part 2

Hab	SPECIES	11/25	11/30	12/3	12/4	12/7	12/8	12/11	12/16	12/18	12/20	12/28	12/31	1/1	1/7	1/8	1/11	
3	White-faced Whistling-Duck	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	
3	Black-bellied Whistling-Duck	12	34	21	180	1	189	2	2	82	.	16	55	25	4	.	3	
3	Fulvous Whistling-Duck	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
3	Greater White-fronted Goose	.	.	.	1	1	1	1	.	.	.	.	.	.	.	.	.	.
3	Egyptian Goose	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
3	Snow Goose	30	33	89	89	86	88	86	86	90	90	90	.	.	.	.	.	
3	Ross's Goose	.	.	.	.	2	2	1	1	.	.	.	.	.	.	.	.	.
3	Canada Goose	3	3	3	3	3	3	3	3	3	3	.	3	3	.	3	3	
3	Muscovy Duck	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
3	Wood Duck	.	.	.	1	.	5	.	3	4	.	.	.	.	.	.	.	
3	Gadwall	10	29	41	.	.	22	17	44	14	27	52	33	47	57	66	40	
3	Eurasian Wigeon	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
3	American Wigeon	107	37	63	.	.	116	123	142	186	155	168	150	154	97	78	70	
3	American Black Duck	2	2	2	2	3	2	2	1	1	.	1	1	1	.	1	2	
3	Mallard	4	6	9	.	.	4	9	21	5	3	4	6	8	1	15	4	
3	Mottled Duck	5	22	20	.	.	33	20	82	29	45	22	16	30	18	26	18	
3	Blue-winged Teal	110	1800	1100	.	.	6500	6475	6580	4760	1550	510	335	320	205	335	450	
3	Cinnamon Teal	.	1	.	.	.	.	1	.	1	.	.	.	.	.	.	.	
3	Northern Shoveler	351	468	450	.	.	575	515	645	540	375	145	630	612	442	429	410	
3	Northern Pintail	2	16	2	65	.	180	316	420	334	198	263	170	106	64	145	180	
3	Green-winged Teal	350	2100	3050	.	.	7700	7350	2400	12565	8550	5695	5640	4250	4600	2950	2250	
3	Eurasian Green-winged Teal	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
1	Canvasback	.	3	3	1	5	5	3	3	4	5	5	3	5	5	5	1	
1	Redhead	.	2	2	.	.	2	.	1	1	2	.	1	3	1	.	.	
1	Ring-necked Duck	4570	7845	11900	.	.	6750	2250	1850	250	360	380	60	110	50	100	40	
1	Greater Scaup	1	.	3	1	.	5	3	3	.	1	.	.	1	3	3	.	
1	Lesser Scaup	9	4	4	3	.	17	25	93	103	21	81	56	48	34	132	62	
1	Black Scoter	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
1	Bufflehead	.	1	1	1	.	.	.	1	1	1	5	2	2	1	.	2	
1	Common Goldeneye	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
1	Hooded Merganser	8	10	9	.	.	9	12	15	18	32	36	40	24	70	57	61	
1	Red-breasted Merganser	.	1	1	1	.	1	.	.	5	.	.	.	.	6	.	6	
1	Ruddy Duck	278	357	430	.	.	517	385	315	95	515	347	119	150	132	322	280	
5	Osprey	8	8	6	.	.	3	3	2	5	1	1	2	2	1	1	2	
7	Swallow-tailed Kite	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.

Table A. Part 2

Hab	SPECIES	11/25	11/30	12/3	12/4	12/7	12/8	12/11	12/16	12/18	12/20	12/28	12/31	1/1	1/7	1/8	1/11
7	Mississippi Kite	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
7	White-tailed Kite	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
7	Snail Kite	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
5	Bald Eagle	12	7	4	.	.	3	17	19	2	3	8	4	8	18	17	10
7	Northern Harrier	9	10	6	.	.	13	12	10	13	27	9	9	17	16	10	24
8	Sharp-shinned Hawk	2	2	2	2	.	1	2	3	1	4	.	4	1	2	.	1
8	Cooper's Hawk	.	.	.	.	.	.	.	.	1	.	.	.	.	.	.	.
8	Red-shouldered Hawk	8	11	6	4	.	10	6	6	4	5	6	8	8	5	3	1
8	Broad-winged Hawk	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
8	Short-tailed Hawk	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
7	Swainson's Hawk	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
8	Red-tailed Hawk	2	2	3	4	4	6	3	4	3	6	4	4	8	6	10	7
8	Red-tailed dark-morph	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
8	Krider's Red-tailed Hawk	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
7	Rough-legged Hawk	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
7	Golden Eagle	.	.	.	.	.	.	.	.	.	.	.	.	.	.	1	.
6	Crested Caracara	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
7	American Kestrel	7	4	7	.	.	10	4	5	7	8	5	5	5	8	7	5
7	Eurasian Kestrel	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
7	Merlin	.	.	.	.	.	.	1	.	1	1	1	1	1	.	.	.
7	Peregrine Falcon	1	1	.	.	.	.	.	1	.	.	.	.	.	.	.	.
8	Common Peafowl	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
7	Gray Partridge	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
8	Wild Turkey	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
7	Ring-necked Pheasant	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
7	Northern Bobwhite	1	.	.	.	.	.	.	.	1	2	.	1	7	.	.	.
2	Yellow Rail	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
2	Black Rail	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
2	Clapper Rail	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
2	King Rail	1	1	2	.	.	.	.	1	.	2	.	.	.	.	.	1
2	Virginia Rail	.	.	1	.	.	.	.	.	.	.	.	.	.	1	.	.
2	Sora	5	6	2	2	2	7	5	10	5	14	13	10	8	16	18	4
2	Purple Gallinule	1	.	1	.	.	1	.	1	.	1	1	.	1	1	1	.
4	Common Moorhen	185	65	55	.	.	40	45	65	55	36	55	80	50	35	35	30
1	American Coot	6630	5700	4320	.	.	5050	3800	6050	3750	3750	2400	2210	3050	1910	3055	3000

Table A. Part 2

Hab	SPECIES	11/25	11/30	12/3	12/4	12/7	12/8	12/11	12/16	12/18	12/20	12/28	12/31	1/1	1/7	1/8	1/11	
1	Caribbean Coot	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	
2	Limpkin	1	.	.	.	.	.	.	.	.	.	.	.	.	.	2	.	
2	Sandhill Crane	5	33	33	.	.	10	25	28	.	9	9	20	9	4	4	4	
2	Whooping Crane	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
4	Black-bellied Plover	315	248	346	.	.	186	145	295	.	105	129	75	82	84	100	.	
4	American Golden-Plover	.	.	.	.	.	.	.	1	.	.	.	.	.	.	.	.	
4	Semipalmated Plover	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	
4	Wilson's Plover	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	
4	Piping Plover	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	
6	Killdeer	278	311	236	.	.	278	176	215	.	220	385	566	756	525	290	.	
4	Black-necked Stilt	.	3	10	9	.	5	10	10	.	10	10	.	10	.	.	.	
4	American Avocet	63	59	59	59	61	56	51	62	56	54	66	64	64	64	66	75	
4	Greater Yellowlegs	85	125	55	.	.	105	115	415	.	185	370	340	156	115	80	.	
4	Lesser Yellowlegs	830	755	415	.	.	540	625	1195	.	620	490	910	450	215	185	.	
4	Solitary Sandpiper	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	
4	Willet	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	
4	Spotted Sandpiper	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	
6	Upland Sandpiper	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	
4	Whimbrel	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	
4	Long-billed Curlew	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	
4	Hudsonian Godwit	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	
4	Marbled Godwit	2	.	.	.	.	.	.	.	.	.	1	.	.	.	.	.	
4	Ruddy Turnstone	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	
4	Red Knot	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	
4	Sanderling	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	
4	Semipalmated Sandpiper	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	
4	Western Sandpiper	3	10	3	.	.	4	1	1	5	5	20	50	7	4	20	.	
4	Least Sandpiper	1150	550	1150	.	.	2400	1100	2050	.	1800	1285	2450	1850	1200	800	.	
4	White-rumped Sandpiper	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	
4	Baird's Sandpiper	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	
4	Pectoral Sandpiper	1	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	
4	Sharp-tailed Sandpiper	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	
4	Dunlin	50	36	21	.	.	75	.	90	30	125	31	145	54	60	130	.	
4	Curlew Sandpiper	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	
4	Stilt Sandpiper	60	88	32	53	.	83	65	103	43	54	42	80	138	85	95	.	

Table A. Part 2

Hab	SPECIES	11/25	11/30	12/3	12/4	12/7	12/8	12/11	12/16	12/18	12/20	12/28	12/31	1/1	1/7	1/8	1/11
6	Buff-breasted Sandpiper	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
4	Ruff	2	1	1	1	1	1	1	1	.	.	.	.	1	1	.	.
4	Short-billed Dowitcher	30	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
4	Long-billed Dowitcher	1275	750	485	.	.	1160	1230	1070	.	920	1485	1545	1855	835	1595	.
4	Wilson's Snipe	110	280	2	.	.	82	7	37	.	115	898	67	72	12	40	.
4	American Woodcock	.	.	.	.	.	.	.	.	.	1	.	.	.	.	.	.
4	Wilson's Phalarope	2	.	1	.	.	.	.	.	.	.	.	.	.	.	.	.
4	Red-necked Phalarope	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
4	Red Phalarope	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
5	Pomarine Jaeger	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
5	Parasitic Jaeger	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
5	Laughing Gull	5	2	2	5	.	1	1	.	2	1	1	.	.	.	.	.
5	Franklin's Gull	6	3	14	21	13	19	3	.	.	.	1	.	.	.	.	.
5	Little Gull	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
5	Bonaparte's Gull	4	2	1	3	2	2	1	6	5	1	8	58	63	111	157	35
5	Ring-billed Gull	.	250	350	450	.	300	188	420	.	310	305	380	498	910	850	650
5	Herring Gull	.	2	14	80	.	40	65	49	7	5	27	21	23	33	10	12
5	Thayer's Gull	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
5	Great Black-backed Gull	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
5	Lesser Black-backed Gull	.	.	1	1	1	1	2	1	2	.	2	.	1	2	.	1
5	Gull-billed Tern	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
5	Caspian Tern	.	44	92	75	.	106	103	135	94	89	77	93	92	62	92	45
5	Royal Tern	.	.	.	.	.	.	.	1	.	.	.	.	.	.	.	.
5	Sandwich Tern	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
5	Roseate Tern	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
5	Common Tern	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
5	Arctic Tern	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
5	Forster's Tern	.	240	220	.	.	260	120	235	280	125	90	62	60	45	45	45
5	Least Tern	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
5	Black Tern	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
5	Bridled Tern	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
5	Sooty Tern	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
5	Black Skimmer	.	.	.	.	.	.	.	.	.	1	3	.	.	4	4	2
8	Rock Pigeon	.	.	.	.	.	.	.	.	42	.	3	.	.	.	3	20
8	Eurasian Collared-Dove	.	.	.	.	.	.	.	7	4	1	2	2	.	1	5	.

Table A. Part 2

Hab	SPECIES	11/25	11/30	12/3	12/4	12/7	12/8	12/11	12/16	12/18	12/20	12/28	12/31	1/1	1/7	1/8	1/11
8	Diamond Dove																
8	African Collared-Dove																
8	White-winged Dove									1			1			1	
8	Mourning Dove	240	42	51			26	93	33	145	23	36	122	45	64	24	70
8	Common Ground-Dove	2	4	2		14	15	5	4	7	8	6	3	6	9	5	10
8	Cockatiel																
7	Budgerigar																
8	Black-billed Cuckoo																
8	Yellow-billed Cuckoo																
8	Smooth-billed Ani																
8	Groove-billed Ani																
8	Barn Owl																
8	Eastern Screech-Owl										2						
8	Great Horned Owl										1						
8	Burrowing Owl																
8	Barred Owl			2				1			2					2	
7	Long-eared Owl																
7	Short-eared Owl		1	1							1						
8	Northern Saw-whet Owl																
8	Lesser Nighthawk								1								
8	Common Nighthawk																
8	Chuck-will's-widow																
8	Eastern Whip-poor-will																
7	Chimney Swift																
8	Ruby-throated Hummingbird																
8	Black-chinned Hummingbird																
5	Belted Kingfisher	7	3	2			3	2	3	3	2		2	4	2	3	2
8	Red-headed Woodpecker								1								
8	Red-bellied Woodpecker	5	3	2	2		4	3	2	2	5	3	4	8	3	8	1
8	Yellow-bellied Sapsucker								1		1	1	1	1	1		
8	Downy Woodpecker						1						4	1	4	4	
8	Hairy Woodpecker																
8	Red-cockaded Woodpecker																
8	Northern Flicker	2	2	1	1		2				3	2	2	3	4	3	
8	Pleated Woodpecker																

Table A. Part 2

Hab	SPECIES	11/25	11/30	12/3	12/4	12/7	12/8	12/11	12/16	12/18	12/20	12/28	12/31	1/1	1/7	1/8	1/11
8	Olive-sided Flycatcher	1	1	1	1	.	2	.	.	.	2	1	1	1	.	3	.
8	Eastern Wood-Pewee	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
8	Yellow-bellied Flycatcher	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
8	Acadian Flycatcher	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
8	Alder Flycatcher	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
8	Willow Flycatcher	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
8	Least Flycatcher	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
7	Eastern Phoebe	21	28	22	.	.	31	.	19	17	32	25	41	19	21	23	13
8	Vermillion Flycatcher	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
8	Ash-throated Flycatcher	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
8	Great Crested Flycatcher	.	.	.	.	.	.	.	.	.	1	.	.	.	.	.	.
8	Brown-crested Flycatcher	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
8	Tropical Kingbird	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
8	Cassin's Kingbird	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
8	Western Kingbird	2	.	.	.	.	.	.	.	.	.	.	1	.	.	.	11
8	Eastern Kingbird	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
8	Gray Kingbird	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
8	Scissor-tailed Flycatcher	.	.	1	1	.	.	.	.	.	1	.	.	.	.	1	1
8	Fork-tailed Flycatcher	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
8	Loggerhead Shrike	2	2	1	4	.	3	2	3	2	1	1	1	3	1	3	1
8	White-eyed Vireo	.	.	.	.	.	.	.	.	.	.	.	1	.	.	.	.
8	Bell's Vireo	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
8	Yellow-throated Vireo	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
8	Blue-headed Vireo	1	1	.	.	.	.	.	.	.	1	.	.	.	.	1	1
8	Philadelphia Vireo	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
8	Red-eyed Vireo	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
8	Black-whiskered Vireo	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
8	Blue Jay	2	5	2	.	.	4	4	2	.	4	8	6	6	9	7	2
8	Florida Scrub-Jay	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
7	American Crow	.	.	.	.	.	.	.	.	.	.	.	.	2	1	1	.
7	Fish Crow	18	41	21	.	.	20	43	11	3	50	237	65	76	274	23	5
7	Purple Martin	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
7	Tree Swallow	30	160	865	.	.	140	55	.	6	150	.	3	12	5	.	1
7	Northern Rough-winged Swallow	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
7	Bank Swallow	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.

Table A. Part 2

Hab	SPECIES	11/25	11/30	12/3	12/4	12/7	12/8	12/11	12/16	12/18	12/20	12/28	12/31	1/1	1/7	1/8	1/11
7	Cliff Swallow	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
7	Cave Swallow	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
7	Barn Swallow	.	.	.	.	.	.	.	1	.	.	.	2	2	.	.	.
8	Carolina Chickadee	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
8	Tufted Titmouse	1	1	.	.	.	.	.	.	.	1	.	.	.	.	.	.
8	Brown-headed Nuthatch	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
8	Carolina Wren	6	5	4	.	.	4	2	.	.	10	11	11	8	11	11	7
8	Bewick's Wren	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
8	House Wren	19	25	15	.	.	9	8	1	4	8	12	8	16	10	10	5
8	Winter Wren	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
7	Sedge Wren	2	2	1	2	.	3	5	5	.	12	7	7	5	13	10	5
7	Marsh Wren	3	5	6	.	.	9	3	9	.	5	2	1	1	.	.	1
8	Golden-crowned Kinglet	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
8	Ruby-crowned Kinglet	2	2	1	.	.	.	3	1	1	4	5	2	5	3	6	2
8	Blue-gray Gnatcatcher	10	11	5	.	.	4	5	4	3	12	8	9	9	12	10	7
8	Eastern Bluebird	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
8	Veery	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
8	Gray-cheeked Thrush	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
8	Bicknell's Thrush	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
8	Swainson's Thrush	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
8	Hermit Thrush	.	1	.	.	.	.	.	.	.	1	.	.	.	1	.	.
8	Wood Thrush	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
8	American Robin	9	13	23	.	140	22	1185	205	50	72	265	90	177	41	165	230
8	Gray Catbird	1	3	4	.	.	3	3	2	6	6	4	10	11	11	14	3
8	Northern Mockingbird	3	2	3	.	.	4	6	2	1	8	9	7	13	5	10	4
8	Brown Thrasher	.	1	.	.	.	.	.	.	.	.	.	.	.	.	.	.
7	European Starling	150	158	390	.	.	120	60	72	.	65	30	40	120	18	12	60
7	Common Myna	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
6	American Pipit	355	35	430	.	.	570	.	480	.	570	215	235	170	395	175	.
8	Cedar Waxwing	.	.	.	.	.	.	35	1	.	15	.	.	.	.	.	.
8	Blue-winged Warbler	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
8	Tennessee Warbler	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
8	Orange-crowned Warbler	1	2	3	.	.	.	1	1	.	1	1	2	2	3	2	.
8	Nashville Warbler	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	1
8	Northern Parula	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.

Table A. Part 2

Hab	SPECIES	11/25	11/30	12/3	12/4	12/7	12/8	12/11	12/16	12/18	12/20	12/28	12/31	1/1	1/7	1/8	1/11
7	Yellow Warbler	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
8	Chestnut-sided Warbler	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
8	Magnolia Warbler	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
8	Cape May Warbler	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
8	Black-throated Blue Warbler	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
8	Yellow-rumped Warbler	.	4	.	.	.	19	24	17	39	11	53	91	64	40	100	55
8	"Audubon's Warbler"	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
8	Black-throated Gray Warbler	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
8	Black-throated Green Warbler	.	.	.	.	.	.	.	2	.	.	.	.	.	.	.	.
8	Blackburnian Warbler	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
8	Yellow-throated Warbler	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
8	Pine Warbler	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
7	Prairie Warbler	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
7	Palm Warbler	195	215	255	.	.	370	.	180	.	175	105	220	265	260	180	.
7	"Yellow Palm Warbler"	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
8	Bay-breasted Warbler	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
8	Blackpoll Warbler	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
8	Cerulean Warbler	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
8	Black-and-white Warbler	.	.	1	1	.	.	.	.	.	1	.	.	.	1	.	.
8	American Redstart	.	.	.	.	.	.	1	.	.	1	2	.	.	.	.	.
8	Prothonotary Warbler	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
8	Worm-eating Warbler	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
8	Swainson's Warbler	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
8	Ovenbird	.	.	.	.	.	.	.	.	.	1	.	1	.	.	.	.
7	Northern Waterthrush	.	.	.	.	.	.	.	.	.	.	.	1	1	1	.	.
7	Louisiana Waterthrush	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
8	Kentucky Warbler	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
7	Common Yellowthroat	9	15	10	.	.	14	14	5	7	21	14	11	6	10	12	9
8	Hooded Warbler	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
8	Wilson's Warbler	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
8	Canada Warbler	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
7	Yellow-breasted Chat	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
8	Summer Tanager	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
8	Scarlet Tanager	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
8	Western Tanager	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.

Table A. Part 2

Hab	SPECIES	11/25	11/30	12/3	12/4	12/7	12/8	12/11	12/16	12/18	12/20	12/28	12/31	1/1	1/7	1/8	1/11
7	Eastern Towhee	.	.	.	.	.	.	.	.	1	1	1	3	3	3	3	1
7	Bachman's Sparrow	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
8	Chipping Sparrow	.	.	2	.	.	1	1	3	.	3	.	.	1	1	.	.
7	Clay-colored Sparrow	.	.	.	.	.	.	.	.	.	3	.	2	.	2	.	.
7	Field Sparrow	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
7	Vesper Sparrow	.	.	.	.	.	.	.	.	.	.	.	.	.	1	1	4
7	Lark Sparrow	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
7	Savannah Sparrow	715	270	450	.	.	860	.	495	.	505	410	840	.	405	420	.
7	Grasshopper Sparrow	5	2	8	.	.	6	.	3	.	2	1	7	2	2	1	.
7	Henslow's Sparrow	.	1	.	.	.	.	.	.	.	.	.	.	.	1	.	.
7	Le Conte's Sparrow	.	.	.	.	.	.	.	1	.	.	.	.	.	.	.	.
7	Nelson's Sparrow	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
7	Fox Sparrow	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
7	Song Sparrow	.	1	2	.	.	2	.	1	.	1	.	1	.	.	.	.
7	Lincoln's Sparrow	1	.	.	.	.	.	.	.	.	1	.	.	.	1	1	.
7	Swamp Sparrow	30	23	24	.	.	32	.	7	.	100	40	31	15	16	23	.
7	White-throated Sparrow	.	.	.	.	.	1	.	.	.	.	.	1	.	1	.	.
7	White-crowned Sparrow	10	3	21	.	.	14	.	1	.	3	.	14	3	11	7	1
7	Dark-eyed Junco	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
7	Lapland Longspur	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
8	Northern Cardinal	4	4	4	.	.	1	2	1	1	7	10	9	9	12	9	7
8	Rose-breasted Grosbeak	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
8	Blue Grosbeak	.	.	.	.	.	1	.	3	.	1	.	.	1	.	1	2
8	Lazuli Bunting	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
8	Indigo Bunting	2	1	.	.	.	.	1	3	.	3	1	3	4	3	7	2
8	Painted Bunting	.	.	.	.	.	.	.	.	.	.	.	.	2	3	2	3
7	Dickcissel	.	.	.	.	.	3	.	.	.	.	.	.	.	.	.	2
7	Bobolink	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
7	Red-winged Blackbird	585	300	300	.	.	560	550	700	.	600	1750	460	720	350	350	200
6	Eastern Meadowlark	.	1	.	.	.	1	.	3	.	11	4	1	.	1	1	1
7	Yellow-headed Blackbird	.	.	1	.	.	3	1	2	.	.	1	5	1	.	1	2
7	Rusty Blackbird	.	.	13	.	.	.	.	.	.	.	.	.	.	.	.	.
7	Brewer's Blackbird	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
7	Common Grackle	.	20	2	5	.	20	55	15	.	39	3	11	1	67	1	1
7	Boat-tailed Grackle	675	550	1140	2100	.	670	760	660	.	700	1250	480	935	145	350	310

Table A. Part 2

Hab	SPECIES	11/25	11/30	12/3	12/4	12/7	12/8	12/11	12/16	12/18	12/20	12/28	12/31	1/1	1/7	1/8	1/11
7	Shiny Cowbird	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
7	Bronzed Cowbird	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
7	Brown-headed Cowbird	10	10	34	.	.	475	456	400	420	1170	645	720	430	95	1	135
8	Orchard Oriole	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
8	Baltimore Oriole	.	.	.	.	.	.	.	.	.	.	.	1	.	.	.	.
8	Bullock's Oriole	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
8	Pine Siskin	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
8	Purple Finch	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
8	House Finch	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
8	American Goldfinch	1	4	1	.	.	.	.	.	.	1	1	1	1	1	2	.
8	House Sparrow	.	.	.	.	.	7	.	.	.	6	.	1	3	4	3	.
8	Bronze Mannikin	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
8	Orange Bishop	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
8	Zebra Finch	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
8	Pin-tailed Whydah	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
	<b>TOTAL SPECIES</b>	<b>112</b>	<b>118</b>	<b>120</b>	<b>40</b>	<b>19</b>	<b>118</b>	<b>104</b>	<b>120</b>	<b>86</b>	<b>134</b>	<b>110</b>	<b>121</b>	<b>119</b>	<b>120</b>	<b>113</b>	<b>89</b>
	<b>TOTAL INDIVIDUALS</b>	<b>26,202</b>	<b>28,903</b>	<b>33,313</b>	<b>4,398</b>	<b>355</b>	<b>41,615</b>	<b>32,318</b>	<b>31,259</b>	<b>28,548</b>	<b>27,648</b>	<b>27,343</b>	<b>24,468</b>	<b>22,067</b>	<b>19,527</b>	<b>18,218</b>	<b>10,846</b>

Table A. Part 3

Hab	SPECIES	1/12	1/15	1/19	1/20	1/27	1/29	2/3	2/5	2/9	2/10	2/17	3/7	3/11	3/13	3/16	3/18
1	Pacific Loon	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
1	Common Loon	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
1	Pied-billed Grebe	205	195	320	.	145	160	125	145	115	75	40	.	.	.	.	.
1	Horned Grebe	2	1	2	.	2	1	1	.	.	.	.	.	.	.	.	.
1	Red-necked Grebe	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
1	Eared Grebe	2	3	4	.	3	2	4	4	3	3	.	.	.	.	.	.
1	Sooty Shearwater	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
1	American White Pelican	3310	2550	2580	.	2150	4370	1715	2610	2370	2050	2190	.	7	3	3	34
1	Brown Pelican	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
1	Neotropic Cormorant	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
1	Double-crested Cormorant	10	70	5	.	16	59	9	46	10	25	39	35	30	38	21	24
1	"California" D-c Cormorant	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
1	Anhinga	19	18	10	.	12	18	8	9	9	11	15	10	2	1	1	4
2	American Bittern	.	1	.	.	.	1	2	.	1	.	1	.	.	.	.	.
2	Least Bittern	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
2	Gray Heron	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
2	Great Blue Heron	297	385	374	.	296	207	167	237	326	205	175	.	6	3	2	12
2	Great White Heron	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
2	Great Egret	485	615	806	.	500	695	365	810	535	330	210	.	1	.	1	.
2	Snowy Egret	14	27	10	.	8	24	8	19	5	2	14	.	.	.	.	.
2	Little Blue Heron	9	8	9	.	13	6	9	8	7	4	11	.	.	.	.	.
2	Tricolored Heron	2	2	2	.	2	1	1	1	.	1	.	.	.	.	.	.
2	Reddish Egret	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
6	Cattle Egret	245	970	570	.	830	610	720	180	185	220	430	60	130	40	70	73
2	Green Heron	12	24	10	.	10	9	14	8	4	4	8	.	.	.	.	.
2	Black-crowned Night-Heron	3	3	2	.	89	6	.	3	.	1	1	.	.	.	.	.
2	Yellow-crowned Night-Heron	.	.	.	.	2	.	.	.	.	.	.	.	.	.	.	.
2	White Ibis	390	155	240	.	215	430	335	380	260	385	160	1	.	1	2	6
2	Glossy Ibis	710	95	380	.	309	390	175	352	175	300	32	.	.	.	.	.
2	White-faced Ibis	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
2	Roseate Spoonbill	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
2	Wood Stork	235	627	595	.	505	815	533	435	670	730	620	10	3	.	1	1
7	Black Vulture	.	2	5	.	.	12	2	.	4	1	11	.	.	3	7	6
7	Turkey Vulture	35	21	32	.	17	36	46	54	49	150	56	25	1	42	42	42
1	Black Swan	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.

Table A. Part 3

Hab	SPECIES	1/12	1/15	1/19	1/20	1/27	1/29	2/3	2/5	2/9	2/10	2/17	3/7	3/11	3/13	3/16	3/18
3	White-faced Whistling-Duck	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
3	Black-bellied Whistling-Duck	4	4	.	.	.	.	.	.	.	.	.	.	.	.	.	.
3	Fulvous Whistling-Duck	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
3	Greater White-fronted Goose	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
3	Egyptian Goose	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
3	Snow Goose	.	.	.	.	.	.	.	.	.	.	1	.	.	.	.	.
3	Ross's Goose	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
3	Canada Goose	3	.	3	.	3	3	3	3	3	3	3	.	.	.	.	.
3	Muscovy Duck	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
3	Wood Duck	7	.	.	.	.	.	1	2	4	1	4	.	.	.	.	.
3	Gadwall	89	36	67	.	20	40	2	.	.	.	.	.	.	.	.	.
3	Eurasian Wigeon	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
3	American Wigeon	88	93	113	.	41	77	.	26	4	4	.	.	.	.	.	.
3	American Black Duck	2	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
3	Mallard	11	4	4	.	3	2	2	6	2	3	2	.	.	2	.	2
3	Mottled Duck	23	8	20	.	5	9	5	6	2	.	.	.	.	.	4	.
3	Blue-winged Teal	2490	2980	3500	.	4190	4300	2320	2450	950	450	50	.	.	.	.	.
3	Cinnamon Teal	.	1	3	1	1	.	1	3	2	1	.	.	.	.	.	.
3	Northern Shoveler	515	535	490	.	770	637	540	540	395	370	75	.	.	.	.	.
3	Northern Pintail	260	184	120	.	60	26	12	80	4	23	4	.	.	.	.	.
3	Green-winged Teal	4700	5970	6950	.	7120	6200	3230	4650	3800	2400	450	.	.	8	.	.
3	Eurasian Green-winged Teal	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
1	Canvasback	2	2	3	.	4	5	.	1	1	1	.	.	.	.	.	.
1	Redhead	.	1	8	4	3	4	3	5	.	.	.	.	.	.	.	.
1	Ring-necked Duck	26	103	52	.	96	72	70	61	25	8	4	.	.	.	.	.
1	Greater Scaup	3	.	2	.	3	3	3	2	.	.	.	.	.	.	.	.
1	Lesser Scaup	279	250	158	.	176	157	76	103	36	37	34	.	.	.	.	.
1	Black Scoter	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
1	Bufflehead	3	5	1	.	.	3	4	4	.	.	.	.	.	.	.	.
1	Common Goldeneye	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
1	Hooded Merganser	100	85	33	.	23	20	41	6	3	2	3	.	.	.	.	.
1	Red-breasted Merganser	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
1	Ruddy Duck	293	377	349	.	245	274	116	147	64	37	54	.	.	.	.	.
5	Osprey	1	1	2	.	2	2	4	4	1	4	8	1	18	14	11	8
7	Swallow-tailed Kite	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.

Table A. Part 3

Hab	SPECIES	1/12	1/15	1/19	1/20	1/27	1/29	2/3	2/5	2/9	2/10	2/17	3/7	3/11	3/13	3/16	3/18
7	Mississippi Kite	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
7	White-tailed Kite	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
7	Snail Kite	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
5	Bald Eagle	14	11	10	.	8	7	9	3	5	10	7	.	4	1	2	2
7	Northern Harrier	14	15	12	.	9	10	10	10	7	6	8	6	8	10	12	7
8	Sharp-shinned Hawk	2	1	.	1	3	3	1	3	1	4	1	2	1	.	1	2
8	Cooper's Hawk	1	.	.	.	.	.	.	1	.	.	.	.	.	.	.	.
8	Red-shouldered Hawk	5	9	9	.	9	9	6	4	9	7	6	.	.	1	1	1
8	Broad-winged Hawk	.	.	.	.	.	.	.	.	.	.	.	.	.	.	1	.
8	Short-tailed Hawk	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
7	Swainson's Hawk	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
8	Red-tailed Hawk	6	6	11	.	12	10	9	12	8	9	12	4	9	11	10	6
8	Red-tailed dark-morph	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
8	Krider's Red-tailed Hawk	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
7	Rough-legged Hawk	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
7	Golden Eagle	1	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
6	Crested Caracara	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
7	American Kestrel	9	8	9	.	9	9	10	11	7	8	13	2	4	6	7	6
7	Eurasian Kestrel	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
7	Merlin	1	.	.	.	.	.	1	.	.	.	.	.	.	.	.	.
7	Peregrine Falcon	1	1	1	.	.	.	1	1	.	.	.	.	.	.	.	.
8	Common Peafowl	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
7	Gray Partridge	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
8	Wild Turkey	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
7	Ring-necked Pheasant	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
7	Northern Bobwhite	.	.	.	.	.	1	.	12	.	6	12	.	.	.	.	.
2	Yellow Rail	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
2	Black Rail	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
2	Clapper Rail	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
2	King Rail	1	1	.	.	.	.	.	.	.	1	.	.	.	.	.	.
2	Virginia Rail	.	.	.	.	.	.	.	.	1	.	.	.	.	.	.	.
2	Sora	18	20	7	.	5	6	10	8	6	5	8	.	.	.	.	.
2	Purple Gallinule	1	1	1	.	1	1	1	.	.	1	1	.	.	.	.	.
4	Common Moorhen	80	130	105	.	137	83	90	60	65	65	60	.	.	.	.	.
1	American Coot	3000	2960	2665	.	1785	1700	2365	1950	1760	1810	470	.	.	.	.	.

Table A. Part 3

Hab	SPECIES	1/12	1/15	1/19	1/20	1/27	1/29	2/3	2/5	2/9	2/10	2/17	3/7	3/11	3/13	3/16	3/18
1	Caribbean Coot	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
2	Limpkin	2	2	3	3	1	2	2	3	2	.	.	.	.	.	.	.
2	Sandhill Crane	3	6	8	.	.	.	.	.	.	.	.	.	.	.	.	.
2	Whooping Crane	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
4	Black-bellied Plover	236	221	109	.	262	122	45	54	175	172	31	.	12	13	2	16
4	American Golden-Plover	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
4	Semipalmated Plover	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
4	Wilson's Plover	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
4	Piping Plover	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
6	Killdeer	116	275	134	.	484	325	615	388	606	378	494	8	20	47	10	10
4	Black-necked Stilt	3	.	10	.	5	10	10	2	8	8	4	.	.	.	.	.
4	American Avocet	75	73	53	.	11	27	30	33	14	14	7	.	.	.	.	.
4	Greater Yellowlegs	130	125	100	.	160	240	105	295	290	230	40	.	.	.	.	.
4	Lesser Yellowlegs	510	270	415	.	550	430	235	720	670	680	70	.	.	8	.	.
4	Solitary Sandpiper	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
4	Willet	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
4	Spotted Sandpiper	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
6	Upland Sandpiper	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
4	Whimbrel	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
4	Long-billed Curlew	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
4	Hudsonian Godwit	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
4	Marbled Godwit	.	.	.	.	1	.	.	1	1	1	.	.	.	.	.	.
4	Ruddy Turnstone	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
4	Red Knot	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
4	Sanderling	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
4	Semipalmated Sandpiper	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
4	Western Sandpiper	.	19	95	.	45	6	.	5	3	3	3	.	.	.	.	.
4	Least Sandpiper	1150	1130	1500	.	1150	1250	1000	1150	1150	1210	90	20	40	40	130	.
4	White-rumped Sandpiper	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
4	Baird's Sandpiper	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
4	Pectoral Sandpiper	.	.	.	.	.	.	.	.	1	1	.	.	.	.	.	.
4	Sharp-tailed Sandpiper	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
4	Dunlin	27	25	175	.	118	30	40	16	28	21	64	.	.	.	.	.
4	Curlew Sandpiper	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
4	Stilt Sandpiper	123	95	156	.	101	35	43	14	78	9	42	.	.	.	.	.

Table A. Part 3

Hab	SPECIES	1/12	1/15	1/19	1/20	1/27	1/29	2/3	2/5	2/9	2/10	2/17	3/7	3/11	3/13	3/16	3/18
6	Buff-breasted Sandpiper	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
4	Ruff	.	1	.	.	.	.	.	.	.	.	.	.	.	.	.	.
4	Short-billed Dowitcher	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
4	Long-billed Dowitcher	1890	1760	1725	.	1270	105	1450	1150	1450	1610	184	.	.	.	.	.
4	Wilson's Snipe	11	17	30	.	26	9	18	27	28	8	1	2	6	1	1	1
4	American Woodcock	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
4	Wilson's Phalarope	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
4	Red-necked Phalarope	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
4	Red Phalarope	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
5	Pomarine Jaeger	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
5	Parasitic Jaeger	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
5	Laughing Gull	1	.	.	.	1	3	.	.	.	1	.	.	.	.	.	.
5	Franklin's Gull	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
5	Little Gull	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
5	Bonaparte's Gull	93	29	20	.	15	6	27	148	97	25	35	.	2	1	1	.
5	Ring-billed Gull	850	1140	1022	.	480	1603	565	204	86	75	133	3	3	4	20	5
5	Herring Gull	22	16	11	.	76	65	88	69	21	44	54	37	7	1	2	1
5	Thayer's Gull	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
5	Great Black-backed Gull	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
5	Lesser Black-backed Gull	1	1	.	.	2	1	2	1	.	.	1	.	.	.	.	.
5	Gull-billed Tern	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
5	Caspian Tern	100	93	180	.	138	160	89	168	165	208	69	57	4	6	17	4
5	Royal Tern	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
5	Sandwich Tern	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
5	Roseate Tern	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
5	Common Tern	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
5	Arctic Tern	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
5	Forster's Tern	90	36	60	.	80	31	21	50	35	85	11	.	.	.	.	.
5	Least Tern	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
5	Black Tern	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
5	Bridled Tern	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
5	Sooty Tern	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
5	Black Skimmer	4	14	5	.	48	60	120	80	14	17	52	.	.	.	.	.
8	Rock Pigeon	.	7	4	.	3	42	8	.	13	31	5	36	25	45	95	30
8	Eurasian Collared-Dove	1	1	1	.	2	6	1	1	1	5	3	2	3	1	5	3

Table A. Part 3

Hab	SPECIES	1/12	1/15	1/19	1/20	1/27	1/29	2/3	2/5	2/9	2/10	2/17	3/7	3/11	3/13	3/16	3/18
8	Diamond Dove																
8	African Collared-Dove																
8	White-winged Dove								1								
8	Mourning Dove	121	74	47		85	96	48	82	58	54	111	35	59	38	128	26
8	Common Ground-Dove	16	10	5		7	8	15	10	16	21	9		1	4	6	4
8	Cockatiel																
7	Budgerigar																
8	Black-billed Cuckoo																
8	Yellow-billed Cuckoo																
8	Smooth-billed Ani																
8	Groove-billed Ani																
8	Barn Owl																
8	Eastern Screech-Owl											1					
8	Great Horned Owl		1						1		1	1					
8	Burrowing Owl																
8	Barred Owl							2				2					
7	Long-eared Owl																
7	Short-eared Owl																
8	Northern Saw-whet Owl																
8	Lesser Nighthawk																
8	Common Nighthawk																
8	Chuck-will's-widow																
8	Eastern Whip-poor-will																
7	Chimney Swift																
8	Ruby-throated Hummingbird																
8	Black-chinned Hummingbird																
5	Belted Kingfisher	2	5	4		1	3	4	2	4	4	3				1	
8	Red-headed Woodpecker																
8	Red-bellied Woodpecker	4	9	4		11	11	5	8	13	11	14	3	6	3	6	7
8	Yellow-bellied Sapsucker		1												1	1	
8	Downy Woodpecker	3	2	3		2	2	2	5	6	2	3	2	1	1	2	4
8	Hairy Woodpecker														1		
8	Red-cockaded Woodpecker																
8	Northern Flicker	3	5	4		5	4	1	2	4	1	2	3	4	1	2	2
8	Pleated Woodpecker																

Table A. Part 3

Hab	SPECIES	1/12	1/15	1/19	1/20	1/27	1/29	2/3	2/5	2/9	2/10	2/17	3/7	3/11	3/13	3/16	3/18
8	Olive-sided Flycatcher	1	4	.	.	2	1	2	1	1	1	2	1	1	1	2	3
8	Eastern Wood-Pewee	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
8	Yellow-bellied Flycatcher	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
8	Acadian Flycatcher	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
8	Alder Flycatcher	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
8	Willow Flycatcher	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
8	Least Flycatcher	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
7	Eastern Phoebe	30	34	32	.	33	33	28	39	49	29	35	4	7	6	5	3
8	Vermilion Flycatcher	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
8	Ash-throated Flycatcher	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
8	Great Crested Flycatcher	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
8	Brown-crested Flycatcher	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
8	Tropical Kingbird	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
8	Cassin's Kingbird	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
8	Western Kingbird	15	12	6	10	1	11	9	6	6	11	4	7	10	16	13	13
8	Eastern Kingbird	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
8	Gray Kingbird	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
8	Scissor-tailed Flycatcher	1	1	.	.	1	1	1	.	2	3	1	.	1	3	2	2
8	Fork-tailed Flycatcher	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
8	Loggerhead Shrike	3	2	2	.	3	5	4	3	2	1	2	2	4	3	3	2
8	White-eyed Vireo	2	2	.	.	2	1	1	2	.	1	2	.	1	1	.	1
8	Bell's Vireo	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
8	Yellow-throated Vireo	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
8	Blue-headed Vireo	1	.	.	.	1	1	.	1	.	.	.	.	.	.	.	.
8	Philadelphia Vireo	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
8	Red-eyed Vireo	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
8	Black-whiskered Vireo	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
8	Blue Jay	11	8	7	.	13	10	9	15	16	16	19	6	7	8	8	8
8	Florida Scrub-Jay	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
7	American Crow	1	.	.	.	1	.	.	1	.	1	.	.	2	.	1	.
7	Fish Crow	68	182	42	.	283	12	1270	2475	875	280	29	9	11	32	75	43
7	Purple Martin	.	.	.	.	.	.	.	.	.	.	.	.	2	.	3	7
7	Tree Swallow	1	8	26	.	27	26	3	32	30	43	278	300	2570	130	1910	1340
7	Northern Rough-winged Swallow	.	.	.	.	.	.	.	.	.	.	.	.	.	.	2	.
7	Bank Swallow	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.

Table A. Part 3

Hab	SPECIES	1/12	1/15	1/19	1/20	1/27	1/29	2/3	2/5	2/9	2/10	2/17	3/7	3/11	3/13	3/16	3/18
7	Cliff Swallow	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
7	Cave Swallow	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
7	Barn Swallow	.	.	.	.	.	.	.	.	.	.	.	.	1	.	3	1
8	Carolina Chickadee	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
8	Tufted Titmouse	2	3	.	.	1	3	1	2	1	1	1	.	.	.	.	.
8	Brown-headed Nuthatch	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
8	Carolina Wren	14	15	9	.	21	17	14	17	22	16	21	5	5	6	9	8
8	Bewick's Wren	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
8	House Wren	13	18	16	.	20	19	10	21	26	25	20	4	7	5	9	9
8	Winter Wren	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
7	Sedge Wren	9	8	19	.	12	13	15	18	20	11	14	.	.	1	1	1
7	Marsh Wren	2	2	1	.	1	2	.	.	1	.	.	.	.	.	.	.
8	Golden-crowned Kinglet	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
8	Ruby-crowned Kinglet	3	5	5	.	2	2	.	2	3	3	3	1	2	1	1	1
8	Blue-gray Gnatcatcher	17	17	9	.	11	13	10	24	18	20	14	.	2	1	3	3
8	Eastern Bluebird	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
8	Veery	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
8	Gray-cheeked Thrush	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
8	Bicknell's Thrush	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
8	Swainson's Thrush	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
8	Hermit Thrush	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
8	Wood Thrush	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
8	American Robin	530	860	28	.	68	140	99	575	878	543	110	16	20	8	11	4
8	Gray Catbird	8	18	9	.	12	10	13	10	24	21	21	10	6	5	6	10
8	Northern Mockingbird	13	14	14	.	18	11	14	15	21	14	21	9	6	6	14	19
8	Brown Thrasher	.	1	.	.	.	.	.	.	.	.	1	.	1	1	2	3
7	European Starling	2	110	51	.	75	109	35	28	225	54	46	22	27	5	4	20
7	Common Myna	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
6	American Pipit	157	220	270	.	315	335	218	35	20	185	75	.	150	20	65	.
8	Cedar Waxwing	3	.	5	.	.	.	.	76	4	4	36	8	.	3	.	2
8	Blue-winged Warbler	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
8	Tennessee Warbler	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
8	Orange-crowned Warbler	1	.	1	2	3	2	2	2	3	3	2	2	2	1	.	1
8	Nashville Warbler	.	1	.	.	.	.	.	1	.	1	.	.	.	1	1	1
8	Northern Parula	.	.	.	.	.	.	.	.	.	.	.	.	1	1	1	6

Table A. Part 3

Hab	SPECIES	1/12	1/15	1/19	1/20	1/27	1/29	2/3	2/5	2/9	2/10	2/17	3/7	3/11	3/13	3/16	3/18
7	Yellow Warbler	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
8	Chestnut-sided Warbler	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
8	Magnolia Warbler	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
8	Cape May Warbler	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
8	Black-throated Blue Warbler	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
8	Yellow-rumped Warbler	110	91	70	.	65	80	75	190	35	141	70	80	51	67	60	113
8	"Audubon's Warbler"	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
8	Black-throated Gray Warbler	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
8	Black-throated Green Warbler	.	1	.	.	.	.	.	.	.	.	.	.	.	.	.	.
8	Blackburnian Warbler	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
8	Yellow-throated Warbler	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
8	Pine Warbler	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
7	Prairie Warbler	.	1	.	.	.	.	.	.	.	.	.	.	.	.	.	1
7	Palm Warbler	180	205	235	.	205	235	170	245	250	180	235	14	35	20	40	35
7	"Yellow Palm Warbler"	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
8	Bay-breasted Warbler	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
8	Blackpoll Warbler	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
8	Cerulean Warbler	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
8	Black-and-white Warbler	.	1	.	.	.	.	1	1	.	1	.	.	.	.	.	.
8	American Redstart	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
8	Prothonotary Warbler	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	1
8	Worm-eating Warbler	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
8	Swainson's Warbler	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
8	Ovenbird	1	.	.	.	.	2	.	.	.	.	1	.	.	.	.	.
7	Northern Waterthrush	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
7	Louisiana Waterthrush	.	.	.	.	.	.	.	.	.	.	.	.	1	.	.	.
8	Kentucky Warbler	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
7	Common Yellowthroat	16	18	16	.	20	18	16	23	20	24	28	5	3	2	6	5
8	Hooded Warbler	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
8	Wilson's Warbler	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
8	Canada Warbler	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
7	Yellow-breasted Chat	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
8	Summer Tanager	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
8	Scarlet Tanager	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
8	Western Tanager	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.

Table A. Part 3

Hab	SPECIES	1/12	1/15	1/19	1/20	1/27	1/29	2/3	2/5	2/9	2/10	2/17	3/7	3/11	3/13	3/16	3/18
7	Eastern Towhee	2	3	3	.	3	3	2	4	6	6	6	6	3	5	5	7
7	Bachman's Sparrow	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
8	Chipping Sparrow	.	.	1	.	.	.	.	.	.	.	.	.	.	.	.	.
7	Clay-colored Sparrow	.	7	13	.	19	24	46	34	21	16	.	.	.	.	.	.
7	Field Sparrow	.	.	2	.	.	.	.	.	.	.	.	.	.	.	1	.
7	Vesper Sparrow	11	1	8	.	1	6	3	7	17	15	18	.	1	8	8	8
7	Lark Sparrow	.	.	.	.	.	.	.	.	1	1	1	.	.	.	.	.
7	Savannah Sparrow	460	630	700	.	635	640	480	610	540	465	430	100	250	210	30	70
7	Grasshopper Sparrow	1	.	6	1	2	2	2	3	4	5	12	.	1	2	.	.
7	Henslow's Sparrow	.	.	1	.	.	.	.	.	.	.	.	.	.	.	.	.
7	Le Conte's Sparrow	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
7	Nelson's Sparrow	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
7	Fox Sparrow	.	.	.	.	.	.	.	.	.	.	1	.	.	.	.	.
7	Song Sparrow	.	.	3	.	5	5	4	6	5	4	3	.	.	.	.	.
7	Lincoln's Sparrow	1	3	3	.	2	1	4	4	4	1	2	.	.	.	.	.
7	Swamp Sparrow	29	26	26	.	31	7	7	10	11	12	5	5	2	1	.	3
7	White-throated Sparrow	.	.	1	.	.	.	.	.	.	1	.	.	.	.	.	.
7	White-crowned Sparrow	16	4	28	.	16	24	51	30	32	24	16	.	1	.	3	5
7	Dark-eyed Junco	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
7	Lapland Longspur	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
8	Northern Cardinal	13	13	14	.	23	23	17	28	23	26	27	6	10	7	14	17
8	Rose-breasted Grosbeak	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
8	Blue Grosbeak	2	1	.	.	2	1	.	1	.	.	.	.	.	.	.	.
8	Lazuli Bunting	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
8	Indigo Bunting	6	7	5	.	3	1	.	2	4	2	1	1	1	1	2	5
8	Painted Bunting	3	3	2	.	3	2	.	1	2	4	4	.	.	.	2	2
7	Dickcissel	.	2	3	.	.	.	2	.	.	1	.	.	.	.	1	.
7	Bobolink	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
7	Red-winged Blackbird	755	1005	560	.	750	165	480	410	280	360	265	20	340	350	1080	300
6	Eastern Meadowlark	2	5	2	.	1	2	9	4	3	1	4	5	9	7	4	4
7	Yellow-headed Blackbird	.	1	.	.	1	1	.	2	1	4	.	.	.	1	1	1
7	Rusty Blackbird	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
7	Brewer's Blackbird	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
7	Common Grackle	.	5	29	.	23	64	31	62	12	6	15	2	4	1	5	2
7	Boat-tailed Grackle	1145	830	970	.	1160	810	1070	510	320	390	690	20	20	10	26	30

Table A. Part 3

Hab	SPECIES	1/12	1/15	1/19	1/20	1/27	1/29	2/3	2/5	2/9	2/10	2/17	3/7	3/11	3/13	3/16	3/18
7	Shiny Cowbird	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
7	Bronzed Cowbird	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
7	Brown-headed Cowbird	240	980	1025	.	1900	2880	2700	3150	1600	870	1250	100	410	155	1545	750
8	Orchard Oriole	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
8	Baltimore Oriole	1	.	.	2	.	.	.	.	.	.	.	.	.	.	.	.
8	Bullock's Oriole	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
8	Pine Siskin	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
8	Purple Finch	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
8	House Finch	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
8	American Goldfinch	4	.	.	.	2	.	.	.	.	.	.	.	3	.	1	2
8	House Sparrow	1	1	1	.	1	2	1	1	1	.	2	.	.	.	.	.
8	Bronze Mannikin	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
8	Orange Bishop	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
8	Zebra Finch	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
8	Pin-tailed Whydah	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
	<b>TOTAL SPECIES</b>	<b>128</b>	<b>129</b>	<b>122</b>	<b>7</b>	<b>125</b>	<b>126</b>	<b>118</b>	<b>126</b>	<b>117</b>	<b>124</b>	<b>117</b>	<b>52</b>	<b>71</b>	<b>74</b>	<b>80</b>	<b>75</b>
	<b>TOTAL INDIVIDUALS</b>	<b>27,532</b>	<b>30,426</b>	<b>30,827</b>	<b>21</b>	<b>30,808</b>	<b>31,999</b>	<b>24,705</b>	<b>28,904</b>	<b>22,369</b>	<b>18,550</b>	<b>10,685</b>	<b>1,134</b>	<b>4,408</b>	<b>1,512</b>	<b>5,616</b>	<b>3,221</b>

Table A. Part 4

Hab	SPECIES	3/19	3/23	3/25	3/30	4/1	4/6	4/9	4/14	4/17	4/20	4/23	4/26	5/1	5/4	5/7	5/10
1	Pacific Loon	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
1	Common Loon	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
1	Pied-billed Grebe	.	.	.	.	.	.	.	.	7	.	6	5	2	1	3	.
1	Horned Grebe	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
1	Red-necked Grebe	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
1	Eared Grebe	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
1	Sooty Shearwater	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
1	American White Pelican	4	40	3	7	2	1	12	3	3	4	34	.	.	12	14	.
1	Brown Pelican	.	.	.	.	.	.	.	.	.	.	.	.	.	1	.	.
1	Neotropic Cormorant	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
1	Double-crested Cormorant	66	30	49	38	51	99	88	43	16	58	10	18	17	30	15	24
1	"California" D-c Cormorant	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
1	Anhinga	6	2	1	21	8	2	3	1	3	7	3	13	11	7	5	5
2	American Bittern	.	.	.	.	.	.	.	.	.	1	.	.	.	.	.	.
2	Least Bittern	.	.	.	.	.	.	.	.	.	.	.	.	.	1	.	.
2	Gray Heron	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
2	Great Blue Heron	4	2	1	4	2	2	2	2	1	14	1	20	12	18	14	27
2	Great White Heron	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
2	Great Egret	.	.	.	.	.	1	.	.	.	.	.	.	1	.	2	1
2	Snowy Egret	.	.	.	.	.	.	.	.	1	.	.	.	3	2	6	12
2	Little Blue Heron	.	.	.	.	.	2	.	3	5	6	.	5	13	22	16	27
2	Tricolored Heron	.	.	.	.	.	.	.	.	.	.	.	.	.	1	.	2
2	Reddish Egret	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
6	Cattle Egret	155	305	36	445	123	220	200	204	302	450	135	560	930	880	930	1420
2	Green Heron	.	.	.	.	.	.	.	.	1	2	1	4	4	5	6	7
2	Black-crowned Night-Heron	.	.	.	.	.	.	.	.	.	1	.	.	.	.	1	.
2	Yellow-crowned Night-Heron	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
2	White Ibis	9	19	25	20	23	31	18	25	2	1	3	3	73	262	142	105
2	Glossy Ibis	.	2	.	1	.	.	.	.	.	2	.	40	90	59	170	101
2	White-faced Ibis	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
2	Roseate Spoonbill	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
2	Wood Stork	3	1	.	13	.	5	.	.	.	.	.	.	1	.	1	.
7	Black Vulture	4	1	5	9	14	7	6	4	.	2	2	1	4	3	.	1
7	Turkey Vulture	17	3	6	6	19	10	7	6	.	15	4	2	2	6	2	5
1	Black Swan	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.

Table A. Part 4

Hab	SPECIES	3/19	3/23	3/25	3/30	4/1	4/6	4/9	4/14	4/17	4/20	4/23	4/26	5/1	5/4	5/7	5/10
3	White-faced Whistling-Duck	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
3	Black-bellied Whistling-Duck	.	.	.	.	.	.	.	.	.	.	.	5	.	.	10	22
3	Fulvous Whistling-Duck	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
3	Greater White-fronted Goose	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
3	Egyptian Goose	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
3	Snow Goose	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
3	Ross's Goose	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
3	Canada Goose	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
3	Muscovy Duck	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
3	Wood Duck	.	.	.	2	.	.	.	5	.	2	2	.	.	2	2	10
3	Gadwall	.	.	.	.	.	.	.	.	.	1	.	.	.	.	.	.
3	Eurasian Wigeon	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
3	American Wigeon	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
3	American Black Duck	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
3	Mallard	.	.	.	.	.	.	.	.	.	2	.	4	4	2	3	4
3	Mottled Duck	.	2	.	.	.	.	3	.	.	3	4	9	12	10	9	11
3	Blue-winged Teal	.	.	.	.	.	.	.	.	.	6	.	1	1	3	.	.
3	Cinnamon Teal	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
3	Northern Shoveler	.	.	.	.	.	.	.	.	.	14	.	18	14	5	10	4
3	Northern Pintail	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
3	Green-winged Teal	.	.	.	.	.	.	.	.	41	.	.	5	6	7	6	5
3	Eurasian Green-winged Teal	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
1	Canvasback	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
1	Redhead	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
1	Ring-necked Duck	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
1	Greater Scaup	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
1	Lesser Scaup	.	.	.	.	.	.	.	.	.	.	.	3	2	3	3	2
1	Black Scoter	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
1	Bufflehead	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
1	Common Goldeneye	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
1	Hooded Merganser	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
1	Red-breasted Merganser	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
1	Ruddy Duck	.	.	.	.	.	.	.	.	.	.	.	.	1	.	.	1
5	Osprey	9	9	7	7	11	9	12	8	10	11	12	5	18	7	7	14
7	Swallow-tailed Kite	.	.	.	.	.	.	.	.	.	.	3	.	.	.	.	6

Table A. Part 4

Hab	SPECIES	3/19	3/23	3/25	3/30	4/1	4/6	4/9	4/14	4/17	4/20	4/23	4/26	5/1	5/4	5/7	5/10
7	Mississippi Kite	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
7	White-tailed Kite	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
7	Snail Kite	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
5	Bald Eagle	3	2	2	4	2	3	4	4	.	2	4	2	1	2	2	2
7	Northern Harrier	12	9	3	2	10	14	5	8	5	4	2	5	5	2	1	3
8	Sharp-shinned Hawk	1	3	4	2	2	2	2	2	.	.	.	.	.	1	.	2
8	Cooper's Hawk	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
8	Red-shouldered Hawk	2	3	3	2	1	1	.	1	1	1	.	1	2	2	2	3
8	Broad-winged Hawk	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
8	Short-tailed Hawk	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
7	Swainson's Hawk	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
8	Red-tailed Hawk	7	6	5	7	4	7	5	4	2	6	5	7	6	7	6	6
8	Red-tailed dark-morph	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
8	Krider's Red-tailed Hawk	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
7	Rough-legged Hawk	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
7	Golden Eagle	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
6	Crested Caracara	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
7	American Kestrel	7	5	6	9	2	2	.	1	4	1	.	.	.	.	.	.
7	Eurasian Kestrel	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
7	Merlin	.	.	1	.	.	.	.	.	.	.	.	1	.	1	.	.
7	Peregrine Falcon	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
8	Common Peafowl	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
7	Gray Partridge	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
8	Wild Turkey	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
7	Ring-necked Pheasant	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
7	Northern Bobwhite	2	2	1	.	2	4	2	4	5	6	3	6	9	6	12	5
2	Yellow Rail	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
2	Black Rail	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
2	Clapper Rail	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
2	King Rail	.	.	.	.	.	.	.	.	.	.	.	1	.	.	.	.
2	Virginia Rail	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
2	Sora	1	.	.	1	.	.	.	.	.	2	.	1	.	.	.	1
2	Purple Gallinule	.	.	.	.	.	.	.	.	.	5	.	9	5	7	14	13
4	Common Moorhen	.	.	.	.	.	.	1	.	.	105	.	90	95	85	75	70
1	American Coot	.	.	.	.	.	.	.	.	.	260	.	230	260	252	205	210

Table A. Part 4

Hab	SPECIES	3/19	3/23	3/25	3/30	4/1	4/6	4/9	4/14	4/17	4/20	4/23	4/26	5/1	5/4	5/7	5/10
1	Caribbean Coot	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
2	Limpkin	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
2	Sandhill Crane	.	.	.	.	.	.	.	.	.	.	.	.	.	.	2	.
2	Whooping Crane	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
4	Black-bellied Plover	3	8	1	25	18	6	25	2	5	10	14	44	65	30	56	33
4	American Golden-Plover	.	.	.	.	.	.	.	.	.	.	1	.	2	.	1	.
4	Semipalmated Plover	.	.	.	1	.	.	.	.	.	2	.	2	5	22	5	1
4	Wilson's Plover	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
4	Piping Plover	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
6	Killdeer	37	23	2	10	1	1	5	2	1	8	3	11	3	4	3	3
4	Black-necked Stilt	.	.	.	.	.	.	.	.	.	32	.	35	66	70	64	34
4	American Avocet	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
4	Greater Yellowlegs	.	.	.	.	.	.	.	.	.	23	.	6	11	3	2	2
4	Lesser Yellowlegs	.	.	.	.	.	.	.	.	.	90	.	43	100	32	4	5
4	Solitary Sandpiper	.	.	.	.	.	.	.	.	.	.	.	1	.	3	1	2
4	Willet	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
4	Spotted Sandpiper	.	.	.	.	.	1	.	.	.	1	.	2	2	9	2	1
6	Upland Sandpiper	.	.	.	.	.	.	.	.	.	6	6	.	.	.	.	1
4	Whimbrel	.	.	.	.	.	.	.	.	.	.	.	.	1	.	.	.
4	Long-billed Curlew	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
4	Hudsonian Godwit	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
4	Marbled Godwit	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
4	Ruddy Turnstone	.	.	.	.	.	.	.	.	.	.	.	.	.	1	.	.
4	Red Knot	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
4	Sanderling	.	.	.	.	.	.	.	.	.	.	.	.	1	.	.	.
4	Semipalmated Sandpiper	.	.	.	.	.	.	.	.	.	1	.	5	12	130	85	10
4	Western Sandpiper	.	.	.	.	.	.	.	.	.	18	.	.	.	1	1	.
4	Least Sandpiper	70	70	.	30	15	30	70	.	.	245	.	85	450	93	103	17
4	White-rumped Sandpiper	.	.	.	.	.	.	.	.	.	.	.	.	.	3	1	.
4	Baird's Sandpiper	.	.	.	.	.	.	.	.	.	.	.	.	.	.	1	.
4	Pectoral Sandpiper	.	.	.	.	.	.	.	.	.	1	.	.	3	1	.	1
4	Sharp-tailed Sandpiper	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
4	Dunlin	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
4	Curlew Sandpiper	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
4	Stilt Sandpiper	.	.	.	.	.	.	.	.	.	5	.	3	.	23	.	4

Table A. Part 4

Hab	SPECIES	3/19	3/23	3/25	3/30	4/1	4/6	4/9	4/14	4/17	4/20	4/23	4/26	5/1	5/4	5/7	5/10
6	Buff-breasted Sandpiper	.	.	.	.	.	.	.	.	.	.	.	.	.	.	1	.
4	Ruff	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
4	Short-billed Dowitcher	.	.	.	.	.	.	.	.	75	.	.	80	6	20	5	.
4	Long-billed Dowitcher	.	.	.	.	.	.	.	.	.	.	.	.	.	4	.	.
4	Wilson's Snipe	1	.	1	1	.	2	.	.	.	.	.	.	1	.	.	.
4	American Woodcock	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
4	Wilson's Phalarope	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
4	Red-necked Phalarope	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
4	Red Phalarope	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
5	Pomarine Jaeger	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
5	Parasitic Jaeger	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
5	Laughing Gull	.	.	.	2	65	.	1	.	.	.	1	2	.	4	1	1
5	Franklin's Gull	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
5	Little Gull	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
5	Bonaparte's Gull	.	.	.	.	2	.	.	.	.	.	.	1	.	.	.	.
5	Ring-billed Gull	2	1	51	12	327	6	4	3	1	17	2	133	98	55	50	55
5	Herring Gull	1	1	1	3	.	.	.	.	.	5	.	1	1	1	1	1
5	Thayer's Gull	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
5	Great Black-backed Gull	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
5	Lesser Black-backed Gull	.	.	.	.	.	.	.	.	.	1	.	.	.	.	.	.
5	Gull-billed Tern	.	.	.	.	.	.	.	1	.	4	2	1	1	.	.	.
5	Caspian Tern	4	5	1	6	4	5	7	5	6	154	4	122	74	55	36	28
5	Royal Tern	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
5	Sandwich Tern	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
5	Roseate Tern	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
5	Common Tern	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
5	Arctic Tern	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
5	Forster's Tern	3	2	.	.	1	2	1	2	1	6	.	1	.	2	.	.
5	Least Tern	.	.	.	.	.	.	.	.	.	.	.	2	3	2	.	.
5	Black Tern	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	1
5	Bridled Tern	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
5	Sooty Tern	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
5	Black Skimmer	.	.	.	.	.	.	.	.	.	1	.	.	.	.	.	.
8	Rock Pigeon	35	40	41	55	55	105	27	10	30	6	30	6	9	28	18	1
8	Eurasian Collared-Dove	6	1	4	3	2	4	2	3	1	3	2	4	2	1	.	1

Table A. Part 4

Hab	SPECIES	3/19	3/23	3/25	3/30	4/1	4/6	4/9	4/14	4/17	4/20	4/23	4/26	5/1	5/4	5/7	5/10
8	Diamond Dove																
8	African Collared-Dove																
8	White-winged Dove																
8	Mourning Dove	182	23	82	211	130	214	70	80	98	134	48	82	125	145	90	267
8	Common Ground-Dove	6	2	8	3	5	7	11	12	6	13	16	28	10	21	23	33
8	Cockatiel																
7	Budgerigar																
8	Black-billed Cuckoo																1
8	Yellow-billed Cuckoo																2
8	Smooth-billed Ani																
8	Groove-billed Ani																
8	Barn Owl																
8	Eastern Screech-Owl	1	2	1											1		1
8	Great Horned Owl					1					1			1		1	
8	Burrowing Owl																
8	Barred Owl																
7	Long-eared Owl																
7	Short-eared Owl																
8	Northern Saw-whet Owl																
8	Lesser Nighthawk																
8	Common Nighthawk									5	5	4	2	1	3	2	2
8	Chuck-will's-widow					2											
8	Eastern Whip-poor-will					1											
7	Chimney Swift						2	1	1	52	2	5		102	2	6	5
8	Ruby-throated Hummingbird					1											
8	Black-chinned Hummingbird																
5	Belted Kingfisher																
8	Red-headed Woodpecker								1								
8	Red-bellied Woodpecker	7	7	8	5	6	10	8	7	7	7	6	10	7	8	5	9
8	Yellow-bellied Sapsucker	1		1													
8	Downy Woodpecker	4	1	3	2	4	2	1	4	3	4	4	6	3	3	2	3
8	Hairy Woodpecker																
8	Red-cockaded Woodpecker																
8	Northern Flicker	3		3	2	2	2	2	1	2	1	2	1		1	1	1
8	Pileated Woodpecker																

Table A. Part 4

Hab	SPECIES	3/19	3/23	3/25	3/30	4/1	4/6	4/9	4/14	4/17	4/20	4/23	4/26	5/1	5/4	5/7	5/10
8	Olive-sided Flycatcher	2	2	5	1	1	3	3	2	2	4	2	4	2	3	2	3
8	Eastern Wood-Pewee	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
8	Yellow-bellied Flycatcher	.	.	.	.	.	.	.	.	.	1	.	.	.	.	.	.
8	Acadian Flycatcher	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
8	Alder Flycatcher	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
8	Willow Flycatcher	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
8	Least Flycatcher	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
7	Eastern Phoebe	4	2	.	.	.	.	.	.	.	.	.	.	.	.	.	.
8	Vermilion Flycatcher	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
8	Ash-throated Flycatcher	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
8	Great Crested Flycatcher	.	.	.	2	.	3	2	2	3	8	6	6	4	1	7	6
8	Brown-crested Flycatcher	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
8	Tropical Kingbird	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
8	Cassin's Kingbird	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
8	Western Kingbird	14	16	12	11	16	16	15	21	2	12	16	15	16	5	11	4
8	Eastern Kingbird	.	.	.	.	.	1	2	1	6	23	6	3	3	13	5	3
8	Gray Kingbird	.	.	.	.	.	.	1	.	.	.	.	.	.	.	.	.
8	Scissor-tailed Flycatcher	2	2	1	2	2	2	2	1	.	1	2	.	.	.	.	.
8	Fork-tailed Flycatcher	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
8	Loggerhead Shrike	3	4	3	1	3	2	2	1	4	3	1	.	4	1	1	3
8	White-eyed Vireo	1	.	.	1	.	.	.	.	1	1	.	.	.	.	.	.
8	Bell's Vireo	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
8	Yellow-throated Vireo	.	1	1	.	.	.	.	.	.	.	.	.	.	.	.	.
8	Blue-headed Vireo	1	.	.	1	.	.	1	1	1	1	.	.	.	.	.	.
8	Philadelphia Vireo	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
8	Red-eyed Vireo	.	.	.	.	.	.	.	.	2	.	.	.	.	.	.	.
8	Black-whiskered Vireo	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
8	Blue Jay	17	9	10	9	8	13	13	10	12	7	11	9	6	8	5	9
8	Florida Scrub-Jay	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
7	American Crow	.	.	.	.	.	.	.	.	.	1	.	.	.	.	.	1
7	Fish Crow	137	51	49	29	850	72	28	22	11	32	12	37	22	20	12	15
7	Purple Martin	4	3	9	2	4	2	5	1	6	1	.	2	12	.	2	2
7	Tree Swallow	920	900	350	4500	1760	350	640	350	2020	2340	125	182	1300	140	70	2
7	Northern Rough-winged Swallow	2	.	.	.	1	.	.	4	7	1	2	.	5	2	1	.
7	Bank Swallow	.	.	.	3	.	1	.	.	11	2	.	.	21	3	2	1

Table A. Part 4

Hab	SPECIES	3/19	3/23	3/25	3/30	4/1	4/6	4/9	4/14	4/17	4/20	4/23	4/26	5/1	5/4	5/7	5/10
7	Cliff Swallow	.	.	.	.	.	.	.	.	1	.	.	.	2	.	.	.
7	Cave Swallow	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
7	Barn Swallow	.	5	3	5	6	5	4	16	2200	80	6	30	565	90	50	65
8	Carolina Chickadee	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
8	Tufted Titmouse	1	.	2	1	.	1	.	.	.	1	.	2	2	.	.	2
8	Brown-headed Nuthatch	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
8	Carolina Wren	12	8	13	10	8	14	19	16	19	19	23	27	21	19	17	41
8	Bewick's Wren	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
8	House Wren	13	10	13	11	16	17	21	19	20	37	5	10	3	1	.	.
8	Winter Wren	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
7	Sedge Wren	1	.	1	.	1	3	1	1	1	4	.	1	.	2	.	.
7	Marsh Wren	.	.	.	.	.	.	.	.	.	.	.	.	.	2	1	.
8	Golden-crowned Kinglet	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
8	Ruby-crowned Kinglet	2	2	2	2	2	4	3	.	2	1	.	.	1	.	.	.
8	Blue-gray Gnatcatcher	2	1	2	.	.	.	3	.	1	1	1	.	.	.	.	.
8	Eastern Bluebird	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
8	Veery	.	.	.	.	.	.	.	.	.	.	.	.	1	.	.	.
8	Gray-cheeked Thrush	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
8	Bicknell's Thrush	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
8	Swainson's Thrush	.	.	.	.	.	.	1	.	.	.	.	.	.	.	.	.
8	Hermit Thrush	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
8	Wood Thrush	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
8	American Robin	2	.	20	1	.	.	1	.	.	1	.	.	.	.	.	.
8	Gray Catbird	12	10	11	8	14	13	32	42	36	24	26	24	12	12	1	.
8	Northern Mockingbird	13	6	14	24	16	18	16	18	12	14	17	22	17	30	14	29
8	Brown Thrasher	3	3	3	1	2	3	1	1	.	1	1	1	2	2	1	2
7	European Starling	6	3	150	250	4	72	11	5	9	33	20	43	11	43	24	14
7	Common Myna	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
6	American Pipit	.	115	.	.	50	220	.	210	105	.	.	.	.	.	.	.
8	Cedar Waxwing	.	6	14	314	225	615	367	248	227	259	178	201	480	570	135	90
8	Blue-winged Warbler	.	.	.	.	.	.	.	.	.	.	.	1	.	.	.	.
8	Tennessee Warbler	.	.	.	.	.	.	.	.	2	.	.	.	1	.	.	.
8	Orange-crowned Warbler	2	1	.	.	.	.	.	.	.	.	.	.	.	.	.	.
8	Nashville Warbler	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
8	Northern Parula	8	2	5	5	2	1	1	3	7	3	3	1	2	.	1	3

Table A. Part 4

Hab	SPECIES	3/19	3/23	3/25	3/30	4/1	4/6	4/9	4/14	4/17	4/20	4/23	4/26	5/1	5/4	5/7	5/10
7	Yellow Warbler	.	.	.	.	.	.	.	.	1	.	.	.	.	.	.	.
8	Chestnut-sided Warbler	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
8	Magnolia Warbler	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
8	Cape May Warbler	.	.	.	.	.	.	.	.	13	2	.	1	5	.	1	.
8	Black-throated Blue Warbler	.	.	.	.	.	.	.	.	.	3	.	1	5	.	.	.
8	Yellow-rumped Warbler	110	150	100	11	51	1	.	.	1	.	.	.	.	.	.	.
8	"Audubon's Warbler"	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
8	Black-throated Gray Warbler	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
8	Black-throated Green Warbler	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
8	Blackburnian Warbler	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
8	Yellow-throated Warbler	.	.	.	.	1	.	.	.	.	.	.	.	.	.	.	.
8	Pine Warbler	.	.	.	.	.	.	.	.	.	1	.	.	.	.	.	.
7	Prairie Warbler	1	.	1	1	1	1	.	2	6	12	3	2	.	4	.	.
7	Palm Warbler	25	16	18	32	16	13	12	14	51	55	6	25	9	.	.	3
7	"Yellow Palm Warbler"	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
8	Bay-breasted Warbler	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
8	Blackpoll Warbler	.	.	.	.	.	.	.	.	4	.	.	4	14	2	1	14
8	Cerulean Warbler	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	1
8	Black-and-white Warbler	.	.	.	.	1	.	.	.	6	2	.	1	2	.	.	1
8	American Redstart	.	.	.	.	.	.	1	1	5	3	1	8	8	4	3	22
8	Prothonotary Warbler	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
8	Worm-eating Warbler	.	.	.	.	.	.	.	.	1	.	.	.	.	.	.	.
8	Swainson's Warbler	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
8	Ovenbird	.	.	.	.	.	.	.	.	1	1	.	.	2	1	.	.
7	Northern Waterthrush	.	.	.	.	.	.	1	.	1	2	4	4	1	1	.	1
7	Louisiana Waterthrush	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
8	Kentucky Warbler	.	.	.	.	.	.	.	1	.	.	.	.	.	.	.	.
7	Common Yellowthroat	5	6	6	5	6	4	9	9	12	16	6	36	10	27	4	5
8	Hooded Warbler	.	1	.	1	.	.	.	.	2	.	.	.	.	.	.	.
8	Wilson's Warbler	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
8	Canada Warbler	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
7	Yellow-breasted Chat	.	.	.	.	.	.	.	.	1	.	.	.	.	.	.	.
8	Summer Tanager	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
8	Scarlet Tanager	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
8	Western Tanager	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.

Table A. Part 4

Hab	SPECIES	3/19	3/23	3/25	3/30	4/1	4/6	4/9	4/14	4/17	4/20	4/23	4/26	5/1	5/4	5/7	5/10
7	Eastern Towhee	6	10	9	7	8	6	9	7	6	2	3	1	2	5	3	5
7	Bachman's Sparrow	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
8	Chipping Sparrow	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
7	Clay-colored Sparrow	.	.	.	.	.	.	.	.	.	.	1	.	.	.	.	.
7	Field Sparrow	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
7	Vesper Sparrow	9	.	3	.	.	.	.	.	.	.	1	.	.	.	.	.
7	Lark Sparrow	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
7	Savannah Sparrow	90	60	30	25	12	9	3	.	.	7	3	55	8	2	1	.
7	Grasshopper Sparrow	2	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
7	Henslow's Sparrow	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
7	Le Conte's Sparrow	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
7	Nelson's Sparrow	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
7	Fox Sparrow	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
7	Song Sparrow	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
7	Lincoln's Sparrow	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
7	Swamp Sparrow	4	1	3	4	2	3	2	4	3	5	.	2	.	1	.	.
7	White-throated Sparrow	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
7	White-crowned Sparrow	1	1	4	1	.	.	.	.	.	2	4	8	3	3	.	.
7	Dark-eyed Junco	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
7	Lapland Longspur	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
8	Northern Cardinal	16	27	30	25	26	43	42	36	56	42	35	50	20	42	29	54
8	Rose-breasted Grosbeak	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
8	Blue Grosbeak	1	.	.	1	2	1	.	3	3	7	3	8	9	10	6	8
8	Lazuli Bunting	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
8	Indigo Bunting	6	1	2	2	4	4	3	9	22	26	13	5	4	3	.	.
8	Painted Bunting	.	2	2	1	2	1	.	1	.	2	.	.	.	.	.	.
7	Dickcissel	.	.	.	3	.	1	3	.	2	1	2	1	.	.	.	.
7	Bobolink	.	.	.	.	.	.	1	.	105	110	60	1600	3120	1920	1000	20
7	Red-winged Blackbird	450	350	90	410	305	85	100	83	60	210	82	140	220	90	95	85
6	Eastern Meadowlark	7	2	4	1	4	4	3	4	1	6	3	12	5	6	9	10
7	Yellow-headed Blackbird	3	.	.	2	2	.	.	.	.	.	.	.	.	.	.	.
7	Rusty Blackbird	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
7	Brewer's Blackbird	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
7	Common Grackle	3	3	3	13	18	20	14	11	6	7	3	6	4	14	4	10
7	Boat-tailed Grackle	20	25	5	18	11	5	23	47	50	160	20	85	415	160	110	250

Table A. Part 4

Hab	SPECIES	3/19	3/23	3/25	3/30	4/1	4/6	4/9	4/14	4/17	4/20	4/23	4/26	5/1	5/4	5/7	5/10
7	Shiny Cowbird	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
7	Bronzed Cowbird	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
7	Brown-headed	1300	900	10	31	4	10	20	2	2	3	4	1	1	.	1	.
8	Orchard Oriole	.	.	.	.	.	.	.	.	1	.	.	.	.	.	.	.
8	Baltimore Oriole	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
8	Bullock's Oriole	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
8	Pine Siskin	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
8	Purple Finch	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
8	House Finch	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
8	American Goldfinch	1	2	1	.	3	1	2	.	.	.	.	.	.	.	.	.
8	House Sparrow	.	.	.	.	.	.	.	.	.	1	.	1	.	.	.	1
8	Bronze Mannikin	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
8	Orange Bishop	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
8	Zebra Finch	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
8	Pin-tailed Whydah	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
	<b>TOTAL SPECIES</b>	<b>80</b>	<b>73</b>	<b>73</b>	<b>78</b>	<b>77</b>	<b>77</b>	<b>74</b>	<b>72</b>	<b>83</b>	<b>120</b>	<b>74</b>	<b>103</b>	<b>106</b>	<b>106</b>	<b>96</b>	<b>100</b>
	<b>TOTAL INDIVIDUALS</b>	<b>3,922</b>	<b>3,351</b>	<b>1,380</b>	<b>6,757</b>	<b>4,390</b>	<b>2,484</b>	<b>2,048</b>	<b>1,691</b>	<b>5,730</b>	<b>5,528</b>	<b>1,098</b>	<b>4,478</b>	<b>9,166</b>	<b>5,760</b>	<b>3,902</b>	<b>3,449</b>

Table A. Part 5

Hab	SPECIES	5/14	5/18	5/22	5/25	5/29	5/31	6/5	6/7	6/12	6/14	6/19	6/22	6/25	6/29	7/4	7/6
1	Pacific Loon	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
1	Common Loon	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
1	Pied-billed Grebe	7	1	4	6	3	7	7	10	11	9	8	6	7	6	12	13
1	Horned Grebe	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
1	Red-necked Grebe	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
1	Eared Grebe	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
1	Sooty Shearwater	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
1	American White Pelican	.	.	.	.	.	.	12	.	.	5	.	.	.	.	.	.
1	Brown Pelican	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
1	Neotropic Cormorant	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
1	Double-crested Cormorant	8	9	17	12	11	6	8	6	10	5	6	1	3	5	4	1
1	"California" D-c Cormorant	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
1	Anhinga	7	18	14	11	13	16	10	18	11	8	22	10	12	12	7	9
2	American Bittern	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
2	Least Bittern	.	.	2	.	.	.	.	.	1	.	2	1	.	1	1	1
2	Gray Heron	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
2	Great Blue Heron	12	12	31	21	20	28	24	26	30	19	28	20	18	25	32	42
2	Great White Heron	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
2	Great Egret	2	1	1	2	.	.	.	.	6	3	5	6	8	8	16	14
2	Snowy Egret	6	2	1	1	5	3	7	8	8	6	4	6	8	12	4	2
2	Little Blue Heron	22	12	20	13	17	20	22	15	19	22	16	11	11	10	15	10
2	Tricolored Heron	2	2	2	1	2	1	3	6	2	2	4	2	2	2	5	11
2	Reddish Egret	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
6	Cattle Egret	1470	555	595	1145	765	975	650	550	1070	2140	1310	2450	2410	650	1250	1790
2	Green Heron	10	5	10	13	8	6	9	12	11	12	12	5	13	11	16	18
2	Black-crowned Night-Heron	.	.	.	.	3	1	.	.	1	.	.	.	.	.	.	.
2	Yellow-crowned Night-Heron	.	.	.	.	.	.	4	.	.	3	3	1	3	1	3	.
2	White Ibis	237	35	43	42	55	140	129	137	67	88	87	70	165	78	77	48
2	Glossy Ibis	105	7	49	16	11	39	19	27	80	179	102	132	68	14	10	50
2	White-faced Ibis	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
2	Roseate Spoonbill	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
2	Wood Stork	.	.	2	8	.	3	74	8	2	15	3	1	1	.	4	1
7	Black Vulture	1	7	4	.	9	2	6	1	2	2	.	9	12	1	4	23
7	Turkey Vulture	3	54	16	7	4	7	66	18	88	68	44	44	41	20	43	48
1	Black Swan	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.

Table A. Part 5

Hab	SPECIES	5/14	5/18	5/22	5/25	5/29	5/31	6/5	6/7	6/12	6/14	6/19	6/22	6/25	6/29	7/4	7/6
3	White-faced Whistling-Duck	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
3	Black-bellied Whistling-Duck	28	17	16	12	10	10	3	3	15	10	52	22	44	8	19	17
3	Fulvous Whistling-Duck	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
3	Greater White-fronted Goose	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
3	Egyptian Goose	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
3	Snow Goose	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
3	Ross's Goose	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
3	Canada Goose	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
3	Muscovy Duck	.	.	.	.	.	1	1	.	1	.	.	.	.	.	.	.
3	Wood Duck	2	.	.	.	2	.	2	4	9	1	5	5	5	.	.	3
3	Gadwall	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
3	Eurasian Wigeon	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
3	American Wigeon	.	1	.	.	.	.	.	.	.	.	.	.	.	.	.	.
3	American Black Duck	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
3	Mallard	6	2	10	8	10	7	4	4	6	10	9	5	1	5	2	2
3	Mottled Duck	4	15	28	18	29	35	29	39	40	38	72	50	24	6	26	12
3	Blue-winged Teal	.	2	.	.	.	.	1	1	2	.	.	.	3	.	.	.
3	Cinnamon Teal	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
3	Northern Shoveler	1	1	.	.	.	.	.	.	.	.	.	.	.	.	.	.
3	Northern Pintail	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
3	Green-winged Teal	2	1	.	.	.	.	.	.	.	.	.	.	.	.	.	.
3	Eurasian Green-winged Teal	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
1	Canvasback	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
1	Redhead	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
1	Ring-necked Duck	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
1	Greater Scaup	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
1	Lesser Scaup	2	1	.	2	2	.	.	.	.	.	.	.	.	.	.	.
1	Black Scoter	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
1	Bufflehead	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
1	Common Goldeneye	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
1	Hooded Merganser	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
1	Red-breasted Merganser	.	.	.	.	.	2	2	2	2	.	.	.	.	.	.	.
1	Ruddy Duck	.	1	1	1	1	1	1	1	1	1	1	1	1	1	.	1
5	Osprey	15	7	10	11	12	19	5	13	8	13	12	9	13	9	9	8
7	Swallow-tailed Kite	.	3	.	1	6	9	3	.	.	2	1	15	21	1	23	43

Table A. Part 5

Hab	SPECIES	5/14	5/18	5/22	5/25	5/29	5/31	6/5	6/7	6/12	6/14	6/19	6/22	6/25	6/29	7/4	7/6
7	Mississippi Kite	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
7	White-tailed Kite	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
7	Snail Kite	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
5	Bald Eagle	1	3	1	1	2	2	3	3	2	1	2	2	1	1	1	3
7	Northern Harrier	1	3	.	.	.	.	.	.	.	.	.	.	.	.	.	.
8	Sharp-shinned Hawk	2	.	.	1	.	1	.	1	1	1	.	2	.	.	1	1
8	Cooper's Hawk	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
8	Red-shouldered Hawk	3	2	3	1	3	3	5	3	2	4	1	3	5	5	4	2
8	Broad-winged Hawk	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
8	Short-tailed Hawk	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
7	Swainson's Hawk	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
8	Red-tailed Hawk	5	3	5	6	4	4	4	4	5	6	7	5	8	7	8	6
8	Red-tailed dark-morph	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
8	Krider's Red-tailed Hawk	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
7	Rough-legged Hawk	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
7	Golden Eagle	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
6	Crested Caracara	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
7	American Kestrel	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
7	Eurasian Kestrel	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
7	Merlin	.	1	.	.	.	.	.	.	.	.	.	.	.	.	.	.
7	Peregrine Falcon	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
8	Common Peafowl	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
7	Gray Partridge	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
8	Wild Turkey	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
7	Ring-necked Pheasant	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
7	Northern Bobwhite	3	9	9	7	14	17	16	17	17	12	14	11	13	11	24	30
2	Yellow Rail	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
2	Black Rail	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
2	Clapper Rail	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
2	King Rail	.	.	.	.	.	.	1	.	.	.	.	.	.	.	1	.
2	Virginia Rail	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
2	Sora	1	2	.	.	.	.	.	.	.	.	.	.	.	.	.	.
2	Purple Gallinule	11	2	7	7	13	13	11	13	17	22	13	5	22	6	16	5
4	Common Moorhen	130	75	105	150	145	128	260	135	123	138	109	90	80	61	72	65
1	American Coot	165	120	119	99	123	98	133	89	94	87	71	25	18	23	16	16

Table A. Part 5

Hab	SPECIES	5/14	5/18	5/22	5/25	5/29	5/31	6/5	6/7	6/12	6/14	6/19	6/22	6/25	6/29	7/4	7/6
1	Caribbean Coot	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
2	Limpkin	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
2	Sandhill Crane	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
2	Whooping Crane	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	3
4	Black-bellied Plover	14	8	20	14	7	8	8	3	8	6	3	3	3	.	.	2
4	American Golden-Plover	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
4	Semipalmated Plover	.	.	.	1	.	.	.	.	.	.	.	.	.	.	.	.
4	Wilson's Plover	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
4	Piping Plover	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
6	Killdeer	3	5	4	3	7	8	6	11	11	27	12	36	142	68	103	46
4	Black-necked Stilt	33	30	30	30	26	33	51	54	28	12	4	15	7	2	1	6
4	American Avocet	.	.	.	.	1	.	.	.	.	.	.	.	.	.	.	.
4	Greater Yellowlegs	1	.	2	5	2	3	1	3	2	.	.	.	.	1	.	1
4	Lesser Yellowlegs	29	.	2	7	1	2	3	3	1	.	.	.	4	.	2	1
4	Solitary Sandpiper	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
4	Willet	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
4	Spotted Sandpiper	1	1	1	.	.	.	.	.	.	.	.	.	.	.	.	.
6	Upland Sandpiper	1	1	.	.	.	.	.	.	.	.	.	.	.	.	.	.
4	Whimbrel	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
4	Long-billed Curlew	.	.	.	.	.	.	.	.	.	.	.	.	1	.	.	.
4	Hudsonian Godwit	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
4	Marbled Godwit	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
4	Ruddy Turnstone	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
4	Red Knot	.	.	.	1	.	.	.	.	.	.	.	.	.	.	.	.
4	Sanderling	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
4	Semipalmated Sandpiper	8	12	26	94	31	30	11	8	.	.	.	.	.	.	.	.
4	Western Sandpiper	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
4	Least Sandpiper	20	10	2	2	4	8	5	1	.	.	.	.	.	.	1	1
4	White-rumped Sandpiper	.	.	.	4	4	2	2	.	1	.	.	.	.	.	.	.
4	Baird's Sandpiper	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
4	Pectoral Sandpiper	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
4	Sharp-tailed Sandpiper	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
4	Dunlin	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
4	Curlew Sandpiper	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
4	Stilt Sandpiper	9	.	.	1	1	1	.	.	.	.	.	.	.	.	.	.

Table A. Part 5

Hab	SPECIES	5/14	5/18	5/22	5/25	5/29	5/31	6/5	6/7	6/12	6/14	6/19	6/22	6/25	6/29	7/4	7/6
6	Buff-breasted Sandpiper	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
4	Ruff	.	.	.	1	1	1	.	.	.	.	.	.	.	.	.	.
4	Short-billed Dowitcher	.	.	.	2	2	.	.	.	.	.	.	.	.	.	.	.
4	Long-billed Dowitcher	1	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
4	Wilson's Snipe	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
4	American Woodcock	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
4	Wilson's Phalarope	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
4	Red-necked Phalarope	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
4	Red Phalarope	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
5	Pomarine Jaeger	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
5	Parasitic Jaeger	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
5	Laughing Gull	9	.	.	.	.	1	2	5	1	.	.	.	.	.	.	.
5	Franklin's Gull	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
5	Little Gull	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
5	Bonaparte's Gull	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
5	Ring-billed Gull	26	21	9	8	7	5	5	4	4	3	4	4	4	2	2	2
5	Herring Gull	1	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
5	Thayer's Gull	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
5	Great Black-backed Gull	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
5	Lesser Black-backed Gull	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
5	Gull-billed Tern	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
5	Caspian Tern	4	1	1	2	.	2	2	11	1	.	.	.	.	.	2	.
5	Royal Tern	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
5	Sandwich Tern	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
5	Roseate Tern	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
5	Common Tern	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
5	Arctic Tern	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
5	Forster's Tern	.	.	.	.	.	1	.	.	.	.	.	.	.	.	.	.
5	Least Tern	.	.	.	7	7	10	10	1	.	.	2	3	3	2	.	.
5	Black Tern	.	.	.	.	.	.	.	.	.	2	1	4	.	.	.	.
5	Bridled Tern	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
5	Sooty Tern	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
5	Black Skimmer	.	2	.	.	.	.	.	.	.	.	.	2	.	.	.	.
8	Rock Pigeon	14	15	28	3	6	16	9	9	25	47	43	96	106	21	58	50
8	Eurasian Collared-Dove	6	1	2	1	2	1	3	36	1	1	2	2	1	2	1	31

Table A. Part 5

Hab	SPECIES	5/14	5/18	5/22	5/25	5/29	5/31	6/5	6/7	6/12	6/14	6/19	6/22	6/25	6/29	7/4	7/6
8	Diamond Dove																
8	African Collared-Dove																
8	White-winged Dove								2					1			
8	Mourning Dove	175	555	1035	1025	1405	1015	1760	855	1145	965	800	875	805	570	730	445
8	Common Ground-Dove	28	41	43	33	45	52	33	22	55	31	38	36	44	46	38	50
8	Cockatiel																
7	Budgerigar																
8	Black-billed Cuckoo																
8	Yellow-billed Cuckoo	1	3	1	2	4	2	4	1	1	3		2	2	2	2	
8	Smooth-billed Ani																
8	Groove-billed Ani																
8	Barn Owl																
8	Eastern Screech-Owl																1
8	Great Horned Owl			1			1				1						
8	Burrowing Owl																
8	Barred Owl					2		2						2			
7	Long-eared Owl																
7	Short-eared Owl																
8	Northern Saw-whet Owl																
8	Lesser Nighthawk																
8	Common Nighthawk	4	2	1	1	1				3	3		3	4	2	2	1
8	Chuck-will's-widow														5		
8	Eastern Whip-poor-will																
7	Chimney Swift	6	10	12	7	4	17	5	38	4	2	12	4	3	2	2	
8	Ruby-throated Hummingbird	1														1	
8	Black-chinned Hummingbird																
5	Belted Kingfisher													1			
8	Red-headed Woodpecker																
8	Red-bellied Woodpecker	4	8	10	10	14	14	11	6	17	7	5	9	9	6	11	9
8	Yellow-bellied Sapsucker																
8	Downy Woodpecker	4	5	6	4	3	3	8	7	11	6	7	3	5	3	4	5
8	Hairy Woodpecker																
8	Red-cockaded Woodpecker																
8	Northern Flicker	1	1	1	1	1	1	2	1	4	3	2		1	1	7	5
8	Pileated Woodpecker																

Table A. Part 5

Hab	SPECIES	5/14	5/18	5/22	5/25	5/29	5/31	6/5	6/7	6/12	6/14	6/19	6/22	6/25	6/29	7/4	7/6
8	Olive-sided Flycatcher	3	3	1	2	1	3	2	1	1	2	1	1	1	2	2	2
8	Eastern Wood-Pewee	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
8	Yellow-bellied Flycatcher	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
8	Acadian Flycatcher	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
8	Alder Flycatcher	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
8	Willow Flycatcher	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
8	Least Flycatcher	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
7	Eastern Phoebe	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
8	Vermilion Flycatcher	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
8	Ash-throated Flycatcher	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
8	Great Crested Flycatcher	7	5	8	3	8	2	2	4	7	4	2	5	1	4	10	9
8	Brown-crested Flycatcher	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
8	Tropical Kingbird	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
8	Cassin's Kingbird	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
8	Western Kingbird	1	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
8	Eastern Kingbird	4	6	.	.	2	.	.	.	.	.	.	1	.	.	.	1
8	Gray Kingbird	.	.	1	.	.	.	.	.	.	.	.	.	.	.	.	.
8	Scissor-tailed Flycatcher	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
8	Fork-tailed Flycatcher	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
8	Loggerhead Shrike	1	5	5	.	4	7	4	9	9	4	6	6	8	6	9	10
8	White-eyed Vireo	.	.	.	.	.	.	.	.	.	.	.	.	1	1	1	.
8	Bell's Vireo	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
8	Yellow-throated Vireo	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
8	Blue-headed Vireo	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
8	Philadelphia Vireo	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
8	Red-eyed Vireo	.	1	1	.	.	.	.	.	.	.	.	.	.	.	.	.
8	Black-whiskered Vireo	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
8	Blue Jay	10	14	9	8	12	16	6	12	17	10	13	12	14	11	13	14
8	Florida Scrub-Jay	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
7	American Crow	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
7	Fish Crow	18	11	12	7	12	24	11	24	24	10	15	21	9	97	22	53
7	Purple Martin	15	13	4	19	19	63	21	700	200	50	1935	76	815	575	1795	1365
7	Tree Swallow	4	2	2	2	4	2	1	1	1	.	.	2	1	.	.	.
7	Northern Rough-winged Swallow	.	.	1	.	2	1	5	1	.	1	.	.	3	.	1	1
7	Bank Swallow	.	.	1	.	.	.	.	.	.	.	.	.	.	.	.	.

Table A. Part 5

Hab	SPECIES	5/14	5/18	5/22	5/25	5/29	5/31	6/5	6/7	6/12	6/14	6/19	6/22	6/25	6/29	7/4	7/6
7	Cliff Swallow	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
7	Cave Swallow	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
7	Barn Swallow	57	52	58	33	35	48	77	55	55	65	65	45	90	80	45	60
8	Carolina Chickadee	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
8	Tufted Titmouse	1	1	.	.	.	2	.	1	.	1	1	1	3	.	1	.
8	Brown-headed Nuthatch	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
8	Carolina Wren	15	22	19	10	23	34	14	28	23	22	19	23	18	8	17	15
8	Bewick's Wren	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
8	House Wren	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
8	Winter Wren	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
7	Sedge Wren	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
7	Marsh Wren	2	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
8	Golden-crowned Kinglet	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
8	Ruby-crowned Kinglet	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
8	Blue-gray Gnatcatcher	.	.	.	.	.	.	.	.	.	2	.	.	.	1	.	.
8	Eastern Bluebird	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
8	Veery	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
8	Gray-cheeked Thrush	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
8	Bicknell's Thrush	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
8	Swainson's Thrush	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
8	Hermit Thrush	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
8	Wood Thrush	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
8	American Robin	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
8	Gray Catbird	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
8	Northern Mockingbird	18	20	24	23	31	47	23	38	25	23	17	23	33	19	39	24
8	Brown Thrasher	2	3	3	4	3	1	1	1	3	3	1	1	5	8	14	7
7	European Starling	17	24	23	44	157	155	145	275	563	214	680	580	540	770	570	695
7	Common Myna	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
6	American Pipit	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
8	Cedar Waxwing	53	125	3	.	.	.	.	.	.	.	.	.	.	.	.	.
8	Blue-winged Warbler	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
8	Tennessee Warbler	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
8	Orange-crowned Warbler	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
8	Nashville Warbler	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
8	Northern Parula	.	1	2	.	1	2	1	1	1	2	.	1	4	3	2	1

Table A. Part 5

Hab	SPECIES	5/14	5/18	5/22	5/25	5/29	5/31	6/5	6/7	6/12	6/14	6/19	6/22	6/25	6/29	7/4	7/6
7	Yellow Warbler	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
8	Chestnut-sided Warbler	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
8	Magnolia Warbler	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
8	Cape May Warbler	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
8	Black-throated Blue Warbler	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
8	Yellow-rumped Warbler	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
8	"Audubon's Warbler"	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
8	Black-throated Gray Warbler	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
8	Black-throated Green Warbler	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
8	Blackburnian Warbler	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
8	Yellow-throated Warbler	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
8	Pine Warbler	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
7	Prairie Warbler	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
7	Palm Warbler	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
7	"Yellow Palm Warbler"	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
8	Bay-breasted Warbler	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
8	Blackpoll Warbler	1	1	.	.	.	.	.	.	.	.	.	.	.	.	.	.
8	Cerulean Warbler	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
8	Black-and-white Warbler	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
8	American Redstart	6	12	2	1	.	.	.	.	.	.	.	.	.	.	.	.
8	Prothonotary Warbler	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
8	Worm-eating Warbler	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
8	Swainson's Warbler	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
8	Ovenbird	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
7	Northern Waterthrush	1	1	.	.	.	.	.	.	.	.	.	.	.	.	.	.
7	Louisiana Waterthrush	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
8	Kentucky Warbler	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
7	Common Yellowthroat	4	1	3	.	.	.	1	1	.	.	.	.	.	.	.	.
8	Hooded Warbler	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
8	Wilson's Warbler	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
8	Canada Warbler	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
7	Yellow-breasted Chat	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
8	Summer Tanager	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
8	Scarlet Tanager	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
8	Western Tanager	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.

Table A. Part 5

Hab	SPECIES	5/14	5/18	5/22	5/25	5/29	5/31	6/5	6/7	6/12	6/14	6/19	6/22	6/25	6/29	7/4	7/6
7	Eastern Towhee	4	6	6	6	7	8	4	9	5	4	5	6	6	3	6	6
7	Bachman's Sparrow	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
8	Chipping Sparrow	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
7	Clay-colored Sparrow	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
7	Field Sparrow	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
7	Vesper Sparrow	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
7	Lark Sparrow	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
7	Savannah Sparrow	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
7	Grasshopper Sparrow	.	.	.	.	.	1	.	.	.	.	.	.	.	.	.	.
7	Henslow's Sparrow	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
7	Le Conte's Sparrow	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
7	Nelson's Sparrow	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
7	Fox Sparrow	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
7	Song Sparrow	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
7	Lincoln's Sparrow	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
7	Swamp Sparrow	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
7	White-throated Sparrow	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
7	White-crowned Sparrow	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
7	Dark-eyed Junco	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
7	Lapland Longspur	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
8	Northern Cardinal	36	50	36	31	56	77	37	80	86	44	44	49	45	32	34	29
8	Rose-breasted Grosbeak	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
8	Blue Grosbeak	6	12	18	11	15	17	22	29	32	30	24	13	22	18	17	17
8	Lazuli Bunting	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
8	Indigo Bunting	4	2	6	2	4	4	5	5	5	3	7	2	5	3	6	6
8	Painted Bunting	.	1	1	2	2	3	3	2	4	3	3	1	2	1	2	3
7	Dickcissel	.	.	.	.	.	2	.	.	2	2	3	.	5	11	1	6
7	Bobolink	46	15	.	.	.	.	.	.	.	.	.	.	.	.	.	.
7	Red-winged Blackbird	80	90	70	90	110	250	150	350	250	255	250	200	370	350	810	405
6	Eastern Meadowlark	9	6	4	6	9	7	6	3	7	7	8	4	6	10	10	6
7	Yellow-headed Blackbird	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
7	Rusty Blackbird	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
7	Brewer's Blackbird	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
7	Common Grackle	16	31	41	7	23	29	13	9	24	8	6	10	19	16	16	16
7	Boat-tailed Grackle	130	210	115	205	115	355	425	315	640	430	1350	2015	2140	1190	760	1010

Table A. Part 5

Hab	SPECIES	5/14	5/18	5/22	5/25	5/29	5/31	6/5	6/7	6/12	6/14	6/19	6/22	6/25	6/29	7/4	7/6
7	Shiny Cowbird	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
7	Bronzed Cowbird	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
7	Brown-headed Cowbird	.	.	.	.	.	.	1	1	.	.	.	2	.	1	46	36
8	Orchard Oriole	.	.	.	1	1	1	1	1	.	1	1	.	.	1	.	3
8	Baltimore Oriole	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
8	Bullock's Oriole	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
8	Pine Siskin	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
8	Purple Finch	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
8	House Finch	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
8	American Goldfinch	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
8	House Sparrow	.	.	1	1	1	1	1	2	1	1	2	1	1	1	1	2
8	Bronze Mannikin	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
8	Orange Bishop	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
8	Zebra Finch	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
8	Pin-tailed Whydah	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
	<b>TOTAL SPECIES</b>	<b>88</b>	<b>86</b>	<b>79</b>	<b>78</b>	<b>80</b>	<b>80</b>	<b>84</b>	<b>79</b>	<b>77</b>	<b>76</b>	<b>68</b>	<b>74</b>	<b>78</b>	<b>72</b>	<b>75</b>	<b>75</b>
	<b>TOTAL INDIVIDUALS</b>	<b>3,249</b>	<b>2,469</b>	<b>2,842</b>	<b>3,410</b>	<b>3,547</b>	<b>3,998</b>	<b>4,459</b>	<b>4,210</b>	<b>5,076</b>	<b>5,253</b>	<b>7,418</b>	<b>7,223</b>	<b>8,356</b>	<b>4,957</b>	<b>6,942</b>	<b>6,756</b>

Table A. Part 6

Hab	SPECIES	7/9	7/12	7/14	7/16	7/20	7/23	7/27	8/3	8/6	8/10	8/13
1	Pacific Loon	.	.	.	.	.	.	.	.	.	.	.
1	Common Loon	.	.	.	.	.	.	.	.	.	.	.
1	Pied-billed Grebe	11	10	10	14	11	15	26	29	46	29	48
1	Horned Grebe	.	.	.	.	.	.	.	.	.	.	.
1	Red-necked Grebe	.	.	.	.	.	.	.	.	.	.	.
1	Eared Grebe	.	.	.	.	.	.	.	.	.	.	.
1	Sooty Shearwater	.	.	.	.	.	.	.	.	.	.	.
1	American White Pelican	.	.	.	.	.	.	.	.	.	.	.
1	Brown Pelican	.	.	.	.	.	.	.	.	.	.	.
1	Neotropic Cormorant	.	.	.	.	.	.	.	.	.	.	.
1	Double-crested Cormorant	1	3	1	5	2	2	1	5	3	1	1
1	"California" D-c Cormorant	.	.	.	.	.	.	.	.	.	.	.
1	Anhinga	11	13	11	19	11	10	12	26	16	22	23
2	American Bittern	.	.	.	.	.	.	.	.	.	.	.
2	Least Bittern	3	.	.	2	3	3	2	2	2	.	.
2	Gray Heron	.	.	.	.	.	.	.	.	.	.	.
2	Great Blue Heron	24	21	22	20	21	26	12	23	23	25	15
2	Great White Heron	.	.	.	.	.	.	.	.	.	.	.
2	Great Egret	10	25	14	30	29	32	15	22	25	14	9
2	Snowy Egret	2	5	13	11	5	3	4	1	10	4	4
2	Little Blue Heron	9	7	13	10	11	11	14	8	15	27	16
2	Tricolored Heron	7	11	6	17	12	12	18	12	10	8	9
2	Reddish Egret	.	.	.	.	.	.	.	.	.	.	.
6	Cattle Egret	2260	2150	1360	2010	2030	2345	2490	2500	2570	3120	2580
2	Green Heron	12	6	11	19	10	7	13	13	9	10	11
2	Black-crowned Night-Heron	.	.	.	.	.	.	.	.	.	1	.
2	Yellow-crowned Night-Heron	1	2	1	3	.	1	1	2	.	1	.
2	White Ibis	62	51	10	56	150	83	231	189	9	106	32
2	Glossy Ibis	50	24	6	66	124	127	171	181	188	278	50
2	White-faced Ibis	.	.	.	.	.	.	.	.	.	.	.
2	Roseate Spoonbill	.	.	.	.	.	.	.	.	.	.	.
2	Wood Stork	.	14	.	.	.	.	1	19	22	1	1
7	Black Vulture	9	1	1	13	5	3	5	6	3	4	10
7	Turkey Vulture	40	27	17	64	29	29	36	36	21	49	27
1	Black Swan	.	.	.	.	.	.	.	.	.	.	.

Table A. Part 6

Hab	SPECIES	7/9	7/12	7/14	7/16	7/20	7/23	7/27	8/3	8/6	8/10	8/13
3	White-faced Whistling-Duck	.	.	.	.	.	.	.	.	.	.	.
3	Black-bellied Whistling-Duck	73	18	22	48	85	40	82	119	302	366	224
3	Fulvous Whistling-Duck	.	1	.	.	.	.	.	.	.	.	.
3	Greater White-fronted Goose	.	.	.	.	.	.	.	.	.	.	.
3	Egyptian Goose	.	.	.	.	.	.	.	.	.	.	.
3	Snow Goose	.	.	.	.	.	.	.	.	.	.	.
3	Ross's Goose	.	.	.	.	.	.	.	.	.	.	.
3	Canada Goose	.	.	.	.	.	.	.	.	.	.	.
3	Muscovy Duck	.	.	.	.	.	.	.	.	.	.	.
3	Wood Duck	6	6	.	4	4	2	2	8	5	8	16
3	Gadwall	.	.	.	.	.	.	.	.	.	.	.
3	Eurasian Wigeon	.	.	.	.	.	.	.	.	.	.	.
3	American Wigeon	.	.	.	.	.	.	.	.	.	.	.
3	American Black Duck	.	.	.	.	.	.	.	.	.	.	.
3	Mallard	5	2	4	.	2	1	4	4	8	8	8
3	Mottled Duck	22	10	35	30	27	9	24	85	99	151	177
3	Blue-winged Teal	.	.	.	1	.	.	1	.	2	2	31
3	Cinnamon Teal	.	.	.	.	.	.	.	.	.	.	.
3	Northern Shoveler	.	.	.	.	.	.	.	.	.	.	.
3	Northern Pintail	.	.	.	.	.	.	.	.	.	.	.
3	Green-winged Teal	.	.	.	.	.	.	.	.	.	.	.
3	Eurasian Green-winged Teal	.	.	.	.	.	.	.	.	.	.	.
1	Canvasback	.	.	.	.	.	.	.	.	.	.	.
1	Redhead	.	.	.	.	.	.	.	.	.	.	.
1	Ring-necked Duck	.	.	.	.	.	.	.	.	.	.	.
1	Greater Scaup	.	.	.	.	.	.	.	.	.	.	.
1	Lesser Scaup	.	.	.	.	.	.	.	.	.	.	.
1	Black Scoter	.	.	.	.	.	.	.	.	.	.	.
1	Bufflehead	.	.	.	.	.	.	.	.	.	.	.
1	Common Goldeneye	.	.	.	.	.	.	.	.	.	.	.
1	Hooded Merganser	.	.	.	.	.	.	.	.	.	.	.
1	Red-breasted Merganser	.	.	.	.	.	.	.	.	.	.	.
1	Ruddy Duck	1	1	1	1	1	1	1	1	2	2	2
5	Osprey	12	9	5	9	6	4	5	3	7	7	5
7	Swallow-tailed Kite	44	39	16	64	102	63	75	44	28	20	5

Table A. Part 6

Hab	SPECIES	7/9	7/12	7/14	7/16	7/20	7/23	7/27	8/3	8/6	8/10	8/13
7	Mississippi Kite	.	.	.	.	.	.	.	.	.	.	.
7	White-tailed Kite	.	.	.	.	.	.	.	.	.	.	.
7	Snail Kite	.	.	1	1	.	.	.	.	.	.	.
5	Bald Eagle	.	3	.	1	.	.	1	2	2	3	.
7	Northern Harrier	.	.	.	.	.	.	.	.	.	1	.
8	Sharp-shinned Hawk	1	1	.	2	1	1	2	2	6	3	2
8	Cooper's Hawk	.	.	.	.	.	1	2	2	3	2	4
8	Red-shouldered Hawk	8	4	4	8	6	4	8	11	5	7	12
8	Broad-winged Hawk	.	.	.	.	.	.	.	.	.	.	.
8	Short-tailed Hawk	.	.	.	.	.	.	.	.	.	.	.
7	Swainson's Hawk	.	.	.	.	.	.	.	.	.	.	.
8	Red-tailed Hawk	11	9	8	8	7	8	8	11	16	24	20
8	Red-tailed dark-morph	.	.	.	.	.	.	.	.	.	.	.
8	Krider's Red-tailed Hawk	.	.	.	.	.	.	.	.	.	.	.
7	Rough-legged Hawk	.	.	.	.	.	.	.	.	.	.	.
7	Golden Eagle	.	.	.	.	.	.	.	.	.	.	.
6	Crested Caracara	.	.	.	.	.	.	1	.	.	.	.
7	American Kestrel	.	.	.	.	.	.	.	.	.	.	.
7	Eurasian Kestrel	.	.	.	.	.	.	.	.	.	.	.
7	Merlin	.	.	.	.	.	.	.	.	.	.	.
7	Peregrine Falcon	.	.	.	.	.	.	.	.	.	.	.
8	Common Peafowl	.	.	.	.	.	.	.	.	.	.	.
7	Gray Partridge	.	.	.	.	.	.	.	.	.	.	.
8	Wild Turkey	.	.	.	.	.	.	.	.	.	.	.
7	Ring-necked Pheasant	.	.	.	.	.	.	.	.	.	.	.
7	Northern Bobwhite	6	6	4	9	5	2	2	6	1	3	4
2	Yellow Rail	.	.	.	.	.	.	.	.	.	.	.
2	Black Rail	.	.	.	.	.	.	.	.	.	.	.
2	Clapper Rail	.	.	.	.	.	.	.	.	.	.	.
2	King Rail	.	.	.	.	.	.	.	.	.	.	.
2	Virginia Rail	.	.	.	.	.	.	.	.	.	.	.
2	Sora	.	.	.	.	.	.	.	.	.	.	.
2	Purple Gallinule	6	8	4	4	7	6	6	15	2	6	14
4	Common Moorhen	90	75	55	55	75	70	145	225	190	645	787
1	American Coot	24	20	10	9	13	46	25	108	143	78	116

Table A. Part 6

Hab	SPECIES	7/9	7/12	7/14	7/16	7/20	7/23	7/27	8/3	8/6	8/10	8/13
1	Caribbean Coot	.	.	.	.	.	.	.	.	.	.	.
2	Limpkin	.	.	.	.	.	1	.	.	.	.	.
2	Sandhill Crane	.	.	.	.	.	.	.	.	.	.	.
2	Whooping Crane	.	.	.	.	.	.	.	.	.	.	.
4	Black-bellied Plover	2	.	.	.	.	.	1	3	5	5	14
4	American Golden-Plover	.	.	.	.	.	.	.	.	.	.	.
4	Semipalmated Plover	.	.	.	.	.	1	.	.	3	2	.
4	Wilson's Plover	.	.	.	.	.	.	.	.	.	.	.
4	Piping Plover	.	.	.	.	.	.	.	.	.	.	.
6	Killdeer	215	107	78	40	39	57	28	28	23	19	3
4	Black-necked Stilt	.	.	.	5	5	3	.	7	7	13	9
4	American Avocet	.	.	.	.	.	.	.	.	.	.	.
4	Greater Yellowlegs	.	.	2	.	2	2	1	.	1	1	1
4	Lesser Yellowlegs	.	.	61	2	9	2	1	1	4	5	.
4	Solitary Sandpiper	.	.	.	.	.	.	.	.	.	.	.
4	Willet	.	.	.	.	.	.	8	.	.	.	.
4	Spotted Sandpiper	.	.	.	1	.	1	.	1	.	2	.
6	Upland Sandpiper	1	.	.	.	1	5	5	6	.	1	.
4	Whimbrel	.	.	.	.	.	.	.	.	.	.	.
4	Long-billed Curlew	.	.	.	.	.	.	.	.	.	.	.
4	Hudsonian Godwit	.	.	.	.	.	.	.	.	.	.	.
4	Marbled Godwit	.	.	.	.	.	.	.	.	.	.	.
4	Ruddy Turnstone	.	.	.	.	.	.	.	.	.	.	.
4	Red Knot	.	.	.	.	.	.	.	.	.	.	.
4	Sanderling	.	.	.	.	.	.	.	.	.	.	.
4	Semipalmated Sandpiper	.	.	1	.	1	.	1	.	18	.	.
4	Western Sandpiper	.	.	3	.	.	.	.	.	.	.	.
4	Least Sandpiper	.	3	31	5	11	21	10	27	29	13	14
4	White-rumped Sandpiper	.	.	.	.	.	.	.	.	.	.	.
4	Baird's Sandpiper	.	.	.	.	.	.	.	.	.	.	.
4	Pectoral Sandpiper	.	1	2	1	7	8	12	2	1	2	1
4	Sharp-tailed Sandpiper	.	.	.	.	.	.	.	.	.	.	.
4	Dunlin	.	.	.	.	.	.	.	.	.	.	.
4	Curlew Sandpiper	.	.	.	.	.	.	.	.	.	.	.
4	Stilt Sandpiper	.	.	2	.	.	.	.	14	8	3	.

Table A. Part 6

Hab	SPECIES	7/9	7/12	7/14	7/16	7/20	7/23	7/27	8/3	8/6	8/10	8/13
6	Buff-breasted Sandpiper	.	.	.	.	.	.	.	.	2	.	12
4	Ruff	.	.	.	.	.	.	.	.	.	.	.
4	Short-billed Dowitcher	.	.	5	2	4	.	.	.	.	1	.
4	Long-billed Dowitcher	.	.	.	.	1	.	.	.	.	.	.
4	Wilson's Snipe	.	.	.	.	.	.	.	.	.	.	.
4	American Woodcock	.	.	.	.	.	.	.	.	.	.	.
4	Wilson's Phalarope	.	.	.	.	.	.	.	.	.	.	.
4	Red-necked Phalarope	.	.	.	.	.	.	.	.	.	.	.
4	Red Phalarope	.	.	.	.	.	.	.	.	.	.	.
5	Pomarine Jaeger	.	.	.	.	.	.	.	.	.	.	.
5	Parasitic Jaeger	.	.	.	.	.	.	.	.	.	.	.
5	Laughing Gull	.	.	.	.	.	.	.	.	.	.	3
5	Franklin's Gull	.	.	.	.	.	.	.	.	.	.	.
5	Little Gull	.	.	.	.	.	.	.	.	.	.	.
5	Bonaparte's Gull	.	.	.	.	.	.	.	.	.	.	.
5	Ring-billed Gull	2	2	2	2	2	2	2	2	1	.	.
5	Herring Gull	.	.	.	.	.	.	.	.	.	.	.
5	Thayer's Gull	.	.	.	.	.	.	.	.	.	.	.
5	Great Black-backed Gull	.	.	.	.	.	.	.	.	.	.	.
5	Lesser Black-backed Gull	.	.	.	.	.	.	.	.	.	.	.
5	Gull-billed Tern	.	.	.	.	.	.	.	.	.	.	.
5	Caspian Tern	.	.	.	.	.	.	.	.	.	.	.
5	Royal Tern	.	.	.	.	.	.	.	.	.	.	.
5	Sandwich Tern	.	.	.	.	.	.	.	.	.	.	.
5	Roseate Tern	.	.	.	.	.	.	.	.	.	.	.
5	Common Tern	.	.	.	.	.	.	.	.	.	.	.
5	Arctic Tern	.	.	.	.	.	.	.	.	.	.	.
5	Forster's Tern	.	.	1	.	.	.	.	1	1	.	.
5	Least Tern	.	.	.	.	2	.	.	.	.	.	.
5	Black Tern	.	3	1	.	1	.	.	1	.	2	2
5	Bridled Tern	.	.	.	.	.	.	.	.	.	.	.
5	Sooty Tern	.	.	.	.	.	.	.	.	.	.	.
5	Black Skimmer	.	.	.	.	.	.	.	.	.	.	.
8	Rock Pigeon	58	51	58	54	53	2	26	13	.	.	1
8	Eurasian Collared-Dove	3	1	4	1	4	2	1	3	.	3	3

Table A. Part 6

Hab	SPECIES	7/9	7/12	7/14	7/16	7/20	7/23	7/27	8/3	8/6	8/10	8/13
8	Diamond Dove											
8	African Collared-Dove	.	.	.	.	.	.	.	.	.	.	.
8	White-winged Dove	1	.	.	1	.	.	.	.	.	.	3
8	Mourning Dove	960	1340	785	1025	605	510	430	165	61	62	100
8	Common Ground-Dove	31	43	31	37	16	23	19	12	8	20	14
8	Cockatiel	.	.	.	.	.	.	.	.	.	.	.
7	Budgerigar	.	.	.	.	.	1	1	1	1	.	.
8	Black-billed Cuckoo	.	.	.	.	.	.	.	.	.	.	.
8	Yellow-billed Cuckoo	.	1	.	.	.	.	.	1	.	.	.
8	Smooth-billed Ani	.	.	.	.	.	.	.	.	.	.	.
8	Groove-billed Ani	.	.	.	.	.	.	.	.	.	.	.
8	Barn Owl	.	4	.	3	.	3	3	.	.	.	.
8	Eastern Screech-Owl	.	.	.	.	.	2	.	.	.	.	.
8	Great Horned Owl	.	.	.	.	.	.	.	1	.	.	.
8	Burrowing Owl	.	.	.	.	.	.	.	.	.	.	.
8	Barred Owl	.	.	.	.	1	.	.	.	.	.	.
7	Long-eared Owl	.	.	.	.	.	.	.	.	.	.	.
7	Short-eared Owl	.	.	.	.	.	.	.	.	.	.	.
8	Northern Saw-whet Owl	.	.	.	.	.	.	.	.	.	.	.
8	Lesser Nighthawk	.	.	.	.	.	.	.	.	.	.	.
8	Common Nighthawk	.	2	1	2	1	1	1	1	.	.	.
8	Chuck-will's-widow	.	.	.	.	.	.	.	.	.	.	.
8	Eastern Whip-poor-will	.	.	.	.	.	.	.	.	.	.	.
7	Chimney Swift	.	.	3	1	1	1	1	6	2	3	2
8	Ruby-throated Hummingbird	.	.	.	.	.	.	.	.	.	.	.
8	Black-chinned Hummingbird	.	.	.	.	.	.	.	.	.	.	.
5	Belted Kingfisher	.	.	1	.	.	.	3	1	1	1	.
8	Red-headed Woodpecker	.	.	.	.	.	.	.	.	.	.	.
8	Red-bellied Woodpecker	12	8	2	6	15	11	8	7	7	6	3
8	Yellow-bellied Sapsucker	.	.	.	.	.	.	.	.	.	.	.
8	Downy Woodpecker	2	2	2	3	3	5	1	2	1	2	.
8	Hairy Woodpecker	.	.	.	.	.	.	.	.	.	.	.
8	Red-cockaded Woodpecker	.	.	.	.	.	.	.	.	.	.	.
8	Northern Flicker	3	5	3	3	5	2	2	1	2	3	1
8	Pileated Woodpecker	.	.	.	.	.	.	.	.	.	.	.

Table A. Part 6

Hab	SPECIES	7/9	7/12	7/14	7/16	7/20	7/23	7/27	8/3	8/6	8/10	8/13
8	Olive-sided Flycatcher	1	1	.	1	1	2	2	2	.	1	2
8	Eastern Wood-Pewee	.	.	.	.	.	.	.	.	.	.	.
8	Yellow-bellied Flycatcher	.	.	.	.	.	.	.	.	.	.	.
8	Acadian Flycatcher	.	.	.	.	.	.	.	.	.	.	.
8	Alder Flycatcher	.	.	.	.	.	.	.	.	.	.	.
8	Willow Flycatcher	.	.	.	.	.	.	1	.	.	.	.
8	Least Flycatcher	.	.	.	.	.	.	.	.	.	.	.
7	Eastern Phoebe	.	.	.	.	.	.	.	.	.	.	.
8	Vermilion Flycatcher	.	.	.	.	.	.	.	.	.	.	.
8	Ash-throated Flycatcher	.	.	.	.	.	.	.	.	.	.	.
8	Great Crested Flycatcher	4	2	1	1	3	4	1	4	2	1	1
8	Brown-crested Flycatcher	.	.	.	.	.	.	.	.	.	.	.
8	Tropical Kingbird	.	.	.	.	.	.	.	.	.	.	.
8	Cassin's Kingbird	.	.	.	.	.	.	.	.	.	.	.
8	Western Kingbird	.	.	.	.	.	.	.	.	.	.	.
8	Eastern Kingbird	.	.	1	.	1	.	.	.	.	1	.
8	Gray Kingbird	.	.	.	.	.	.	.	.	.	.	1
8	Scissor-tailed Flycatcher	.	.	.	.	.	.	.	.	.	.	.
8	Fork-tailed Flycatcher	.	.	.	.	.	.	.	.	.	.	.
8	Loggerhead Shrike	7	10	6	9	11	15	9	7	10	13	10
8	White-eyed Vireo	.	.	.	.	.	1	1	.	1	1	.
8	Bell's Vireo	.	.	.	.	.	.	.	.	.	.	.
8	Yellow-throated Vireo	.	.	.	.	.	.	.	.	.	.	.
8	Blue-headed Vireo	.	.	.	.	.	.	.	.	.	.	.
8	Philadelphia Vireo	.	.	.	.	.	.	.	.	.	.	.
8	Red-eyed Vireo	1	1	1	.	.	.	.	.	.	1	.
8	Black-whiskered Vireo	.	.	.	.	.	.	.	.	.	.	.
8	Blue Jay	8	13	5	10	15	8	7	13	14	13	7
8	Florida Scrub-Jay	.	.	.	.	.	.	.	.	.	.	.
7	American Crow	.	.	.	.	.	.	.	.	.	.	.
7	Fish Crow	.	34	132	49	74	16	5	10	3	12	3
7	Purple Martin	550	675	54	535	290	235	28	34	140	436	12
7	Tree Swallow	.	1	.	.	.	.	.	.	1	.	.
7	Northern Rough-winged Swallow	.	.	.	1	.	1	.	1	3	1	1
7	Bank Swallow	.	.	.	.	1	1	2	2	6	1	2

Table A. Part 6

Hab	SPECIES	7/9	7/12	7/14	7/16	7/20	7/23	7/27	8/3	8/6	8/10	8/13
7	Cliff Swallow	.	.	.	.	.	.	.	1	2	.	3
7	Cave Swallow	.	.	.	.	.	.	.	.	.	.	.
7	Barn Swallow	100	55	35	40	75	85	65	43	85	444	270
8	Carolina Chickadee	.	.	.	.	.	.	.	.	.	.	.
8	Tufted Titmouse	.	1	.	.	1	4	2	1	1	2	1
8	Brown-headed Nuthatch	.	.	.	.	.	.	.	.	.	.	.
8	Carolina Wren	17	19	7	15	17	20	15	11	9	11	16
8	Bewick's Wren	.	.	.	.	.	.	.	.	.	.	.
8	House Wren	.	.	.	.	.	.	.	.	.	.	.
8	Winter Wren	.	.	.	.	.	.	.	.	.	.	.
7	Sedge Wren	.	.	.	.	.	.	.	.	.	.	.
7	Marsh Wren	.	.	.	.	.	.	.	.	.	.	.
8	Golden-crowned Kinglet	.	.	.	.	.	.	.	.	.	.	.
8	Ruby-crowned Kinglet	.	.	.	.	.	.	.	.	.	.	.
8	Blue-gray Gnatcatcher	.	.	.	1	.	1	.	3	1	.	1
8	Eastern Bluebird	.	.	.	.	.	.	.	.	.	.	.
8	Veery	.	.	.	.	.	.	.	.	.	.	.
8	Gray-cheeked Thrush	.	.	.	.	.	.	.	.	.	.	.
8	Bicknell's Thrush	.	.	.	.	.	.	.	.	.	.	.
8	Swainson's Thrush	.	.	.	.	.	.	.	.	.	.	.
8	Hermit Thrush	.	.	.	.	.	.	.	.	.	.	.
8	Wood Thrush	.	.	.	.	.	.	.	.	.	.	.
8	American Robin	.	.	.	.	.	.	.	.	.	.	.
8	Gray Catbird	.	.	.	.	.	.	.	.	.	.	.
8	Northern Mockingbird	13	16	13	19	22	20	11	18	6	19	6
8	Brown Thrasher	5	5	3	5	5	5	5	7	4	4	3
7	European Starling	170	625	275	735	620	158	135	22	7	5	1
7	Common Myna	.	.	.	.	.	.	.	.	.	.	.
6	American Pipit	.	.	.	.	.	.	.	.	.	.	.
8	Cedar Waxwing	.	.	.	.	.	.	.	.	.	.	.
8	Blue-winged Warbler	.	.	.	.	.	.	.	.	.	.	.
8	Tennessee Warbler	.	.	.	.	.	.	.	.	.	.	.
8	Orange-crowned Warbler	.	.	.	.	.	.	.	.	.	.	.
8	Nashville Warbler	.	.	.	.	.	.	.	.	.	.	.
8	Northern Parula	.	.	.	.	.	.	.	.	.	.	1

Table A. Part 6

Hab	SPECIES	7/9	7/12	7/14	7/16	7/20	7/23	7/27	8/3	8/6	8/10	8/13
7	Yellow Warbler	.	.	.	.	.	.	.	8	49	11	15
8	Chestnut-sided Warbler	.	.	.	.	.	.	.	.	.	.	.
8	Magnolia Warbler	.	.	.	.	.	.	.	.	.	.	.
8	Cape May Warbler	.	.	.	.	.	.	.	.	.	.	.
8	Black-throated Blue Warbler	.	.	.	.	.	.	.	.	.	.	.
8	Yellow-rumped Warbler	.	.	.	.	.	.	.	.	.	.	.
8	"Audubon's Warbler"	.	.	.	.	.	.	.	.	.	.	.
8	Black-throated Gray Warbler	.	.	.	.	.	.	.	.	.	.	.
8	Black-throated Green Warbler	.	.	.	.	.	.	.	.	.	.	.
8	Blackburnian Warbler	.	.	.	.	.	.	.	.	.	.	.
8	Yellow-throated Warbler	.	.	.	.	.	.	.	.	.	.	.
8	Pine Warbler	.	.	.	.	.	.	.	.	.	.	.
7	Prairie Warbler	.	.	.	.	1	1	1	3	2	3	3
7	Palm Warbler	.	.	.	.	.	.	.	.	.	.	.
7	"Yellow Palm Warbler"	.	.	.	.	.	.	.	.	.	.	.
8	Bay-breasted Warbler	.	.	.	.	.	.	.	.	.	.	.
8	Blackpoll Warbler	.	.	.	.	.	.	.	.	.	.	.
8	Cerulean Warbler	.	.	.	.	.	.	.	.	.	.	.
8	Black-and-white Warbler	.	.	.	.	.	.	.	.	.	.	.
8	American Redstart	.	.	.	.	.	.	.	.	1	.	1
8	Prothonotary Warbler	.	.	.	.	.	.	.	.	.	.	.
8	Worm-eating Warbler	.	.	.	.	.	.	.	.	.	.	.
8	Swainson's Warbler	.	.	.	.	.	.	.	.	.	.	.
8	Ovenbird	.	.	.	.	.	.	.	.	.	.	.
7	Northern Waterthrush	.	.	.	.	.	.	.	.	.	.	.
7	Louisiana Waterthrush	.	.	.	.	.	.	.	.	.	1	2
8	Kentucky Warbler	.	.	.	.	.	.	.	.	.	.	.
7	Common Yellowthroat	.	.	.	.	.	.	.	.	1	.	1
8	Hooded Warbler	.	.	.	.	.	.	.	.	.	.	.
8	Wilson's Warbler	.	.	.	.	.	.	.	.	.	.	.
8	Canada Warbler	.	.	.	.	.	.	.	.	.	.	.
7	Yellow-breasted Chat	.	.	.	.	.	.	.	.	.	.	.
8	Summer Tanager	.	.	.	.	.	.	.	.	.	.	.
8	Scarlet Tanager	.	.	.	.	.	.	.	.	.	.	.
8	Western Tanager	.	.	.	.	.	.	.	.	.	.	.

Table A. Part 6

Hab	SPECIES	7/9	7/12	7/14	7/16	7/20	7/23	7/27	8/3	8/6	8/10	8/13
7	Eastern Towhee	5	5	8	4	5	5	5	6	3	3	5
7	Bachman's Sparrow	.	.	.	.	.	.	.	.	.	.	.
8	Chipping Sparrow	.	.	.	.	.	.	.	.	.	.	.
7	Clay-colored Sparrow	.	.	.	.	.	.	.	.	.	.	.
7	Field Sparrow	.	.	.	.	.	.	.	.	.	.	.
7	Vesper Sparrow	.	.	.	.	.	.	.	.	.	.	.
7	Lark Sparrow	.	.	.	.	.	.	.	.	.	.	.
7	Savannah Sparrow	.	.	.	.	.	.	.	.	.	.	.
7	Grasshopper Sparrow	.	.	.	.	.	.	.	.	.	.	.
7	Henslow's Sparrow	.	.	.	.	.	.	.	.	.	.	.
7	Le Conte's Sparrow	.	.	.	.	.	.	.	.	.	.	.
7	Nelson's Sparrow	.	.	.	.	.	.	.	.	.	.	.
7	Fox Sparrow	.	.	.	.	.	.	.	.	.	.	.
7	Song Sparrow	.	.	.	.	.	.	.	.	.	.	.
7	Lincoln's Sparrow	.	.	.	.	.	.	.	.	.	.	.
7	Swamp Sparrow	.	.	.	.	.	.	.	.	.	.	.
7	White-throated Sparrow	.	.	.	.	.	.	.	.	.	.	.
7	White-crowned Sparrow	.	.	.	.	.	.	.	.	.	.	.
7	Dark-eyed Junco	.	.	.	.	.	.	.	.	.	.	.
7	Lapland Longspur	.	.	.	.	.	.	.	.	.	.	.
8	Northern Cardinal	34	28	20	24	30	31	29	22	18	22	22
8	Rose-breasted Grosbeak	.	.	.	.	.	.	.	.	.	.	.
8	Blue Grosbeak	13	16	6	11	13	10	11	6	5	10	18
8	Lazuli Bunting	.	.	.	.	.	.	.	.	.	.	.
8	Indigo Bunting	3	3	2	2	2	3	3	3	1	3	2
8	Painted Bunting	2	3	1	1	1	1	1	2	1	1	.
7	Dickcissel	1	3	.	1	.	.	.	.	.	.	.
7	Bobolink	.	.	.	.	.	.	.	.	.	.	.
7	Red-winged Blackbird	340	250	180	130	165	220	170	140	530	155	150
6	Eastern Meadowlark	5	6	6	9	5	9	8	5	8	3	3
7	Yellow-headed Blackbird	.	.	.	.	.	.	.	.	.	.	.
7	Rusty Blackbird	.	.	.	.	.	.	.	.	.	.	.
7	Brewer's Blackbird	.	.	.	.	.	.	.	.	.	.	.
7	Common Grackle	18	13	6	13	34	112	26	18	165	58	238
7	Boat-tailed Grackle	530	2050	985	1275	1090	615	1070	2170	1260	670	550

Table A. Part 6

Hab	SPECIES	7/9	7/12	7/14	7/16	7/20	7/23	7/27	8/3	8/6	8/10	8/13
7	Shiny Cowbird	.	1	.	.	.	.	.	.	.	.	.
7	Bronzed Cowbird	.	.	.	.	.	.	.	.	.	.	.
7	Brown-headed Cowbird	148	455	550	1005	510	110	330	95	7	3	2
8	Orchard Oriole	.	.	.	.	1	1	.	1	.	.	.
8	Baltimore Oriole	.	.	.	.	.	.	.	.	.	.	.
8	Bullock's Oriole	.	.	.	.	.	.	.	.	.	.	.
8	Pine Siskin	.	.	.	.	.	.	.	.	.	.	.
8	Purple Finch	.	.	.	.	.	.	.	.	.	.	.
8	House Finch	.	.	.	.	.	.	.	.	.	.	.
8	American Goldfinch	.	.	.	.	.	.	.	.	.	.	.
8	House Sparrow	.	1	.	1	1	.	.	.	.	.	.
8	Bronze Mannikin	.	.	.	.	.	.	.	.	.	.	.
8	Orange Bishop	.	.	.	.	.	.	.	.	.	.	.
8	Zebra Finch	.	.	.	.	.	.	.	.	.	.	.
8	Pin-tailed Whydah	.	.	.	.	.	.	.	.	.	.	.
	<b>TOTAL SPECIES</b>	<b>64</b>	<b>74</b>	<b>71</b>	<b>75</b>	<b>79</b>	<b>82</b>	<b>83</b>	<b>87</b>	<b>85</b>	<b>86</b>	<b>80</b>
	<b>TOTAL INDIVIDUALS</b>	<b>6,086</b>	<b>8,447</b>	<b>5,040</b>	<b>7,703</b>	<b>6,577</b>	<b>5,327</b>	<b>5,954</b>	<b>6,685</b>	<b>6,325</b>	<b>7,114</b>	<b>5,802</b>

## Table B

### Habitat usage on a daily basis

This table is a daily summary of the number of birds using the different described habitats. By each species in Table A I have given a “Hab”itat code using codes 1 to 8. This code indicates what I perceive as each species’ preferred habitat at Zellwood. It is the “Hab” code that has been used to collate the numbers using each habitat on a daily basis. Detailed below are the preferred habitats together with a brief description of the same.

#### Habitat 1    Deep water

This covers a field that is deep flooded to its banks or the deeper areas of an otherwise shallow flooded field. The species in this category are the grebes, pelicans, cormorants, diving ducks and the American Coot.

#### Habitat 2    Wetlands

This covers what are sometimes described as marsh birds but in reality they use a variety of habitats from damp fields to the edge of open sheets of water. The species in this category are the herons, egrets, ibis, Wood Stork, Limpkin, the cranes and the rails. The only exception is the Cattle Egret which is to be found in the short grassed areas.

#### Habitat 3    Shallow water

This category includes the surface feeding ducks and geese. The title says it all this relates to those fields that are shallow flooded in whole or in part. There will often be loafing areas.

#### Habitat 4    Mud and water

This relates to the muddy shores of flooded fields and any muddy ridges out in the middle of the fields. The drier areas will be used by the plovers but the other shorebirds will use the wet mud or the shallow water, the depth of water used depending on their leg length. The only shorebirds that are excluded are the Killdeer, Upland Sandpiper and the Buff-breasted Sandpiper; these prefer a short grass habitat.

#### Habitat 5 Over water

This category covers those species that feed over water. This includes such diverse species as the gulls and terns along with the Bald Eagle, Osprey and Belted Kingfisher. The gulls and terns may feed over the water but they require loafing and roosting areas preferably a muddy island in the middle of a flooded field. It is also possible that some will roost out in the middle of Lake Apopka. The Bald Eagle, the Osprey and the kingfisher all use snags or utility poles for perches and roosting.

#### Habitat 6 Short Grass

The Sod Farm provided this habitat with a lesser area near the Lust Road gate. The species in this category are the Cattle Egret, Killdeer, Upland Sandpiper, Buff-breasted Sandpiper, American Pipit and the Eastern Meadowlark.

#### Habitat 7 Weedy fields

The habitat varies from groves of Elderberry inter mixed with other plants to fields with tall grass or vines. This category covers such diverse species as the Swallow-tailed Kite and Barn Swallow that hunt over the fields to the sparrows that search the ground for seeds.

#### Habitat 8 The eastern and northern borders of woodland and scrub

Included in this category are those species that utilize the wood and scrub borders more than they do the fields. This category has a diverse list of species; one can check the "hab" code on the spreadsheet in Table A to see which species are included here or in Habitat 7.

Habitat	1	2	3	4	5	6	7	8
15-Aug-98	24	2674	77	2528	370	490	728	100
2-Sep-98	46	615	119	3377	1070	3063	3423	15
11-Sep-98	222	1148	192	5235	515	1524	1706	17
17-Sep-98	487	1998	335	2878	212	2820	3237	20
30-Sep-98	209	918	1392	840	104	846	1506	18
6-Oct-98	460	1140	117	1513	50	86	148	13
16-Oct-98	1567	1883	5308	4081	42	2050	463	33
21-Oct-98	4540	2030	5508	4717	69	87	728	44
29-Oct-98	5319	1780	7948	4235	174	102	540	31
2-Nov-98	8963	2740	11005	5044	155	20	1332	27
6-Nov-98	7642	3356	9168	3921	232	74	1121	51
11-Nov-98	14262	3230	5146	3717	417	291	1772	75
13-Nov-98	13280	2855	1748	4971	541	395	3138	109
18-Nov-98	19229	3380	2755	3792	819	823	3191	108
20-Nov-98	1221	96	136	370	481	882	2228	112
23-Nov-98	1	0	41	0	8	0	94	0
25-Nov-98	13649	3010	986	4163	42	1483	2541	328
3-Dec-98	18254	1755	4850	2635	706	1371	3598	144
30-Nov-98	15034	1927	4551	2970	561	1887	1823	150
4-Dec-98	9	4	341	122	635	1100	2167	20
7-Dec-98	7	16	96	62	16	0	0	158
8-Dec-98	12842	1534	15420	4737	738	2799	3396	149
11-Dec-98	7080	1528	14921	3395	505	1336	2157	1396
16-Dec-98	9085	1654	10430	5395	871	778	2735	311
18-Dec-98	6069	1689	18614	189	400	780	490	317
20-Dec-98	5411	1195	10996	4030	538	1501	3731	246
28-Dec-98	7321	1608	6966	4882	523	1034	4554	455
31-Dec-98	4409	1455	7039	5806	622	1692	3034	411
1-Jan-99	4313	2375	5556	4789	751	1186	2680	417
7-Jan-99	4801	1586	5488	2710	1188	1711	1772	271
8-Jan-99	4536	2144	4048	3146	1179	1251	1479	435
11-Jan-99	5183	28	3430	105	804	1	841	454
12-Jan-99	7254	2182	8192	4235	1178	520	3030	941
15-Jan-99	6620	1972	9815	3866	1346	1470	4112	1225
19-Jan-99	6192	2447	11270	4474	1314	976	3862	292
20-Jan-99	4	0	1	0	0	0	1	15
27-Jan-99	4663	1958	12213	3836	851	1630	5240	417
29-Jan-99	6848	2600	11294	2347	1941	1272	5148	549
3-Feb-99	4540	1622	6116	3066	929	1562	6489	381
5-Feb-99	5093	2264	7766	3527	729	607	7791	1127
9-Feb-99	4396	1992	5166	3961	428	814	4391	1221
10-Feb-99	4059	1969	3255	4032	473	784	2974	1004
17-Feb-99	2849	1241	589	596	373	1003	3479	555
7-Mar-99	45	11	0	22	98	73	640	245
11-Mar-99	39	10	0	58	38	309	3704	250

13-Mar-99	42	4	10	62	27	114	1000	253
16-Mar-99	25	6	4	133	54	149	4823	422
18-Mar-99	62	19	2	17	20	87	2693	321
19-Mar-99	76	17	0	74	22	199	3035	499
23-Mar-99	72	24	2	78	20	445	2356	354
25-Mar-99	53	26	0	2	62	42	766	429
30-Mar-99	66	39	0	57	34	456	5367	738
1-Apr-99	61	25	2	33	412	178	3058	621
6-Apr-99	102	41	0	39	25	445	701	1131
9-Apr-99	103	20	3	96	29	208	907	682
14-Apr-99	47	30	5	2	23	420	602	562
17-Apr-99	22	9	0	5	18	409	4638	629
20-Apr-99	336	35	69	608	201	470	3116	693
23-Apr-99	47	5	6	15	25	147	386	467
26-Apr-99	270	83	42	396	276	583	2276	552
1-May-99	296	202	37	820	208	938	5853	812
4-May-99	307	377	29	530	156	890	2549	922
7-May-99	243	374	40	406	115	943	1401	380
10-May-99	245	296	56	180	103	1434	504	631
14-May-99	189	408	43	246	56	1483	408	416
18-May-99	150	80	39	136	34	567	543	920
22-May-99	155	168	54	188	21	603	377	1276
25-May-99	131	124	38	312	29	1154	435	1187
29-May-99	153	134	51	225	28	781	521	1654
31-May-99	130	254	52	216	36	990	990	1330
5-Jun-99	173	303	40	341	27	662	950	1963
7-Jun-99	126	252	51	207	34	564	1815	1161
12-Jun-99	129	244	73	163	20	1088	1875	1484
14-Jun-99	115	371	59	156	20	2174	1125	1233
19-Jun-99	108	279	138	116	21	1330	4380	1046
22-Jun-99	43	260	82	108	24	2490	3040	1176
25-Jun-99	41	319	77	95	22	2558	4088	1156
29-Jun-99	47	168	19	64	14	728	3128	789
4-Jul-99	39	200	47	76	14	1363	4168	1035
6-Jul-99	40	205	34	76	13	1842	3797	749
9-Jul-99	48	186	106	92	14	2481	1961	1198
12-Jul-99	47	174	37	79	17	2263	4240	1590
14-Jul-99	33	100	61	162	10	1444	2266	964
16-Jul-99	48	238	83	71	12	2059	3940	1252
20-Jul-99	38	372	118	115	11	2075	3006	842
23-Jul-99	74	312	52	108	6	2416	1658	701
27-Jul-99	65	488	113	179	11	2532	1957	609
3-Aug-99	169	487	216	280	10	2539	2652	332
6-Aug-99	210	315	416	266	12	2603	2320	183
10-Aug-99	132	481	535	692	13	3143	1883	235
13-Aug-99	190	161	456	826	10	2598	1306	255

**Table C**

**Days the site visited, the number of species seen together with the number of birds seen**

During this year I did not record the number of hours; all I have is an estimate of at least 1,000 hours for the year.

<b>Date</b>	<b>Total species</b>	<b>Number of birds</b>
8.15.98	60	6,991
9.2.98	62	11,728
9.11.98	62	10,559
9.17.98	64	11,987
9.30.98	62	5,833
10.6.98	54	3,527
10.16.98	71	15,427
10.21.98	78	17,723
10.29.98	83	20,129
11.2.98	88	29,286
11.6.98	97	25,565
11.11.98	102	28,910
11.13.98	106	27,037
11.18.98	107	34,097
11.20.98	77	5,526
11.25.98	112	26,202
11.30.98	118	28,903
12.3.98	120	33,313
12.4.98	40	4,398
12.8.98	118	41,615

<b>Date</b>	<b>Total species</b>	<b>Number of birds</b>
12.11.98	104	32,318
12.16.98	120	31,259
12.18.98	86	28,548
12.20.98	134	27,648
12.28.98	110	27,343
12.31.98	121	24,468
1.1.99	119	22,067
1.7.99	120	19,527
1.8.99	113	18,218
1.11.99	89	10,846
1.12.99	128	27,532
1.15.99	129	30,426
1.19.99	122	30,827
1.27.99	125	30,808
1.29.99	126	31,999
2.3.99	118	24,765
2.5.99	126	28,904
2.9.99	117	22,369
2.10.99	124	18,550
2.17.99	117	10,685
3.7.99	52	1,134
3.11.99	71	4,408
3.13.99	74	1,512
3.16.99	80	5,616
3.18.99	75	3,221
3.19.99	80	3,922
3.23.99	73	3,351
3.25.99	73	1,380
3.30.99	78	6,757
4.1.99	77	4,390
4.6.99	77	2,484
4.9.99	74	2,048
4.14.99	72	1,691
4.17.99	83	5,730
4.20.99	120	5,528
4.23.99	74	1,098
4.26.99	103	4,478
5.1.99	106	9,166

<b>Date</b>	<b>Total species</b>	<b>Number of birds</b>
5.4.99	106	5,760
5.7.99	96	3,902
5.10.99	100	3,449
5.14.99	88	3,249
5.18.99	86	2,469
5.22.99	79	2,842
5.25.99	78	3,410
5.29.99	80	3,547
5.31.99	80	3,998
6.5.99	84	4,459
6.7.99	79	4,210
6.12.99	77	5,076
6.14.99	76	5,253
6.19.99	68	7,418
6.22.99	74	7,123
6.25.99	78	8,356
6.29.99	72	4,957
7.4.99	75	6,942
7.6.99	75	6,756
7.9.99	64	6,086
7.12.99	74	8,447
7.14.99	71	5,040
7.16.99	75	7,703
7.20.99	79	6,577
7.23.99	82	5,327
7.27.99	83	5,954
8.3.99	87	6,685
8.6.99	85	6,325
8.10.99	86	7,114
8.13.99	80	5,802

Total days = 88      Total hours = 1,000 plus

Table D which follows deals with all the species seen during the first five years and again during the first 14 years. It seems important to show that although the list is long with some exceptional records the amount of fieldwork needed to find these birds was also extensive. I am therefore including below a summary of the number of days the site visited and the number of hours spent on fieldwork for each of the 14 years.

<b>Survey Year</b>	<b>No. visits</b>	<b>Total visits</b>	<b>No. hours</b>	<b>Total hours</b>
8.15.98-8.14.99	88	88	1,000	1,000
8.15.99-8.14.00	104	192	1,207	2,207
8.15.00-8.14.01	104	296	1,328	3,535
8.15.01-8.14.02	104	400	1,345	4,880
8.15.02-8.14.03	105	505	1,367	6,247
8.15.03-8.14.04	104	609	1,380	7,627
8.15.04-8.14.05	94	703	1,261	8,888
8.15.05-8.14.06	131	834	1,629	10,517
8.15.06-8.14.07	147	981	1,803	12,320
8.15.07-8.14.08	152	1,133	1,801	14,121
8.15.08-8.14.09	157	1,290	1,829	15,950
8.15.09-8.14.10	155	1,445	1,806	17,756
8.15.10-8.14.11	155	1,660	1,822	19,578
8.15.11-8.14.12	153	1,753	1,558	21,136

**TABLE D****Systematic List of all species seen August 15, 1998 to August 14, 2012.**

This list covers all the species seen during the first 14 years of the survey. As well as listing the species details are given of the highest daily count for each species together with the date on which the high count occurred to August 14, 2003 and to August 14, 2012. When the same high count occurred on more than one date only the first is given. I will be including this double table in Reports two to five.

Species	Highest count to 8.14.03	Date of high count to 8.14.03	Highest Count to 8.14.12	Date of high count to 8.14.12
Pacific Loon			1	12.11.05
Common Loon	1	11.18.01	3	12.8.06
Pied-billed Grebe	750	11.18.98	945	11.26.10
Horned Grebe	3	11.11.98	4	12.21.11
Red-necked Grebe			1	11.24.06
Eared Grebe	4	1.1.99	4	1.1.99
Sooty Shearwater			1	8.15.04
American White Pelican	4,370	1.29.99	4,370	1.29.99
Brown Pelican	3	3.24.03	6	4.30.05
Neotropic Cormorant			1	6.3.09
Double-crested Cormorant	828	3.25.01	7,800	2.22.04
Anhinga	68	9.3.00	873	7.2.10
American Bittern	17	3.26.03	105	12.30.09
Least Bittern	17	5.12.03	76	7.9.08
Gray Heron			1	12.17.03
Great Blue Heron	395	12.3.98	395	12.3.98
Great White Heron	1	6.1.03	3	6.22.08

Species	Highest count to 8.14.03	Date of high count to 8.14.03	Highest Count to 8.14.12	Date of high count to 8.14.12
Great Egret	1,950	11.6.98	2,390	12.5.04
Snowy Egret	322	6.12.02	2,585	11.7.04
Little Blue Heron	163	10.24.01	735	12.1.04
Tricolored Heron	93	7.19.03	466	7.13.11
Reddish Egret	1	3.21.00	1	3.21.00
Cattle Egret	5,375	10.13.02	6,400	9.16.04
Green Heron	109	6.29.03	242	8.23.08
Black-crowned Night-Heron	89	1.27.99	241	3.20.11
Yellow-crowned Night-Heron	16	6.12.02	28	4.24.11
White Ibis	1,370	6.23.03	11,210	6.17.11
Glossy Ibis	1,380	7.19.03	3,825	12.1.04
White-faced Ibis	2	11.11.01	3	3.5.10
Roseate Spoonbill	30	6.26.02	139	10.2.11
Wood Stork	1,130	11.18.98	1,130	11.18.98
Black Vulture	127	7.10.02	1,340	2.28.07
Turkey Vulture	511	10.29.99	2,800	2.11.09
White-faced Whistling-Duck	1	5.7.00	1	5.7.00
Black-bellied Whistling-Duck	6	7.19.03	1,660	2.5.10
Fulvous Whistling-Duck	366	8.10.99	840	10.22.03
Greater White-fronted Goose	3	10.28.01	3	10.28.01
Snow Goose	90	12.18.98	90	12.18.98
Ross's Goose	2	12.7.98	2	12.7.98
Canada Goose	3	10.29.98	3	10.29.98
Egyptian Goose			3	7.23.06
Black Swan	1	6.10.02	1	6.10.02
Muscovy Duck	1	6.5.99	4	11.18.05
Wood Duck	53	9.10.99	316	9.9.11
Gadwall	222	11.22.99	812	12.16.11
Eurasian Wigeon			1	11.19.10
American Wigeon	186	12.18.98	186	12.18.98
American Black Duck	3	12.7.98	6	12.26.10
Mallard	40	11.19.99	103	10.24.04
Mottled Duck	197	8.20.99	397	9.2.11
Blue-winged Teal	10,500	11.2.98	10,500	11.2.98
Cinnamon Teal	3	1.19.99	3	1.19.99
Northern Shoveler	770	1.27.99	770	1.27.99
Northern Pintail	420	12.16.98	420	12.16.98
"Common Teal"			1	1.22.06

Species	Highest count to 8.14.03	Date of high count to 8.14.03	Highest Count to 8.14.12	Date of high count to 8.14.12
Green-winged Teal	12,565	12.18.98	12,565	12.18.98
Canvasback	5	12.7.98	5	12.7.98
Redhead	18	1.3.02	18	1.3.02
Ring-necked Duck	11,900	12.3.98	11,900	12.3.98
Greater Scaup	5	12.8.98	22	12.19.10
Lesser Scaup	279	1.12.99	3,300	1.23.09
Black Scoter			2	11.22.06
Bufflehead	9	12.30.99	34	12.31.10
Common Goldeneye	1	12.30.02	2	11.22.05
Hooded Merganser	100	1.12.99	100	1.12.99
Red-breasted Merganser	6	1.7.99	14	3.15.09
Ruddy Duck	3,650	3.12.03	34,000	1.4.06
Osprey	57	4.24.03	201	7.11.12
Swallow-tailed Kite	556	7.25.03	1,642	8.3.12
White-tailed Kite	1	6.30.00	1	6.30.00
Snail Kite	1	7.16.99	1	7.16.99
Mississippi Kite			1	5.5.04
Bald Eagle	20	4.3.02	109	11.13.05
Northern Harrier	223	1.14.00	305	12.12.04
Sharp-shinned Hawk	6	8.6.99	26	11.30.07
Cooper's Hawk	21	8.7.02	45	8.25.06
Red-shouldered Hawk	28	1.7.00	133	9.29.06
Broad-winged Hawk	1	10.6.98	3	9.29.06
Short-tailed Hawk	1	9.30.99	1	9.30.99
Swainson's Hawk	1	12.27.99	2	11.11.07
Red-tailed Hawk	94	3.14.00	175	11.30.07
Rough-legged Hawk	3	2.23.00	3	2.23.00
Golden Eagle	1	1.8.99	1	1.8.99
Crested Caracara	1	7.27.99	1	7.27.99
Eurasian Kestrel	1	2.26.03	1	2.26.03
American Kestrel	28	10.26.99	38	11.5.03
Merlin	3	10.8.99	8	9.30.07
Peregrine Falcon	4	10.12.99	4	10.12.99
Ring-necked Pheasant	1	5.6.02	1	5.6.02
Common Peafowl			1	9.10.06
Wild Turkey	1	6.6.00	13	10.21.09
Gray Partridge			2	9.14.03
Northern Bobwhite	69	7.4.03	105	6.1.08

Species	Highest count to 8.14.03	Date of high count to 8.14.03	Highest Count to 8.14.12	Date of high count to 8.14.12
Yellow Rail	1	3.9.03	1	3.9.03
Black Rail	1	6.4.03	1	6.4.03
Clapper Rail			1	11.28.03
King Rail	14	1.9.03	523	8.23.06
Virginia Rail	3	1.5.03	9	2.16.05
Sora	109	12.30.02	415	11.28.08
Purple Gallinule	58	4.21.03	97	4.25.04
Common Gallinule	1,890	10.21.98	6,600	9.18.11
American Coot	16,720	11.18.98	24,900	11.7.10
Limpkin	5	5.14.01	6	3.8.09
Sandhill Crane	104	11.25.01	375	1.16.09
Whooping Crane	8	3.21.00	8	3.21.00
Black-bellied Plover	346	12.3.98	346	12.3.98
American Golden-Plover	6	10.26.99	6	10.26.99
Wilson's Plover			1	9.10.08
Semipalmated Plover	134	5.15.02	134	5.15.02
Piping Plover	1	5.20.02	1	5.20.02
Killdeer	1,935	2.9.03	2,815	1.2.09
Black-necked Stilt	368	9.17.98	432	8.4.10
American Avocet	75	1.11.99	75	1.11.99
Greater Yellowlegs	415	12.16.98	415	12.16.98
Lesser Yellowlegs	1,195	12.16.98	1,195	12.16.98
Solitary Sandpiper	8	4.26.01	76	5.7.06
Willet	8	7.27.99	8	7.27.99
Spotted Sandpiper	13	5.15.02	13	5.15.02
Upland Sandpiper	6	4.20.99	6	4.20.99
Whimbrel	1	5.1.99	2	4.30.08
Long-billed Curlew	1	6.25.99	1	6.25.99
Hudsonian Godwit			1	6.22.11
Marbled Godwit	2	11.25.98	3	8.19.11
Ruddy Turnstone	8	5.6.02	8	5.6.02
Red Knot	12	5.14.01	12	5.14.01
Sanderling	5	5.20.02	5	5.20.02
Semipalmated Sandpiper	1,540	5.23.02	1,540	5.23.02
Western Sandpiper	965	9.11.98	1,250	9.7.11
Least Sandpiper	2,450	12.31.98	2,450	12.31.98
White-rumped Sandpiper	37	5.23.02	118	5.21.11
Baird's Sandpiper	2	8.6.00	2	8.6.00

Species	Highest count to 8.14.03	Date of high count to 8.14.03	Highest Count to 8.14.12	Date of high count to 8.14.12
Pectoral Sandpiper	690	9.16.01	965	9.12.08
Sharp-tailed Sandpiper	1	9.26.02	1	9.26.02
Dunlin	210	11.13.98	210	11.13.98
Curlew Sandpiper	1	9.2.98	1	9.2.98
Stilt Sandpiper	490	10.21.98	490	10.21.98
Buff-breasted Sandpiper	23	9.11.98	23	9.11.98
Ruff	2	11.25.98	2	11.25.98
Short-billed Dowitcher	670	10.29.98	670	10.29.98
Long-billed Dowitcher	1,890	1.12.99	1,890	1.12.99
Wilson's Snipe	898	12.28.98	1,090	1.4.04
American Woodcock	7	1.13.02	12	12.7.05
Wilson's Phalarope	21	9.2.98	21	9.2.98
Red-necked Phalarope	1	9.23.99	5	8.22.08
Red Phalarope	1	9.16.01	1	9.16.01
Pomarine Jaeger	2	5.6.01	2	5.6.01
Parasitic Jaeger			1	8.20.08
Laughing Gull	114	4.11.01	174	2.14.10
Franklin's Gull	21	12.4.98	21	12.4.98
Little Gull	1	1.7.01	1	1.7.01
Bonaparte's Gull	404	1.10.02	1,013	1.17.10
Ring-billed Gull	4,600	12.21.02	18,000	2.8.05
Herring Gull	88	2.3.99	88	2.3.99
Thayer's Gull			1	3.31.04
Lesser Black-backed Gull	2	12.11.98	2	12.11.98
Great Black-backed Gull			1	1.27.06
Gull-billed Tern	4	4.20.99	4	4.20.99
Caspian Tern	208	2.10.99	208	2.10.99
Royal Tern	1	12.16.98	8	8.22.08
Sandwich Tern	1	7.1.01	4	5.7.07
Roseate Tern			1	5.20.08
Common Tern	5	4.7.02	103	10.31.07
Arctic Tern	2	5.23.02	3	10.31.07
Forster's Tern	500	9.2.98	611	1.16.08
Least Tern	54	7.19.00	92	6.10.09
Bridled Tern			6	8.20.08
Sooty Tern			16	8.22.08
Black Tern	500	9.2.98	532	8.24.08
Black Skimmer	120	2.3.99	120	2.3.99

Species	Highest count to 8.14.03	Date of high count to 8.14.03	Highest Count to 8.14.12	Date of high count to 8.14.12
Rock Pigeon	106	6.25.99	106	6.25.99
Eurasian Collared-Dove	36	6.7.99	36	6.7.99
Diamond Dove			1	8.6.10
White-winged Dove	24	9.19.01	35	8.12.09
Mourning Dove	2,120	7.8.01	2,370	7.30.08
Common Ground-Dove	111	5.21.03	111	5.21.03
Budgerigar	1	7.23.99	1	7.23.99
Cockatiel	1	9.2.02	1	9.2.02
Black-billed Cuckoo	1	5.10.99	1	5.10.99
Yellow-billed Cuckoo	23	5.4.03	52	6.8.06
Smooth-billed Ani	1	6.26.03	1	6.26.03
Groove-billed Ani	2	10.20.02	6	2.6.05
Barn Owl	10	2.7.01	25	12.22.06
Eastern Screech-Owl	2	12.20.98	3	2.1.09
Great Horned Owl	4	8.27.00	10	1.30.05
Burrowing Owl	1	6.18.03	1	6.18.03
Barred Owl	4	12.14.02	11	10.8.06
Long-eared Owl			1	1.11.04
Short-eared Owl	3	12.7.99	9	12.29.06
Northern Saw-whet Owl	1	11.5.02	1	11.5.02
Lesser Nighthawk	1	12.16.98	1	12.16.98
Common Nighthawk	1,233	9.11.02	1,233	9.11.02
Chuck's-will's-widow	13	6.4.03	16	5.23.04
Eastern Whip-poor-will	3	9.13.00	7	3.15.09
Chimney Swift	1,510	10.2.99	8,100	9.24.08
Ruby-throated Hummingbird	2	10.13.02	2	10.13.02
Black-chinned Hummingbird	1	12.19.99	1	12.19.99
Belted Kingfisher	19	11.9.02	45	11.1.09
Red-headed Woodpecker	1	12.16.98	3	9.10.03
Red-bellied Woodpecker	48	4.27.03	91	10.1.06
Yellow-bellied Sapsucker	4	10.23.99	10	12.13.06
Downy Woodpecker	19	9.19.00	49	3.28.07
Hairy Woodpecker	1	3.13.99	1	3.13.99
Red-cockaded Woodpecker	1	6.23.03	1	6.23.03
Northern Flicker	8	10.19.99	16	10.8.06
Pileated Woodpecker	8	1.14.01	12	11.4.07
Olive-sided Flycatcher			1	4.20.05
Eastern Wood-Pewee	6	9.24.00	7	9.27.06

Species	Highest count to 8.14.03	Date of high count to 8.14.03	Highest Count to 8.14.12	Date of high count to 8.14.12
Yellow-bellied Flycatcher			1	10.11.04
Acadian Flycatcher	2	9.11.02	4	9.10.03
Alder Flycatcher			1	9.14.03
Willow Flycatcher	1	7.27.99	1	7.27.99
Least Flycatcher	8	12.2.02	23	12.19.07
Eastern Phoebe	257	11.5.00	416	10.26.03
Vermillion Flycatcher	2	3.4.02	2	3.4.02
Ash-throated Flycatcher	19	1.20.02	16	12.14.07
Great Crested Flycatcher	18	7.3.02	45	5.16.07
Brown-crested Flycatcher	1	1.14.01	2	3.1.06
Tropical Kingbird	1	12.9.01	1	12.9.01
Cassin's Kingbird	1	12.4.99	2	2.29.04
Western Kingbird	72	1.27.02	72	1.27.02
Eastern Kingbird	347	8.31.99	347	8.31.99
Gray Kingbird	2	10.21.98	2	10.21.98
Scissor-tailed Flycatcher	5	3.31.02	8	12.11.05
Fork-tailed Flycatcher	1	7.23.00	1	7.23.00
Loggerhead Shrike	18	2.3.02	18	2.3.02
White-eyed Vireo	27	10.5.00	74	10.5.08
Bell's Vireo	1	2.6.00	1	2.6.00
Yellow-throated Vireo	2	4.3.02	2	4.3.02
Blue-headed Vireo	4	12.2.02	19	11.23.08
Philadelphia Vireo	1	10.14.99	1	10.14.99
Red-eyed Vireo	17	9.21.00	17	9.21.00
Black-whiskered Vireo			1	9.10.06
Blue Jay	46	10.5.00	180	10.17.07
Florida Scrub-Jay	2	4.17.02	2	4.17.02
American Crow	6	7.4.03	38	11.9.08
Fish Crow	4,400	1.27.02	4,400	1.27.02
Purple Martin	1,935	6.19.99	2,850	6.20.04
Tree Swallow	7,120	3.9.03	71,000	3.10.06
Northern Rough-winged Swallow	7	4.17.99	28	10.11.04
Bank Swallow	145	9.2.01	265	8.20.08
Cliff Swallow	68	9.25.99	71	10.1.06
Cave Swallow	1	3.18.01	14	10.28.05
Barn Swallow	2,200	4.17.99	9,300	8.22.08
Carolina Chickadee	1	11.9.99	7	5.3.09
Tufted Titmouse	6	7.2.03	16	9.15.10

Species	Highest count to 8.14.03	Date of high count to 8.14.03	Highest Count to 8.14.12	Date of high count to 8.14.12
Brown-headed Nuthatch			1	12.17.03
Carolina Wren	103	4.24.03	103	4.24.03
Bewick's Wren	1	2.25.00	1	2.25.00
House Wren	674	11.5.00	674	11.5.00
Winter Wren	1	1.19.03	1	1.19.03
Sedge Wren	108	11.26.00	108	11.26.00
Marsh Wren	126	11.5.00	211	11.9.05
Golden-crowned Kinglet	1	12.7.99	3	11.17.06
Ruby-crowned Kinglet	23	11.24.02	67	11.17.06
Blue-gray Gnatcatcher	96	10.5.00	173	12.7.07
Eastern Bluebird	6	12.21.02	6	12.21.02
Veery	12	10.2.02	12	10.2.02
Gray-cheeked Thrush	1	10.6.99	6	10.15.08
Bicknell's Thrush	1	5.27.00	1	5.27.00
Swainson's Thrush	36	9.26.01	36	9.26.01
Hermit Thrush	2	11.17.02	9	12.12.04
Wood Thrush	1	10.19.99	1	10.19.99
American Robin	3100	3.2.03	240,000	12.29.06
Gray Catbird	270	10.13.02	713	10.17.08
Northern Mockingbird	102	7.6.03	126	10.8.06
Brown Thrasher	23	10.7.01	74	10.8.08
European Starling	860	7.8.02	2,040	7.13.07
Common Myna			1	7.11.05
American Pipit	570	12.8.98	820	1.2.09
Cedar Waxwing	615	4.6.99	2,240	4.8.07
Blue-winged Warbler	2	9.3.00	2	9.3.00
Tennessee Warbler	7	9.19.00	29	10.21.04
Orange-crowned Warbler	36	12.15.00	36	12.15.00
Nashville Warbler	1	1.11.99	1	1.11.99
Northern Parula	15	3.5.03	52	3.18.05
Yellow Warbler	119	8.28.02	232	9.15.06
Chestnut-sided Warbler	6	9.21.00	6	9.21.00
Magnolia Warbler	2	10.5.00	4	10.17.09
Cape May Warbler	13	4.17.99	16	4.30.08
Black-throated Blue Warbler	5	5.1.99	15	4.30.08
Yellow-rumped Warbler	8,470	3.5.03	10,220	2.23.07
Black-throated Gray Warbler			1	9.15.10
Black-throated Green Warbler	2	12.20.98	4	10.15.10

Species	Highest count to 8.14.03	Date of high count to 8.14.03	Highest Count to 8.14.12	Date of high count to 8.14.12
Blackburnian Warbler	4	9.19.00	4	9.19.00
Yellow-throated Warbler	2	9.19.00	8	9.26.07
Pine Warbler	6	10.29.99	24	12.9.11
Prairie Warbler	39	9.9.01	83	9.10.03
Palm Warbler	3,,120	2.26.03	3,120	2.26.03
Bay-breasted Warbler	1	10.19.99	2	11.2.07
Blackpoll Warbler	18	5.1.02	73	5.5.06
Cerulean Warbler	2	9.21.00	2	9.21.00
Black-and-white Warbler	6	4.17.99	10	9.22.04
American Redstart	48	5.14.01	48	5.14.01
Prothonotary Warbler	2	4.14.02	2	4.14.02
Worm-eating Warbler	1	4.17.99	2	9.22.04
Swainson's Warbler	1	8.16.00	1	8.16.00
Ovenbird	22	10.2.02	92	9.27.06
Northern Waterthrush	102	9.26.02	188	9.28.04
Louisiana Waterthrush	34	8.16.00	98	8.27.10
Kentucky Warbler	1	4.14.99	1	4.14.99
Common Yellowthroat	321	10.2.02	856	9.22.04
Hooded Warbler	2	4.17.99	2	4.17.99
Wilson's Warbler	1	2.8.00	2	1.26.05
Canada Warbler			1	8.24.03
Yellow-breasted Chat	30	6.11.03	41	5.23.04
Summer Tanager	2	10.19.99	2	10.19.99
Scarlet Tanager	1	10.2.99	2	10.10.07
Western Tanager			1	12.9.07
Eastern Towhee	228	7.30.03	228	7.30.03
Bachman's Sparrow			1	1.16.05
Chipping Sparrow	4	4.14.02	19	12.17.08
Clay-colored Sparrow	46	2.3.99	46	2.3.99
Field Sparrow	12	3.14.02	32	1.30.09
Vesper Sparrow	19	1.7.03	45	1.16.09
Lark Sparrow	1	2.9.99	1	2.9.99
Savannah Sparrow	860	12.8.98	860	12.8.98
Grasshopper Sparrow	12	2.17.99	12	2.17.99
Henslow's Sparrow	1	11.20.98	1	11.20.98
LeConte's Sparrow	1	12.16.98	1	12.16.98
Nelson's Sparrow	1	11.5.00	1	11.5.00
Fox Sparrow	1	2.17.99	1	2.17.99

Species	Highest count to 8.14.03	Date of high count to 8.14.03	Highest Count to 8.14.12	Date of high count to 8.14.12
Song Sparrow	16	12.16.02	16	12.16.02
Lincoln's Sparrow	5	11.17.02	5	11.17.02
Swamp Sparrow	725	12.2.02	1,126	11.21.04
White-throated Sparrow	4	2.25.01	7	3.4.09
White-crowned Sparrow	51	2.3.99	51	2.3.99
Dark-eyed Junco			1	12.17.03
Lapland Longspur	1	10.16.98	1	10.16.98
Northern Cardinal	273	5.4.03	344	4.9.08
Rose-breasted Grosbeak	1	4.30.00	3	10.21.09
Blue Grosbeak	39	7.4.00	72	10.1.06
Lazuli Bunting	1	1.7.02	1	1.7.02
Indigo Bunting	281	10.16.02	840	10.26.07
Painted Bunting	9	5.9.02	12	5.26.04
Dickcissel	11	6.29.99	143	5.22.05
Bobolink	7,060	5.1.02	16,550	4.30.08
Red-winged Blackbird	27,000	8.13.03	303,000	7.17.05
Eastern Meadowlark	62	1.24.02	74	2.27.09
Yellow-headed Blackbird	5	12.31.98	5	12.31.98
Rusty Blackbird	13	12.3.98	13	12.3.98
Brewer's Blackbird	1	12.19.01	1	12.19.01
Common Grackle	960	11.17.02	117,000	7.17.05
Boat-tailed Grackle	5,510	8.13.03	167,000	7.14.05
Shiny Cowbird	2	7.15.01	13	7.3.05
Bronzed Cowbird	1	11.23.98	2	12.13.09
Brown-headed Cowbird	3,150	2.5.99	3,600	2.27.09
Orchard Oriole	14	6.26.03	28	6.19.09
Baltimore Oriole	5	12.11.99	7	9.29.03
Bullock's Oriole	1	1.22.03	1	1.22.03
Purple Finch			1	11.26.06
House Finch			27	7.11.12
Pine Siskin	1	4.30.03	2	12.26.08
American Goldfinch	62	11.24.02	196	2.20.08
House Sparrow	7	12.8.98	7	12.8.98
Orange Bishop	1	4.6.03	1	4.6.03
Bronze Mannikin	1	11.18.01	1	11.18.01
Zebra Finch			1	9.7.05
Pin-tailed Whydah			2	9.22.05

That is a total of 320 species to August 14, 2003 and 357 species to August 14, 2012.

The following seven species were recorded by others at Zellwood prior to the start of the survey on August 15, 1998 and they had not been seen since. One of these species has now been seen in 2011, that is the Hudsonian Godwit, it was seen on June 22, 2011.

Brant	1	10.24.81
White-cheeked Pintail	1	8.18.73
Ferruginous Hawk	2	12.19.83
Southern Lapwing	1	7.23.61
Hudsonian Godwit	32	9.3.86
Brown Noddy	1	9.10.65
Golden-winged Warbler	1	8.17.74

### SUMMARY

<b>Total species August 15, 1998 to August 14, 2003</b>	<b>320</b>
Additional species pre-survey	7
<b>Grand Total</b>	<b>327</b>
Less exotics	8
<b>Acceptable Total</b>	<b>319</b>
<b>Total species August 15, 1998 to August 14, 2012</b>	<b>357</b>
Additional species pre-survey	6
<b>Grand Total</b>	<b>363</b>
Less exotics	15
<b>Acceptable Total</b>	<b>348</b>

## Table E

### **This table looks at the effects of deep flooding versus shallow flooding of the fields.**

During the fall of 1998 and the winter of 1998/1999 whilst some 5,000 acres of Unit Two were flooded I was able to observe the habitat preferences of the waders, wildfowl, shorebirds, gulls and terns. Most of the fields were shallow flooded initially with the exception of two fields down the Roach Road extension. Later when the water was moved to the south and then out into Lake Apopka I was able to see the effect that action had on the various populations. In Table C I broke down the habitat preferences for all the species, not just the ones I mentioned above.

The following is an attempt to calculate just what would happen to the birdlife if the fields had been deep flooded instead of shallow flooded. By deep flooding I mean a field that is flooded to its banks with a water depth of say four feet. On the other hand a shallow flooded field would have some deeper water (two plus feet) but consist mainly of shallow water with areas of mud either at the edge or in ridges out in the middle of a field complex.

I tried to estimate the numbers of birds that would choose a shallow flooded field but that would remain if the fields were deep flooded. I believe that some 10% of the surface feeding ducks and 5% of the herons and egrets would remain. I would expect all the shorebirds to leave if the water levels rose to the banks. Unless the gulls and terns could find an alternative loafing/roosting area they would also depart.

To represent the potential impact of deep flooding I have taken a selection of dates during the period October 1998 to January 1999 and tried to estimate the numbers that would have used the fields under these two scenarios.

<b>Date</b>	<b>Deep Water</b>	<b>Shallow Water</b>	<b>% remaining if the fields deep flooded</b>
	Estimated # of birds	Actual # of birds	
10.16.1998	4,243	12,295	34%
11.2.1998	8,554	21,577	39%
11.18.1998	16,912	22,137	76%
12.3.1998	12,240	18,381	66%
12.18.1998	5,045	17,590	28%
1.1.1999	3,503	11,408	30%
1.19.1999	3,400	13,445	25%
1.29.1999	5,031	15,853	31%

Note: The peak on November 18 relates to the passage of American Coots and the December 3 peak relates to the passage of the Ring-necked Ducks.

### **Summary**

Apart from those two peaks caused by the arrival of large numbers of migrant ducks and coots that preferred deeper water it is clear that deep water would not be as beneficial to birds as the shallow flooding actually was.

I cannot say how many more diving ducks, coots and grebes would have been attracted to the area if it had been deep flooded but it is unlikely to adjust the figures much. The figures for shallow flooding are also lower than they might have been because of the frequently shifting areas under water.

There are two problems that I cannot address. If the area was deep flooded the question of plant growth comes up, for example water hyacinth or cattails. Both of the plants would change the bird populations dramatically. If there was no significant areas of open water the ducks, coots and grebes would for the most part leave. Cattails would increase the populations of Least Bitterns and Red-winged Blackbirds. The hyacinth would attract Little Blue Herons and Purple Gallinules. The other problem relates to shallow water, I believe that in order to keep an optimal habitat the water levels would need to be managed to a high degree in order to keep areas of mud. Plants would otherwise take over.

## Table F

### **An estimate of the total numbers of waterfowl, shorebirds and allies using the flooded fields of Unit Two in the fall of 1998 and the winter of 1998/1999.**

There have been many attempts to estimate the numbers of water birds, shorebirds and their allies using a particular site. I do not know of any system that has been developed for wildfowl but there is one for shorebirds.

Attempts have been made to establish how long individuals stop off passage. Most systems have their problems. The best system for shorebirds appears to be combination of weekly counts together with the netting of as many birds as possible. These birds are then color dyed and banded with a different color for each week of trapping.

A study of the shorebirds on the Atlantic coast of Morocco in March 1981 by M.Kersten and C.J.Smit gives some help. They trapped over 600 shorebirds and color dyed them on the under-parts using a different color for each week. They also counted the total population and counted separately all the color banded birds each week.

The results indicated that the Ringed Plover *Charadrius hiaticula* stopped off passage for 6.3 days. The Redshank *Tringa totanus* stopped off passage for 8.5 days. The Dunlin *Calidris alpina* stopped off passage for 12.2 days giving an overall average of nine days for the three species. The first two species are the European equivalents of the Semipalmated Plover and the Lesser Yellowlegs, the Dunlin occurs on both continents.

It is extremely rough but I treat those species that did not have a separate peak in the fall as being winter visitors only. For these species I am only using the highest count, this will not be totally true as some will certainly leave and others will arrive to take their place. I do not know how to identify and quantify those individuals. This means that more birds will have used the area than I have allowed for, the totals will be under-estimates.

For those species that only occurred on passage and those that had a separate peak or peaks in the fall it is possible to get an idea of the numbers passing through the area. I have treated all these migrant shorebirds as being off passage for ten days which is a longer period than that found above. It is likely that the waterfowl follow a similar pattern but it is probably with longer stopovers. I have therefore had to estimate numbers much more on the rise and fall irrespective of the interval.

**TABLE A Estimated waterfowl numbers during the fall and the winter.**

Species	Est.'s. total fall passage	Peak winter count	Totals
Pied-billed Grebe		620	620
Horned Grebe		3	3
Eared Grebe		4	4
Am. White Pelican	5,376	4,370	9,746
Double-crested Cormorant	549	70	619
Fulvous Whistling-Duck		189	189
Snow Goose		90	90
Gadwall	46	89	135
American Wigeon	290	113	403
American Black Duck		3	3
Mallard		15	15
Mottled Duck	143	82	226
Blue-winged Teal	18,330	4,300	22,630
Northern Shoveler	500	770	1,270
Northern Pintail	400	260	660
Green-winged Teal	12,015	7,120	19,135
Canvasback		5	5
Redhead		8	8
Ring-necked Duck	11,910	103	12,013
Greater Scaup		5	5
Lesser Scaup	128	279	407
Bufflehead		5	5
Hooded Merganser		100	100
Red-breasted Merganser		6	6
Ruddy Duck	883	377	1,260
Common Moorhen	2,945	137	3,082
American Coot	19,635	3,055	22,690
<b>Totals</b>	<b>73,150</b>	<b>22,178</b>	<b>95,328</b>

**TABLE B Estimated shorebird passage during the fall and the winter.**

Species	Estimated fall passage	Peak winter count	Totals
Black-bellied Plover	1,180	262	1,442
American Golden Plover	7		7
Semipalmated Plover	140		140
Killdeer	1,275	615	1,890
Black-necked Stilt	738	10	748
American Avocet		75	75
Greater Yellowlegs	1,544	295	1,839
Lesser Yellowlegs	5,267	720	5,987
Solitary Sandpiper	1		1
Willet	5		5
Spotted Sandpiper	3		3
Upland Sandpiper	2		2
Marbled Godwit		2	2
Ruddy Turnstone	3		3
Red Knot	2		2
Sanderling	3		3
Semipalmated Sandpiper	414		414
Western Sandpiper	1,462	95	1,557
Least Sandpiper	12,710	1,500	14,210
Pectoral Sandpiper	781	1	782
Dunlin	857	175	1,032
Stilt Sandpiper	1,572	156	1,728
Buff-breasted Sandpiper	23		23
Ruff		2	2
Short-billed Dowitcher	2,995		2,995
Long-billed Dowitcher		1,890	1,890
Wilson's Snipe	1,712	40	1752
Wilson's Phalarope	48		48
<b>Shorebird totals</b>	<b>32,744</b>	<b>5,838</b>	<b>38,582</b>

## TABLE C

**This is a summary of the numbers of waterfowl and shorebirds using the area in the fall of 1998 and the winter of 1998/1999.**

Species groups	Estimated passage	Peak winter count	Totals
Wildfowl etc	73,150	22,178	95,328
Shorebirds	32,744	5838	38,582
	<b>105,894</b>	<b>28,016</b>	<b>133,910</b>

Different breeding populations of a species may migrate at different times and for different distances. Adults also can migrate at different times from the juveniles. No attempt was made by me to age the birds. Some groups will leapfrog over others, for example more northerly populations may travel further and earlier than the more southerly breeding populations.

It is a complicated subject. The above totals are NOT FACTS, just my best estimates as to the number of birds using Zellwood during the fall of 1998 and the winter of 1998/1999.

### References:

P.R.Evans, J.D.Goss-Custard, W.G.Hale: Coastal Waders and Wildfowl in winter. 1984 Cambridge

M.Owen, G.Atkinson-Wiles, D.G.Salmon: Wildfowl in Great Britain 2<sup>nd</sup> Edn. 1986 Cambridge

A.J.Prater. Estuary Birds in Britain and Ireland 1981 Poyser

## **APPENDIX A**

### **Historical Bird Sightings at Zellwood**

I have decided because of space not to include these historical records. The full list can be seen in *Bird Migration a Florida Study* and in *Bird Migration a Second Florida Study*.

## APPENDIX B

### Field Descriptions

#### Long-billed Curlew (*Numenius americanus*)

On June 25 when I arrived at the Sod Farm I scanned the fields for any shorebirds and I quickly found this individual; it was hard to miss. I watched this bird feeding out in the fields through my Kowa telescope. This was a very, very large long-legged shorebird its overall color was buff. The underparts were a clear buff whilst the mantle and the wings were darker but with pale buff edges to the feathers. Apart from this overall buff color the bill was the most striking feature; this was exceptionally long and down curved. The legs were long and a gray color. Whilst I have seen countless Eurasian Curlews and Whimbrels I have only seen a few of these birds but they are so distinctive.

#### Lapland Longspur (*Calcarius lapponicus*)

This was the craziest of sightings. I was by the flooded fields of Roach Road when I spotted this bird feeding in the gravel and weeds by the side of the road. This is a species I saw frequently every fall in England but it was not one that I ever expected to see at Zellwood so it took me a little time to identify it. This was clearly a sparrow with its seed eating bill and it was probably similar in size to a White-crowned sparrow. There were two very striking features that led me to identify this bird as a Lapland Longspur. Firstly there was a strong chestnut patch on the hind neck and secondly there was dark gray mottling on the breast and flanks; the rest of the underparts being white. The upperparts were streaked, wings were long. Crown was streaked with a broad buff supercilium below. The ear coverts were lighter with a dark rear surround. Throat was white. This was all I noted.

**Table C**

**Days the site visited, the number of species seen together with the number of birds seen**

During this year I did not record the number of hours; all I have is an estimate of at least 1,000 hours for the year.

<b>Date</b>	<b>Total species</b>	<b>Number of birds</b>
8.15.98	60	6,991
9.2.98	62	11,728
9.11.98	62	10,559
9.17.98	64	11,987
9.30.98	62	5,833
10.6.98	54	3,527
10.16.98	71	15,427
10.21.98	78	17,723
10.29.98	83	20,129
11.2.98	88	29,286
11.6.98	97	25,565
11.11.98	102	28,910
11.13.98	106	27,037
11.18.98	107	34,097
11.20.98	77	5,526
11.25.98	112	26,202
11.30.98	118	28,903
12.3.98	120	33,313
12.4.98	40	4,398
12.8.98	118	41,615

<b>Date</b>	<b>Total species</b>	<b>Number of birds</b>
12.11.98	104	32,318
12.16.98	120	31,259
12.18.98	86	28,548
12.20.98	134	27,648
12.28.98	110	27,343
12.31.98	121	24,468
1.1.99	119	22,067
1.7.99	120	19,527
1.8.99	113	18,218
1.11.99	89	10,846
1.12.99	128	27,532
1.15.99	129	30,426
1.19.99	122	30,827
1.27.99	125	30,808
1.29.99	126	31,999
2.3.99	118	24,765
2.5.99	126	28,904
2.9.99	117	22,369
2.10.99	124	18,550
2.17.99	117	10,685
3.7.99	52	1,134
3.11.99	71	4,408
3.13.99	74	1,512
3.16.99	80	5,616
3.18.99	75	3,221
3.19.99	80	3,922
3.23.99	73	3,351
3.25.99	73	1,380
3.30.99	78	6,757
4.1.99	77	4,390
4.6.99	77	2,484
4.9.99	74	2,048
4.14.99	72	1,691
4.17.99	83	5,730
4.20.99	120	5,528
4.23.99	74	1,098
4.26.99	103	4,478
5.1.99	106	9,166

<b>Date</b>	<b>Total species</b>	<b>Number of birds</b>
5.4.99	106	5,760
5.7.99	96	3,902
5.10.99	100	3,449
5.14.99	88	3,249
5.18.99	86	2,469
5.22.99	79	2,842
5.25.99	78	3,410
5.29.99	80	3,547
5.31.99	80	3,998
6.5.99	84	4,459
6.7.99	79	4,210
6.12.99	77	5,076
6.14.99	76	5,253
6.19.99	68	7,418
6.22.99	74	7,123
6.25.99	78	8,356
6.29.99	72	4,957
7.4.99	75	6,942
7.6.99	75	6,756
7.9.99	64	6,086
7.12.99	74	8,447
7.14.99	71	5,040
7.16.99	75	7,703
7.20.99	79	6,577
7.23.99	82	5,327
7.27.99	83	5,954
8.3.99	87	6,685
8.6.99	85	6,325
8.10.99	86	7,114
8.13.99	80	5,802

Total days = 88      Total hours = 1,000 plus

Table D which follows deals with all the species seen during the first five years and again during the first 14 years. It seems important to show that although the list is long with some exceptional records the amount of fieldwork needed to find these birds was also extensive. I am therefore including below a summary of the number of days the site visited and the number of hours spent on fieldwork for each of the 14 years.

<b>Survey Year</b>	<b>No. visits</b>	<b>Total visits</b>	<b>No. hours</b>	<b>Total hours</b>
8.15.98-8.14.99	88	88	1,000	1,000
8.15.99-8.14.00	104	192	1,207	2,207
8.15.00-8.14.01	104	296	1,328	3,535
8.15.01-8.14.02	104	400	1,345	4,880
8.15.02-8.14.03	105	505	1,367	6,247
8.15.03-8.14.04	104	609	1,380	7,627
8.15.04-8.14.05	94	703	1,261	8,888
8.15.05-8.14.06	131	834	1,629	10,517
8.15.06-8.14.07	147	981	1,803	12,320
8.15.07-8.14.08	152	1,133	1,801	14,121
8.15.08-8.14.09	157	1,290	1,829	15,950
8.15.09-8.14.10	155	1,445	1,806	17,756
8.15.10-8.14.11	155	1,660	1,822	19,578
8.15.11-8.14.12	153	1,753	1,558	21,136

## TABLE D

### Systematic List of all species seen August 15, 1998 to August 14, 2012.

This list covers all the species seen during the first 14 years of the survey. As well as listing the species details are given of the highest daily count for each species together with the date on which the high count occurred to August 14, 2003 and to August 14, 2012. When the same high count occurred on more than one date only the first is given. I will be including this double table in Reports two to five.

Species	Highest count to 8.14.03	Date of high count to 8.14.03	Highest Count to 8.14.12	Date of high count to 8.14.12
Pacific Loon			1	12.11.05
Common Loon	1	11.18.01	3	12.8.06
Pied-billed Grebe	750	11.18.98	945	11.26.10
Horned Grebe	3	11.11.98	4	12.21.11
Red-necked Grebe			1	11.24.06
Eared Grebe	4	1.1.99	4	1.1.99
Sooty Shearwater			1	8.15.04
American White Pelican	4,370	1.29.99	4,370	1.29.99
Brown Pelican	3	3.24.03	6	4.30.05
Neotropic Cormorant			1	6.3.09
Double-crested Cormorant	828	3.25.01	7,800	2.22.04
Anhinga	68	9.3.00	873	7.2.10
American Bittern	17	3.26.03	105	12.30.09
Least Bittern	17	5.12.03	76	7.9.08
Gray Heron			1	12.17.03
Great Blue Heron	395	12.3.98	395	12.3.98
Great White Heron	1	6.1.03	3	6.22.08

Species	Highest count to 8.14.03	Date of high count to 8.14.03	Highest Count to 8.14.12	Date of high count to 8.14.12
Great Egret	1,950	11.6.98	2,390	12.5.04
Snowy Egret	322	6.12.02	2,585	11.7.04
Little Blue Heron	163	10.24.01	735	12.1.04
Tricolored Heron	93	7.19.03	466	7.13.11
Reddish Egret	1	3.21.00	1	3.21.00
Cattle Egret	5,375	10.13.02	6,400	9.16.04
Green Heron	109	6.29.03	242	8.23.08
Black-crowned Night-Heron	89	1.27.99	241	3.20.11
Yellow-crowned Night-Heron	16	6.12.02	28	4.24.11
White Ibis	1,370	6.23.03	11,210	6.17.11
Glossy Ibis	1,380	7.19.03	3,825	12.1.04
White-faced Ibis	2	11.11.01	3	3.5.10
Roseate Spoonbill	30	6.26.02	139	10.2.11
Wood Stork	1,130	11.18.98	1,130	11.18.98
Black Vulture	127	7.10.02	1,340	2.28.07
Turkey Vulture	511	10.29.99	2,800	2.11.09
White-faced Whistling-Duck	1	5.7.00	1	5.7.00
Black-bellied Whistling-Duck	6	7.19.03	1,660	2.5.10
Fulvous Whistling-Duck	366	8.10.99	840	10.22.03
Greater White-fronted Goose	3	10.28.01	3	10.28.01
Snow Goose	90	12.18.98	90	12.18.98
Ross's Goose	2	12.7.98	2	12.7.98
Canada Goose	3	10.29.98	3	10.29.98
Egyptian Goose			3	7.23.06
Black Swan	1	6.10.02	1	6.10.02
Muscovy Duck	1	6.5.99	4	11.18.05
Wood Duck	53	9.10.99	316	9.9.11
Gadwall	222	11.22.99	812	12.16.11
Eurasian Wigeon			1	11.19.10
American Wigeon	186	12.18.98	186	12.18.98
American Black Duck	3	12.7.98	6	12.26.10
Mallard	40	11.19.99	103	10.24.04
Mottled Duck	197	8.20.99	397	9.2.11
Blue-winged Teal	10,500	11.2.98	10,500	11.2.98
Cinnamon Teal	3	1.19.99	3	1.19.99
Northern Shoveler	770	1.27.99	770	1.27.99
Northern Pintail	420	12.16.98	420	12.16.98
"Common Teal"			1	1.22.06

Species	Highest count to 8.14.03	Date of high count to 8.14.03	Highest Count to 8.14.12	Date of high count to 8.14.12
Green-winged Teal	12,565	12.18.98	12,565	12.18.98
Canvasback	5	12.7.98	5	12.7.98
Redhead	18	1.3.02	18	1.3.02
Ring-necked Duck	11,900	12.3.98	11,900	12.3.98
Greater Scaup	5	12.8.98	22	12.19.10
Lesser Scaup	279	1.12.99	3,300	1.23.09
Black Scoter			2	11.22.06
Bufflehead	9	12.30.99	34	12.31.10
Common Goldeneye	1	12.30.02	2	11.22.05
Hooded Merganser	100	1.12.99	100	1.12.99
Red-breasted Merganser	6	1.7.99	14	3.15.09
Ruddy Duck	3,650	3.12.03	34,000	1.4.06
Osprey	57	4.24.03	201	7.11.12
Swallow-tailed Kite	556	7.25.03	1,642	8.3.12
White-tailed Kite	1	6.30.00	1	6.30.00
Snail Kite	1	7.16.99	1	7.16.99
Mississippi Kite			1	5.5.04
Bald Eagle	20	4.3.02	109	11.13.05
Northern Harrier	223	1.14.00	305	12.12.04
Sharp-shinned Hawk	6	8.6.99	26	11.30.07
Cooper's Hawk	21	8.7.02	45	8.25.06
Red-shouldered Hawk	28	1.7.00	133	9.29.06
Broad-winged Hawk	1	10.6.98	3	9.29.06
Short-tailed Hawk	1	9.30.99	1	9.30.99
Swainson's Hawk	1	12.27.99	2	11.11.07
Red-tailed Hawk	94	3.14.00	175	11.30.07
Rough-legged Hawk	3	2.23.00	3	2.23.00
Golden Eagle	1	1.8.99	1	1.8.99
Crested Caracara	1	7.27.99	1	7.27.99
Eurasian Kestrel	1	2.26.03	1	2.26.03
American Kestrel	28	10.26.99	38	11.5.03
Merlin	3	10.8.99	8	9.30.07
Peregrine Falcon	4	10.12.99	4	10.12.99
Ring-necked Pheasant	1	5.6.02	1	5.6.02
Common Peafowl			1	9.10.06
Wild Turkey	1	6.6.00	13	10.21.09
Gray Partridge			2	9.14.03
Northern Bobwhite	69	7.4.03	105	6.1.08

Species	Highest count to 8.14.03	Date of high count to 8.14.03	Highest Count to 8.14.12	Date of high count to 8.14.12
Yellow Rail	1	3.9.03	1	3.9.03
Black Rail	1	6.4.03	1	6.4.03
Clapper Rail			1	11.28.03
King Rail	14	1.9.03	523	8.23.06
Virginia Rail	3	1.5.03	9	2.16.05
Sora	109	12.30.02	415	11.28.08
Purple Gallinule	58	4.21.03	97	4.25.04
Common Gallinule	1,890	10.21.98	6,600	9.18.11
American Coot	16,720	11.18.98	24,900	11.7.10
Limpkin	5	5.14.01	6	3.8.09
Sandhill Crane	104	11.25.01	375	1.16.09
Whooping Crane	8	3.21.00	8	3.21.00
Black-bellied Plover	346	12.3.98	346	12.3.98
American Golden-Plover	6	10.26.99	6	10.26.99
Wilson's Plover			1	9.10.08
Semipalmated Plover	134	5.15.02	134	5.15.02
Piping Plover	1	5.20.02	1	5.20.02
Killdeer	1,935	2.9.03	2,815	1.2.09
Black-necked Stilt	368	9.17.98	432	8.4.10
American Avocet	75	1.11.99	75	1.11.99
Greater Yellowlegs	415	12.16.98	415	12.16.98
Lesser Yellowlegs	1,195	12.16.98	1,195	12.16.98
Solitary Sandpiper	8	4.26.01	76	5.7.06
Willet	8	7.27.99	8	7.27.99
Spotted Sandpiper	13	5.15.02	13	5.15.02
Upland Sandpiper	6	4.20.99	6	4.20.99
Whimbrel	1	5.1.99	2	4.30.08
Long-billed Curlew	1	6.25.99	1	6.25.99
Hudsonian Godwit			1	6.22.11
Marbled Godwit	2	11.25.98	3	8.19.11
Ruddy Turnstone	8	5.6.02	8	5.6.02
Red Knot	12	5.14.01	12	5.14.01
Sanderling	5	5.20.02	5	5.20.02
Semipalmated Sandpiper	1,540	5.23.02	1,540	5.23.02
Western Sandpiper	965	9.11.98	1,250	9.7.11
Least Sandpiper	2,450	12.31.98	2,450	12.31.98
White-rumped Sandpiper	37	5.23.02	118	5.21.11
Baird's Sandpiper	2	8.6.00	2	8.6.00

Species	Highest count to 8.14.03	Date of high count to 8.14.03	Highest Count to 8.14.12	Date of high count to 8.14.12
Pectoral Sandpiper	690	9.16.01	965	9.12.08
Sharp-tailed Sandpiper	1	9.26.02	1	9.26.02
Dunlin	210	11.13.98	210	11.13.98
Curlew Sandpiper	1	9.2.98	1	9.2.98
Stilt Sandpiper	490	10.21.98	490	10.21.98
Buff-breasted Sandpiper	23	9.11.98	23	9.11.98
Ruff	2	11.25.98	2	11.25.98
Short-billed Dowitcher	670	10.29.98	670	10.29.98
Long-billed Dowitcher	1,890	1.12.99	1,890	1.12.99
Wilson's Snipe	898	12.28.98	1,090	1.4.04
American Woodcock	7	1.13.02	12	12.7.05
Wilson's Phalarope	21	9.2.98	21	9.2.98
Red-necked Phalarope	1	9.23.99	5	8.22.08
Red Phalarope	1	9.16.01	1	9.16.01
Pomarine Jaeger	2	5.6.01	2	5.6.01
Parasitic Jaeger			1	8.20.08
Laughing Gull	114	4.11.01	174	2.14.10
Franklin's Gull	21	12.4.98	21	12.4.98
Little Gull	1	1.7.01	1	1.7.01
Bonaparte's Gull	404	1.10.02	1,013	1.17.10
Ring-billed Gull	4,600	12.21.02	18,000	2.8.05
Herring Gull	88	2.3.99	88	2.3.99
Thayer's Gull			1	3.31.04
Lesser Black-backed Gull	2	12.11.98	2	12.11.98
Great Black-backed Gull			1	1.27.06
Gull-billed Tern	4	4.20.99	4	4.20.99
Caspian Tern	208	2.10.99	208	2.10.99
Royal Tern	1	12.16.98	8	8.22.08
Sandwich Tern	1	7.1.01	4	5.7.07
Roseate Tern			1	5.20.08
Common Tern	5	4.7.02	103	10.31.07
Arctic Tern	2	5.23.02	3	10.31.07
Forster's Tern	500	9.2.98	611	1.16.08
Least Tern	54	7.19.00	92	6.10.09
Bridled Tern			6	8.20.08
Sooty Tern			16	8.22.08
Black Tern	500	9.2.98	532	8.24.08
Black Skimmer	120	2.3.99	120	2.3.99

Species	Highest count to 8.14.03	Date of high count to 8.14.03	Highest Count to 8.14.12	Date of high count to 8.14.12
Rock Pigeon	106	6.25.99	106	6.25.99
Eurasian Collared-Dove	36	6.7.99	36	6.7.99
Diamond Dove			1	8.6.10
White-winged Dove	24	9.19.01	35	8.12.09
Mourning Dove	2,120	7.8.01	2,370	7.30.08
Common Ground-Dove	111	5.21.03	111	5.21.03
Budgerigar	1	7.23.99	1	7.23.99
Cockatiel	1	9.2.02	1	9.2.02
Black-billed Cuckoo	1	5.10.99	1	5.10.99
Yellow-billed Cuckoo	23	5.4.03	52	6.8.06
Smooth-billed Ani	1	6.26.03	1	6.26.03
Groove-billed Ani	2	10.20.02	6	2.6.05
Barn Owl	10	2.7.01	25	12.22.06
Eastern Screech-Owl	2	12.20.98	3	2.1.09
Great Horned Owl	4	8.27.00	10	1.30.05
Burrowing Owl	1	6.18.03	1	6.18.03
Barred Owl	4	12.14.02	11	10.8.06
Long-eared Owl			1	1.11.04
Short-eared Owl	3	12.7.99	9	12.29.06
Northern Saw-whet Owl	1	11.5.02	1	11.5.02
Lesser Nighthawk	1	12.16.98	1	12.16.98
Common Nighthawk	1,233	9.11.02	1,233	9.11.02
Chuck's-will's-widow	13	6.4.03	16	5.23.04
Eastern Whip-poor-will	3	9.13.00	7	3.15.09
Chimney Swift	1,510	10.2.99	8,100	9.24.08
Ruby-throated Hummingbird	2	10.13.02	2	10.13.02
Black-chinned Hummingbird	1	12.19.99	1	12.19.99
Belted Kingfisher	19	11.9.02	45	11.1.09
Red-headed Woodpecker	1	12.16.98	3	9.10.03
Red-bellied Woodpecker	48	4.27.03	91	10.1.06
Yellow-bellied Sapsucker	4	10.23.99	10	12.13.06
Downy Woodpecker	19	9.19.00	49	3.28.07
Hairy Woodpecker	1	3.13.99	1	3.13.99
Red-cockaded Woodpecker	1	6.23.03	1	6.23.03
Northern Flicker	8	10.19.99	16	10.8.06
Pileated Woodpecker	8	1.14.01	12	11.4.07
Olive-sided Flycatcher			1	4.20.05
Eastern Wood-Pewee	6	9.24.00	7	9.27.06

Species	Highest count to 8.14.03	Date of high count to 8.14.03	Highest Count to 8.14.12	Date of high count to 8.14.12
Yellow-bellied Flycatcher			1	10.11.04
Acadian Flycatcher	2	9.11.02	4	9.10.03
Alder Flycatcher			1	9.14.03
Willow Flycatcher	1	7.27.99	1	7.27.99
Least Flycatcher	8	12.2.02	23	12.19.07
Eastern Phoebe	257	11.5.00	416	10.26.03
Vermillion Flycatcher	2	3.4.02	2	3.4.02
Ash-throated Flycatcher	19	1.20.02	16	12.14.07
Great Crested Flycatcher	18	7.3.02	45	5.16.07
Brown-crested Flycatcher	1	1.14.01	2	3.1.06
Tropical Kingbird	1	12.9.01	1	12.9.01
Cassin's Kingbird	1	12.4.99	2	2.29.04
Western Kingbird	72	1.27.02	72	1.27.02
Eastern Kingbird	347	8.31.99	347	8.31.99
Gray Kingbird	2	10.21.98	2	10.21.98
Scissor-tailed Flycatcher	5	3.31.02	8	12.11.05
Fork-tailed Flycatcher	1	7.23.00	1	7.23.00
Loggerhead Shrike	18	2.3.02	18	2.3.02
White-eyed Vireo	27	10.5.00	74	10.5.08
Bell's Vireo	1	2.6.00	1	2.6.00
Yellow-throated Vireo	2	4.3.02	2	4.3.02
Blue-headed Vireo	4	12.2.02	19	11.23.08
Philadelphia Vireo	1	10.14.99	1	10.14.99
Red-eyed Vireo	17	9.21.00	17	9.21.00
Black-whiskered Vireo			1	9.10.06
Blue Jay	46	10.5.00	180	10.17.07
Florida Scrub-Jay	2	4.17.02	2	4.17.02
American Crow	6	7.4.03	38	11.9.08
Fish Crow	4,400	1.27.02	4,400	1.27.02
Purple Martin	1,935	6.19.99	2,850	6.20.04
Tree Swallow	7,120	3.9.03	71,000	3.10.06
Northern Rough-winged Swallow	7	4.17.99	28	10.11.04
Bank Swallow	145	9.2.01	265	8.20.08
Cliff Swallow	68	9.25.99	71	10.1.06
Cave Swallow	1	3.18.01	14	10.28.05
Barn Swallow	2,200	4.17.99	9,300	8.22.08
Carolina Chickadee	1	11.9.99	7	5.3.09
Tufted Titmouse	6	7.2.03	16	9.15.10

Species	Highest count to 8.14.03	Date of high count to 8.14.03	Highest Count to 8.14.12	Date of high count to 8.14.12
Brown-headed Nuthatch			1	12.17.03
Carolina Wren	103	4.24.03	103	4.24.03
Bewick's Wren	1	2.25.00	1	2.25.00
House Wren	674	11.5.00	674	11.5.00
Winter Wren	1	1.19.03	1	1.19.03
Sedge Wren	108	11.26.00	108	11.26.00
Marsh Wren	126	11.5.00	211	11.9.05
Golden-crowned Kinglet	1	12.7.99	3	11.17.06
Ruby-crowned Kinglet	23	11.24.02	67	11.17.06
Blue-gray Gnatcatcher	96	10.5.00	173	12.7.07
Eastern Bluebird	6	12.21.02	6	12.21.02
Veery	12	10.2.02	12	10.2.02
Gray-cheeked Thrush	1	10.6.99	6	10.15.08
Bicknell's Thrush	1	5.27.00	1	5.27.00
Swainson's Thrush	36	9.26.01	36	9.26.01
Hermit Thrush	2	11.17.02	9	12.12.04
Wood Thrush	1	10.19.99	1	10.19.99
American Robin	3100	3.2.03	240,000	12.29.06
Gray Catbird	270	10.13.02	713	10.17.08
Northern Mockingbird	102	7.6.03	126	10.8.06
Brown Thrasher	23	10.7.01	74	10.8.08
European Starling	860	7.8.02	2,040	7.13.07
Common Myna			1	7.11.05
American Pipit	570	12.8.98	820	1.2.09
Cedar Waxwing	615	4.6.99	2,240	4.8.07
Blue-winged Warbler	2	9.3.00	2	9.3.00
Tennessee Warbler	7	9.19.00	29	10.21.04
Orange-crowned Warbler	36	12.15.00	36	12.15.00
Nashville Warbler	1	1.11.99	1	1.11.99
Northern Parula	15	3.5.03	52	3.18.05
Yellow Warbler	119	8.28.02	232	9.15.06
Chestnut-sided Warbler	6	9.21.00	6	9.21.00
Magnolia Warbler	2	10.5.00	4	10.17.09
Cape May Warbler	13	4.17.99	16	4.30.08
Black-throated Blue Warbler	5	5.1.99	15	4.30.08
Yellow-rumped Warbler	8,470	3.5.03	10,220	2.23.07
Black-throated Gray Warbler			1	9.15.10
Black-throated Green Warbler	2	12.20.98	4	10.15.10

Species	Highest count to 8.14.03	Date of high count to 8.14.03	Highest Count to 8.14.12	Date of high count to 8.14.12
Blackburnian Warbler	4	9.19.00	4	9.19.00
Yellow-throated Warbler	2	9.19.00	8	9.26.07
Pine Warbler	6	10.29.99	24	12.9.11
Prairie Warbler	39	9.9.01	83	9.10.03
Palm Warbler	3,,120	2.26.03	3,120	2.26.03
Bay-breasted Warbler	1	10.19.99	2	11.2.07
Blackpoll Warbler	18	5.1.02	73	5.5.06
Cerulean Warbler	2	9.21.00	2	9.21.00
Black-and-white Warbler	6	4.17.99	10	9.22.04
American Redstart	48	5.14.01	48	5.14.01
Prothonotary Warbler	2	4.14.02	2	4.14.02
Worm-eating Warbler	1	4.17.99	2	9.22.04
Swainson's Warbler	1	8.16.00	1	8.16.00
Ovenbird	22	10.2.02	92	9.27.06
Northern Waterthrush	102	9.26.02	188	9.28.04
Louisiana Waterthrush	34	8.16.00	98	8.27.10
Kentucky Warbler	1	4.14.99	1	4.14.99
Common Yellowthroat	321	10.2.02	856	9.22.04
Hooded Warbler	2	4.17.99	2	4.17.99
Wilson's Warbler	1	2.8.00	2	1.26.05
Canada Warbler			1	8.24.03
Yellow-breasted Chat	30	6.11.03	41	5.23.04
Summer Tanager	2	10.19.99	2	10.19.99
Scarlet Tanager	1	10.2.99	2	10.10.07
Western Tanager			1	12.9.07
Eastern Towhee	228	7.30.03	228	7.30.03
Bachman's Sparrow			1	1.16.05
Chipping Sparrow	4	4.14.02	19	12.17.08
Clay-colored Sparrow	46	2.3.99	46	2.3.99
Field Sparrow	12	3.14.02	32	1.30.09
Vesper Sparrow	19	1.7.03	45	1.16.09
Lark Sparrow	1	2.9.99	1	2.9.99
Savannah Sparrow	860	12.8.98	860	12.8.98
Grasshopper Sparrow	12	2.17.99	12	2.17.99
Henslow's Sparrow	1	11.20.98	1	11.20.98
LeConte's Sparrow	1	12.16.98	1	12.16.98
Nelson's Sparrow	1	11.5.00	1	11.5.00
Fox Sparrow	1	2.17.99	1	2.17.99

Species	Highest count to 8.14.03	Date of high count to 8.14.03	Highest Count to 8.14.12	Date of high count to 8.14.12
Song Sparrow	16	12.16.02	16	12.16.02
Lincoln's Sparrow	5	11.17.02	5	11.17.02
Swamp Sparrow	725	12.2.02	1,126	11.21.04
White-throated Sparrow	4	2.25.01	7	3.4.09
White-crowned Sparrow	51	2.3.99	51	2.3.99
Dark-eyed Junco			1	12.17.03
Lapland Longspur	1	10.16.98	1	10.16.98
Northern Cardinal	273	5.4.03	344	4.9.08
Rose-breasted Grosbeak	1	4.30.00	3	10.21.09
Blue Grosbeak	39	7.4.00	72	10.1.06
Lazuli Bunting	1	1.7.02	1	1.7.02
Indigo Bunting	281	10.16.02	840	10.26.07
Painted Bunting	9	5.9.02	12	5.26.04
Dickcissel	11	6.29.99	143	5.22.05
Bobolink	7,060	5.1.02	16,550	4.30.08
Red-winged Blackbird	27,000	8.13.03	303,000	7.17.05
Eastern Meadowlark	62	1.24.02	74	2.27.09
Yellow-headed Blackbird	5	12.31.98	5	12.31.98
Rusty Blackbird	13	12.3.98	13	12.3.98
Brewer's Blackbird	1	12.19.01	1	12.19.01
Common Grackle	960	11.17.02	117,000	7.17.05
Boat-tailed Grackle	5,510	8.13.03	167,000	7.14.05
Shiny Cowbird	2	7.15.01	13	7.3.05
Bronzed Cowbird	1	11.23.98	2	12.13.09
Brown-headed Cowbird	3,150	2.5.99	3,600	2.27.09
Orchard Oriole	14	6.26.03	28	6.19.09
Baltimore Oriole	5	12.11.99	7	9.29.03
Bullock's Oriole	1	1.22.03	1	1.22.03
Purple Finch			1	11.26.06
House Finch			27	7.11.12
Pine Siskin	1	4.30.03	2	12.26.08
American Goldfinch	62	11.24.02	196	2.20.08
House Sparrow	7	12.8.98	7	12.8.98
Orange Bishop	1	4.6.03	1	4.6.03
Bronze Mannikin	1	11.18.01	1	11.18.01
Zebra Finch			1	9.7.05
Pin-tailed Whydah			2	9.22.05

That is a total of 320 species to August 14, 2003 and 357 species to August 14, 2012.

The following seven species were recorded by others at Zellwood prior to the start of the survey on August 15, 1998 and they had not been seen since. One of these species has now been seen in 2011, that is the Hudsonian Godwit, it was seen on June 22, 2011.

Brant	1	10.24.81
White-cheeked Pintail	1	8.18.73
Ferruginous Hawk	2	12.19.83
Southern Lapwing	1	7.23.61
Hudsonian Godwit	32	9.3.86
Brown Noddy	1	9.10.65
Golden-winged Warbler	1	8.17.74

### SUMMARY

<b>Total species August 15, 1998 to August 14, 2003</b>	<b>320</b>
Additional species pre-survey	7
<b>Grand Total</b>	<b>327</b>
Less exotics	8
<b>Acceptable Total</b>	<b>319</b>
<b>Total species August 15, 1998 to August 14, 2012</b>	<b>357</b>
Additional species pre-survey	6
<b>Grand Total</b>	<b>363</b>
Less exotics	15
<b>Acceptable Total</b>	<b>348</b>

## Table E

### **This table looks at the effects of deep flooding versus shallow flooding of the fields.**

During the fall of 1998 and the winter of 1998/1999 whilst some 5,000 acres of Unit Two were flooded I was able to observe the habitat preferences of the waders, wildfowl, shorebirds, gulls and terns. Most of the fields were shallow flooded initially with the exception of two fields down the Roach Road extension. Later when the water was moved to the south and then out into Lake Apopka I was able to see the effect that action had on the various populations. In Table C I broke down the habitat preferences for all the species, not just the ones I mentioned above.

The following is an attempt to calculate just what would happen to the birdlife if the fields had been deep flooded instead of shallow flooded. By deep flooding I mean a field that is flooded to its banks with a water depth of say four feet. On the other hand a shallow flooded field would have some deeper water (two plus feet) but consist mainly of shallow water with areas of mud either at the edge or in ridges out in the middle of a field complex.

I tried to estimate the numbers of birds that would choose a shallow flooded field but that would remain if the fields were deep flooded. I believe that some 10% of the surface feeding ducks and 5% of the herons and egrets would remain. I would expect all the shorebirds to leave if the water levels rose to the banks. Unless the gulls and terns could find an alternative loafing/roosting area they would also depart.

To represent the potential impact of deep flooding I have taken a selection of dates during the period October 1998 to January 1999 and tried to estimate the numbers that would have used the fields under these two scenarios.

<b>Date</b>	<b>Deep Water</b>	<b>Shallow Water</b>	<b>% remaining if the fields deep flooded</b>
	Estimated # of birds	Actual # of birds	
10.16.1998	4,243	12,295	34%
11.2.1998	8,554	21,577	39%
11.18.1998	16,912	22,137	76%
12.3.1998	12,240	18,381	66%
12.18.1998	5,045	17,590	28%
1.1.1999	3,503	11,408	30%
1.19.1999	3,400	13,445	25%
1.29.1999	5,031	15,853	31%

Note: The peak on November 18 relates to the passage of American Coots and the December 3 peak relates to the passage of the Ring-necked Ducks.

### **Summary**

Apart from those two peaks caused by the arrival of large numbers of migrant ducks and coots that preferred deeper water it is clear that deep water would not be as beneficial to birds as the shallow flooding actually was.

I cannot say how many how many more diving ducks, coots and grebes would have been attracted to the area if it had been deep flooded but it is unlikely to adjust the figures much. The figures for shallow flooding are also lower than they might have been because of the frequently shifting areas under water.

There are two problems that I cannot address. If the area was deep flooded the question of plant growth comes up, for example water hyacinth or cattails. Both of the plants would change the bird populations dramatically. If there was no significant areas of open water the ducks, coots and grebes would for the most part leave. Cattails would increase the populations of Least Bitterns and Red-winged Blackbirds. The hyacinth would attract Little Blue Herons and Purple Gallinules. The other problem relates to shallow water, I believe that in order to keep an optimal habitat the water levels would need to be managed to a high degree in order to keep areas of mud. Plants would otherwise take over.

## Table F

### **An estimate of the total numbers of waterfowl, shorebirds and allies using the flooded fields of Unit Two in the fall of 1998 and the winter of 1998/1999.**

There have been many attempts to estimate the numbers of water birds, shorebirds and their allies using a particular site. I do not know of any system that has been developed for wildfowl but there is one for shorebirds.

Attempts have been made to establish how long individuals stop off passage. Most systems have their problems. The best system for shorebirds appears to be combination of weekly counts together with the netting of as many birds as possible. These birds are then color dyed and banded with a different color for each week of trapping.

A study of the shorebirds on the Atlantic coast of Morocco in March 1981 by M.Kersten and C.J.Smit gives some help. They trapped over 600 shorebirds and color dyed them on the under-parts using a different color for each week. They also counted the total population and counted separately all the color banded birds each week.

The results indicated that the Ringed Plover *Charadrius hiaticula* stopped off passage for 6.3 days. The Redshank *Tringa totanus* stopped off passage for 8.5 days. The Dunlin *Calidris alpina* stopped off passage for 12.2 days giving an overall average of nine days for the three species. The first two species are the European equivalents of the Semipalmated Plover and the Lesser Yellowlegs, the Dunlin occurs on both continents.

It is extremely rough but I treat those species that did not have a separate peak in the fall as being winter visitors only. For these species I am only using the highest count, this will not be totally true as some will certainly leave and others will arrive to take their place. I do not know how to identify and quantify those individuals. This means that more birds will have used the area than I have allowed for, the totals will be under-estimates.

For those species that only occurred on passage and those that had a separate peak or peaks in the fall it is possible to get an idea of the numbers passing through the area. I have treated all these migrant shorebirds as being off passage for ten days which is a longer period than that found above. It is likely that the waterfowl follow a similar pattern but it is probably with longer stopovers. I have therefore had to estimate numbers much more on the rise and fall irrespective of the interval.

**TABLE A Estimated waterfowl numbers during the fall and the winter.**

Species	Est.'s. total fall passage	Peak winter count	Totals
Pied-billed Grebe		620	620
Horned Grebe		3	3
Eared Grebe		4	4
Am. White Pelican	5,376	4,370	9,746
Double-crested Cormorant	549	70	619
Fulvous Whistling-Duck		189	189
Snow Goose		90	90
Gadwall	46	89	135
American Wigeon	290	113	403
American Black Duck		3	3
Mallard		15	15
Mottled Duck	143	82	226
Blue-winged Teal	18,330	4,300	22,630
Northern Shoveler	500	770	1,270
Northern Pintail	400	260	660
Green-winged Teal	12,015	7,120	19,135
Canvasback		5	5
Redhead		8	8
Ring-necked Duck	11,910	103	12,013
Greater Scaup		5	5
Lesser Scaup	128	279	407
Bufflehead		5	5
Hooded Merganser		100	100
Red-breasted Merganser		6	6
Ruddy Duck	883	377	1,260
Common Moorhen	2,945	137	3,082
American Coot	19,635	3,055	22,690
<b>Totals</b>	<b>73,150</b>	<b>22,178</b>	<b>95,328</b>

**TABLE B Estimated shorebird passage during the fall and the winter.**

Species	Estimated fall passage	Peak winter count	Totals
Black-bellied Plover	1,180	262	1,442
American Golden Plover	7		7
Semipalmated Plover	140		140
Killdeer	1,275	615	1,890
Black-necked Stilt	738	10	748
American Avocet		75	75
Greater Yellowlegs	1,544	295	1,839
Lesser Yellowlegs	5,267	720	5,987
Solitary Sandpiper	1		1
Willet	5		5
Spotted Sandpiper	3		3
Upland Sandpiper	2		2
Marbled Godwit		2	2
Ruddy Turnstone	3		3
Red Knot	2		2
Sanderling	3		3
Semipalmated Sandpiper	414		414
Western Sandpiper	1,462	95	1,557
Least Sandpiper	12,710	1,500	14,210
Pectoral Sandpiper	781	1	782
Dunlin	857	175	1,032
Stilt Sandpiper	1,572	156	1,728
Buff-breasted Sandpiper	23		23
Ruff		2	2
Short-billed Dowitcher	2,995		2,995
Long-billed Dowitcher		1,890	1,890
Wilson's Snipe	1,712	40	1752
Wilson's Phalarope	48		48
<b>Shorebird totals</b>	<b>32,744</b>	<b>5,838</b>	<b>38,582</b>

## TABLE C

**This is a summary of the numbers of waterfowl and shorebirds using the area in the fall of 1998 and the winter of 1998/1999.**

Species groups	Estimated passage	Peak winter count	Totals
Wildfowl etc	73,150	22,178	95,328
Shorebirds	32,744	5838	38,582
	<b>105,894</b>	<b>28,016</b>	<b>133,910</b>

Different breeding populations of a species may migrate at different times and for different distances. Adults also can migrate at different times from the juveniles. No attempt was made by me to age the birds. Some groups will leapfrog over others, for example more northerly populations may travel further and earlier than the more southerly breeding populations.

It is a complicated subject. The above totals are NOT FACTS, just my best estimates as to the number of birds using Zellwood during the fall of 1998 and the winter of 1998/1999.

### References:

P.R.Evans, J.D.Goss-Custard, W.G.Hale: Coastal Waders and Wildfowl in winter. 1984 Cambridge

M.Owen, G.Atkinson-Wiles, D.G.Salmon: Wildfowl in Great Britain 2<sup>nd</sup> Edn. 1986 Cambridge

A.J.Prater. Estuary Birds in Britain and Ireland 1981 Poyser

## **APPENDIX A**

### **Historical Bird Sightings at Zellwood**

I have decided because of space not to include these historical records. The full list can be seen in *Bird Migration a Florida Study* and in *Bird Migration a Second Florida Study*.

## APPENDIX B

### Field Descriptions

#### Long-billed Curlew (*Numenius americanus*)

On June 25 when I arrived at the Sod Farm I scanned the fields for any shorebirds and I quickly found this individual; it was hard to miss. I watched this bird feeding out in the fields through my Kowa telescope. This was a very, very large long-legged shorebird its overall color was buff. The underparts were a clear buff whilst the mantle and the wings were darker but with pale buff edges to the feathers. Apart from this overall buff color the bill was the most striking feature; this was exceptionally long and down curved. The legs were long and a gray color. Whilst I have seen countless Eurasian Curlews and Whimbrels I have only seen a few of these birds but they are so distinctive.

#### Lapland Longspur (*Calcarius lapponicus*)

This was the craziest of sightings. I was by the flooded fields of Roach Road when I spotted this bird feeding in the gravel and weeds by the side of the road. This is a species I saw frequently every fall in England but it was not one that I ever expected to see at Zellwood so it took me a little time to identify it. This was clearly a sparrow with its seed eating bill and it was probably similar in size to a White-crowned sparrow. There were two very striking features that led me to identify this bird as a Lapland Longspur. Firstly there was a strong chestnut patch on the hind neck and secondly there was dark gray mottling on the breast and flanks; the rest of the underparts being white. The upperparts were streaked, wings were long. Crown was streaked with a broad buff supercilium below. The ear coverts were lighter with a dark rear surround. Throat was white. This was all I noted.

## **APPENDIX C**

### **The Breeding Birds of Zellwood**

I carried out a survey of the breeding birds in each of the six years (1999 to 2004). This survey was conducted in late May and early June. The area covered being the Sand Farm together with Units One and Unit Two.

During the six surveys I followed the same routine each summer. I walked the boundary of the property together with every road and track. Every year I walked some 75 miles averaging eight miles a day. For the most part I recorded singing males but for the majority of the species I saw adults carrying food or the recently fledged young. To avoid disturbance I did not look for nests or use tapes.

At the end of this appendix there is a table showing the species and the number of pairs for each year. I have decided to put this paper in each of the first six reports. I have decided to include the summary from 2004 in all the earlier reports as I think this will give a clearer picture.

## The Species

### Pied-billed Grebe

There was a 300 acre lake at the Sand Farm up to November, 2000 when it was drained. This same area was allowed to flood naturally during the winter of 2001/2002 and by July, 2002 a significant cattail marsh had formed with areas of open water. This is the only breeding site for this species, there were five pairs in 1999 with one pair in 2003 and seven pairs in 2004.

### Anhinga

There were five pairs on two small islands near the western end of Lust Road in 2000. Breeding was successful with the pairs raising one to two young a pair. It is possible that this species also nested regularly on the lake side of the larger islands but those areas could not be seen from the shore of the lake.

### American Bittern

Very exceptionally a pair raised one young at the Sand Farm Cattail Marsh in 2004.

### Least Bittern

Numbers varied each year depending on the water level in Lake Apopka. With high water levels pairs nested in the various small cattail beds along the shore of the lake. Nesting also now occurs at the Sand Farm cattail marsh. Population has been edging higher with 15 pairs in 2003.

### Great Blue Heron

This species probably bred for many years on the Duda property but with the death and collapse of so many trees there pairs started nesting in the survey area in 2004. There were five pairs that year each pair raised at least one young.

### Little Blue Heron

Two pairs nested on an island near the end of Lust Road in 2000. Young almost certainly raised but the vegetation grew too thick to see what was going on.

## Cattle Egret

Nesting depended on the depth of water in Lake Apopka, when the water level in the lake high there were a series of islands that might be used for nesting. There were 413 pairs in 1999 and 103 pairs in 2000 on a series of islands near the end of Lust Road, many young raised.

## Green Heron

With the District's purchase of the property the ditches and canals gradually developed an extensive growth of vegetation. Then in 2003 the District took back control and started to clean out and clear the ditches and canals. The breeding population reflects this situation. There were only nine pairs in 1999 but the population had grown to 54 pairs in 2002. Numbers then lower with 43 pairs in 2003 and 38 pairs in 2004. Pairs will continue to nest by Lake Apopka, the Lake Level Canal and at the Sand Farm cattail marsh.

## Night-Herons

Both species were present all summer but no nest sites have been located.

## Fulvous Whistling-Duck

In 1999 there were 25 pairs, many broods of young seen. This population probably stemmed from birds that had stayed locally after the fields of Unit Two drained in February, 1999. One pair located in 2000, none in the other three years. In 2004 there was a pair at the Sand Farm Cattail Marsh, young were seen.

## Wood Duck

This species probably nests every year in the survey area. Normally just one pair but there was two pairs in 2002. Perhaps only one to two young survive. The known nesting sites are the wood at the southern end of the Lake Level Canal, the island to the south of Hooper Farms Road extension and the southern border.

## Mallard

There were three pairs in 1999 with one pair in 2000. They nested in the major canals. No nesting in the later years.

## Mottled Duck

There were 12 pairs in 1999 and 2002 with 13 pairs in 2000. They nested in the hyacinth filled canals. The District has been working at clearing the waterways so only four pairs found in 2003 with none in 2004.

### Bald Eagle

A pair nests every year in the pine wood at the Sand Farm, often raising one young. There is another pair immediately to the south of the survey area.

### Cooper's Hawk

Population often in the range of three to four pairs in the wooded borders. Adults hunt over the fields and there is a growing post-breeding gathering.

### Red-shouldered Hawk

Population ranges from four to six pairs with a high count of nine pairs in 2001. The nesting sites are all in the wooded borders. There is unlikely to be much change in the numbers.

### Red-tailed Hawk

There are slightly higher numbers of this species as six to eight pairs located annually with a high count of 11 pairs in 2000. Most of the pairs were in the more isolated stretches of woodland along the eastern border.

### Northern Bobwhite

This species is very habitat dependent. Initially the breeding population was along the eastern border and throughout the Sand Farm fields, as the vegetation grew it moved out into the fields of Units One and Unit Two. With increased mowing and roller-chopping the population will return to its original size. Initially there were 38 to 40 pairs with 89 pairs in 2002 and 125 pairs in 2003. Only 87 pairs located in 2004. With plenty of cover many young raised.

### King Rail

With the formation of the Sand Farm cattail marsh and the continuing extension of these marshes at Duda the overall breeding population is likely to rise. At Zellwood there were two pairs in 2002 with 14 pairs in 2003 and 18 pairs in 2004, young seen each year.

### Purple Gallinule

Both this and the next species have gained from the clearance of the thick vegetation from the canals. In the nutrient rich waters of the canals vegetation grows very fast providing nesting and feeding habitats for these two species. There were only 21 pairs in 1999 with 40 pairs in 2002, 51 pairs in 2003 and 54 pairs in 2004.

### Common Gallinule

As the ditches and canals were neglected the population grew slowly from 104 pairs in 1999 to 146 pairs in 2002. With the clearance of the vegetation there were 214 pairs in 2003 with 305 pairs in 2004.

### American Coot

This species has similar needs to the Pied-billed Grebe. It has not nested at Lake Apopka, the only nesting took place at the Sand Farm Cattail Marsh, and there were five pairs in 1999 with two pairs in 2004.

### Limpkin

It is likely that this species nests in the Sand Farm/Duda area and on the southern border.

### Killdeer

Habitat is the deciding factor for this species. Initially there was the Sod Farm with its very short grass but this ceased operation in the summer of 2002. At that time they removed all the turf creating many shallow, mud lined ponds. With the Sod Farm in use up to six pairs a year seen through to 2001 after operations ceased in 2002 there were 11 pairs but none could be found in 2003 or 2004.

### Black-necked Stilt

The water levels in Lake Apopka and the Lake Level Canal are the deciding factor for this species. In normal years with average water levels there were six pairs in 1999 and seven pairs in 2000. Then the water level dropped and the number of pairs rose, there were 18 pairs in 2001 with 30 pairs in 2002. Lake Apopka then became too full and only one pair could be found in 2003 and 2004.

### Eurasian Collared-Dove

This immigrant is really a suburban dweller rather than a bird of the woods or the fields. There was a single pair on the northern border from 2001 to 2003 with three pairs in 2004.

### White-winged Dove

This is a new arrival with three pairs in 2003. They were in an area south of Hogshead Road where thick stands of willows lined a ditch. I had seen birds in that area in the previous two summers.

## Mourning Dove

The population is probably static in the wooded borders, averaging 24 pairs a year.

**The following describes the woodland edge breeding bird territories and the changes that occurred to these territories over the six years of this survey.**

Many of the species that follow show a similar pattern in that the breeding population has risen in “steps”. I believe that these species had territories along the edge of the wood whilst the fields were being cultivated. This pattern did not change in the first two years after the farming stopped. Step 1 therefore deals with that basic situation for the years 1999 and 2000. In 2001 and 2002 many species changed their territory shape from linear to one which included a portion of a field. This meant that many more pairs could fit into a given stretch of the eastern border, this I call Step 2. In 2003 and 2004 numbers jumped again, this time many species were now also nesting out in the fields. A few species did not make this move out into the fields or perhaps they delayed the move for a year. This last move I call Step 3.

## Common Ground-Dove

This is a woodland edge species that was later nesting out in the fields. This is the first of a number of species where the population has risen in steps. In 1999 there were 40 pairs with 59 pairs in 2000 (step 1). In 2001 there were 116 pairs with 98 pairs in 2002 (step 2). Finally there were 236 pairs in 2003 with 191 pairs in 2004 (step 3). That is a major change in a very short period of time.

## Yellow-billed Cuckoo

This is another species that moved from the woods out into the fields. There were seven pairs in 1999 with ten pairs in 2000 (step 1). There were 16 pairs in 2001 with 26 pairs in 2002 (step 2). There were 48 pairs in 2003 with 49 pairs in 2004 (step 3).

## Barn Owl

This species nested in derelict buildings that were scattered through the property. Normally four pairs a year located with six pairs in 2004; up to three young per pair raised.

## Eastern Screech-Owl

It will be present but as I do not use recordings I have no idea as to the size of the population.

## Great Horned Owl

The population has been growing as there were only two pairs in 1999 with seven pairs in 2001, nine pairs in 2002 and 13 pairs in 2004. The increase will be due to the change in the shape of their territories, they are now hunting out over the fields so they need a smaller woodland range.

## Barred Owl

This species has remained in the woods so there is a stable population of two to four pairs.

## Common Nighthawk

This is another species that has taken advantage of the changing habitat. It still nests in the borders but it is now also nesting out in the fields, especially those that have been roller-chopped. There were just five pairs in 1999 with four pairs in 2000. Since then the population has been in the range of eight to 13 pairs with 16 pairs in 2004.

## Chuck-will's-widow

Up to five pairs a year seen from 1999 to 2002. In this species the change was delayed but step 2 occurred in 2003 and 2004 as 20 pairs located in both years. This species is not breeding out in the fields.

## Red-bellied Woodpecker

This is another "pattern" species as step 1 involved 27 pairs in 1999 and 39 pairs in 2000 with for step 2 a total of 58 pairs in 2001 and 56 pairs in 2002. With step 3 the population climbed to 76 pairs in 2003 with 94 pairs in 2004. The count in 2004 is so much higher perhaps there is yet another element encouraging a larger population.

## Downy Woodpecker

This is yet another pattern species but one with a variation. Step 1 involved 12 pairs in 1999 and 14 pairs in 2000, and then step 2 involved 31 pairs in 2001. This species made the move to step 3 after one year as there were from 37 to 39 pairs from 2002 to 2004.

## Northern Flicker

This is also a pattern species with five pairs in 1999 and 2000 (step 1) then with ten to 12 pairs from 2001 to 2003 (step 2). In 2004 there were 18 pairs which indicated a move to step 3. I have seen nest holes for both this and the following species in utility poles out in the fields.

### Pileated Woodpecker

The same pattern as for the Northern Flicker, there were three pairs in 1999 and 2000 with eight to ten pairs from 2001 to 2003. In 2004 there were 13 pairs, it seems strange but I have regularly seen a Pileated Woodpecker drumming on a utility pole at least half a mile from any woodland.

### Great Crested Flycatcher

The summer visitors appear to have more variable breeding populations but the "pattern" appears to be at work here. There were 17 pairs in 1999 with only ten pairs in 2000 and 13 pairs in 2001. Step 2 appears to have happened in 2002 when 25 pairs located. The switch to step 3 appears to be complete in 2003 (30 pairs) and 2004 (33 pairs). I regularly saw birds out in the fields near stands of trees.

### Eastern Kingbird

This is puzzlement in that I have not been able to prove breeding even by the sight of fledged young.

### Loggerhead Shrike

There was a stable population of five to six pairs along the border, most pairs were located near buildings with barbed wire fencing.

### White-eyed Vireo

This is not really a step species as it appears to have gone straight from step 1 to step 3! There were five pairs in 2000 with three pairs in 2001 (step 1) then with step 3 there were 13 pairs seen in 2002 with 14 pairs in 2003 and 16 pairs in 2004. This species is nesting out in the fields.

### Blue Jay

This is another pattern species. Step 1 involved 26 pairs in 1999 and 25 pairs in 2000. For step 2 there were 42 pairs in 2001 with 49 pairs in 2002. Then with step 3 there were 62 pairs in 2003 and 70 pairs in 2004. This species can now be found year round out in the fields.

### Fish Crow

Isolated pairs nested by water with a population of between four and 11 pairs. After breeding they and the fledged young leave the area.

## Barn Swallow

The breeding population is dependent on there being suitable nesting sites i.e. bridges. The District had to replace some of the bridges and the new bridges are not suitable nesting sites. The breeding population has therefore fallen from 44 to 52 pairs down to 34 to 36 pairs in 2003 and 2004. The count of 52 pairs was in 2001. The first swallows to arrive each year tend to be the locally breeding birds. They nest early and leave the area with the fledged young in June.

## Tufted Titmouse

This is a pattern species with step 1 involving three pairs in 1999 and 2000. Step 2 involved seven pairs in 2001 and nine pairs in 2002. Finally step 3 had 16 pairs in both 2003 and 2004. There is a problem here as I did not see this species out in the fields, so again there has to be another unknown trigger.

## Carolina Wren

This is yet another pattern species, a real one. Step 1 involved 79 pairs in 1999 with 69 pairs in 2000. Step 2 involved 153 pairs on 2001 and 162 pairs in 2002. Step 3 involved 185 pairs in 2003 and 171 pairs in 2004. This species is nesting out in the fields.

## Northern Mockingbird

There had to be a problem species and this is it. This should be a "pattern" species but it is not. There were 55 pairs in 1999 with 59 pairs in 2001, 62 pairs in 2002, 61 pairs in 2003 and 60 pairs in 2004. This species has to have gone through these steps as it is now breeding out in the fields. It would appear that the population in the border habitats is dropping and that the extra pairs out in the fields are not even compensating for that loss.

## Brown Thrasher

This is a pattern species, initially with step 1 there were seven pairs in 1999 with 12 pairs in 2000. Step 2 lasted for three years not the usual two with 20 pairs in 2001 and 2002 then 22 pairs in 2003. The reluctance to move out into the fields shown by this and a few other species is interesting. It did eventually move out, there were 38 pairs in 2004.

## European Starling

There were 16 pairs in 1999 otherwise seven to 11 pairs recorded. This species nests in buildings or old trees.

### Northern Parula

As a summer visitor numbers vary from two pairs in 1999 and 2000 to ten pairs in 2001 and 2003. All the pairs were found in the larger pieces of woodland.

### Common Yellowthroat

This is an occasional summer resident, breeding has not been proved. Singing males located but no females found. Most of these males were on territory in locations that I could not get close to so it is possible that they bred.

### Yellow-breasted Chat

This is a species that should not be breeding in Central Florida but it is. With the clearance of so much vegetation the population is now falling but there were 19 pairs in 2000 with seven pairs in 2001, 25 pairs in 2002, 56 pairs in 2003 and an exceptional count of 103 pairs in 2004. I say pairs but this is really a count of singing males on territory. Adults have been seen carrying food and fledged young have been noted. This is such a secretive species that I have only seen the females occasionally.

### Eastern Towhee

This is a pattern species with for step 1 ten pairs in 1999 with 48 pairs in 2000. Step 2 involved 72 pairs in 2001 with 91 pairs in 2002. Then there was a huge jump with step 3 as there were 206 pairs in 2003 with 207 pairs in 2004. The figures suggest that many pairs took less than two years to change their habits. There really were only ten pairs in 1999. It was a hard species to find through the first year. This species is now widespread out in the fields.

### Northern Cardinal

This is another pattern species with for step 1 a total of 179 pairs in 1999 and 176 pairs in 2000. For step 2 there were 320 pairs in 2001 with 380 pairs in 2002. Step 3 involved 575 pairs in 2002 and 593 pairs in 2004. This species is now widespread out in the fields.

### Blue Grosbeak

This is another pattern species with step 1 involving 41 pairs in 1999 and 59 pairs in 2000. Step 2 involved 76 pairs in 2001 and 74 pairs in 2002. Step 3 involved 87 pairs in 2003 and 81 pairs in 2004. Unlike some of the other species the numbers never took off. It is breeding out in the fields.

## Indigo Bunting

In reality this is a pattern species but the population has been growing so fast that there are no steps! Its rate of growth was so fast that even though it started off with 30 less pairs than the Blue Grosbeak in 2004 there were 76 more pairs of Indigo Buntings. There were 11 pairs in 1999 with 32 pairs in 2000, 54 pairs in 2001, 65 pairs in 2002, 96 pairs in 2003 and a staggering 157 pairs in 2004. This species is now widespread out in the fields.

## Painted Bunting

This is another pattern species but it has not progressed to step 3 (not even by 2013 when this is being written). I have not knowingly seen females, just adult or immature males on territory. For step 1 there were eight in 1999 with nine in 2000. Step 2 involved 19 in 2001, 20 in 2002, 19 in 2003 and 22 in 2004. I have not found one out in the fields. This is not a breeding species but it is included because its behavior is the same.

## Dickcissel

Whilst the Yellow-breasted Chat was not known to nest in Central Florida this species is not meant to nest in Florida. Females are hard to locate so counts are of males on territory. Nests have been found, females and fledged young also noted. There were 13 males on territory in 1999 with eight in 2000, four in 2003 and four in 2004. With this exceptional species I am including even later records. In 2005 there were at least 143 males on territory with 11 females and later two fledged young. When not singing this species it is very hard to locate making it difficult to locate any adults or their young. Later in 2006 there were 14 males. In 2010 I am beginning to think of it as a resident, what more can I say. Zellwood always surprises and this is certainly an unexpected series of events.

## Red-winged Blackbird

The number of pairs appears to be totally dependent on the height and type of vegetation. If it is grass there are no pairs in contrast if the fields are full of woody plants with taller plants interspersed then there will be many pairs of Red-winged Blackbirds. The worst year was 1999 with 545 pairs and the best year was 2003 with 2,582 pairs. Some, if not many, of the nests may be destroyed by mowing. It is likely that in 2003 some 1,200 of the 2,582 nests were destroyed. The adults then congregate at the Sand Farm Cattail Marsh for a few days before leaving to nest again at a new location.

## Eastern Meadowlark

This species prefers the shorter grassed fields. So with more mowing the population grew. There were up to 26 pairs a year through to 2003 with 43 pairs in 2004.

### Common Grackle

This species nests in small colonies in the wetter woodlands. The population is small, in the range of 25 to 32 pairs in four years with higher counts of 45 pairs in 2001 and 2004. Why the two higher years? I have no idea.

### Boat-tailed Grackle

There are so many locations in the whole North Shore area for this species to nest that the number of colonies and their size is probably not significant. The colonies are either in cattails or in willows. The lowest count was that of 111 pairs in 2002 and the highest was that of 225 pairs in 1999. This species is an early nester.

### Brown-headed Cowbird

This is an increasing but unwelcome addition to the breeding birds of Zellwood. There were single pairs seen in 1999 and 2000 with three pairs in 2001, four pairs in 2002, five pairs in 2003 and eight pairs in 2004. To date the known “parents” are Northern Mockingbirds and Red-winged Blackbirds. Could this be the reason for the decline in the numbers of Northern Mockingbirds in the border habitats? Fledged young seen each year in early June.

### Orchard Oriole

This is the last pattern species with step 1 involving single pairs in 1999 and 2000. Step 2 involved ten pairs in 2001 and 15 pairs in 2002. Step 3 involved 26 pairs in 2003 and 22 pairs in 2004. Zellwood is right at the southern limit of this species’ breeding range, to have so many pairs here is really exceptional. Nests have been found (by others) and fledged young seen with their parents. Pairs are now breeding out in the fields where there are isolated mature trees.

### House Sparrow

Up to two pairs bred on the northern border in man-made structures. No pairs located in 2004 or since.

## **CAUTION**

Whilst this text was written in 2013 it is written as in the fall of 2004. There have been major changes to the habitat during the last few years with increased mowing and roller-chopping. Even these activities have now ceased. Most of the fields have had their surface soil buried four to six foot down. Two large tracts, Phases One and Two have been re-flooded.

There are now more not less breeding species. The only species lost are the Loggerhead Shrike and the House Sparrow.

What this appendix does show is just how adaptable most species are if they are given the opportunity to expand. Even species of concern like the Northern Bobwhite and the Eastern Meadowlark have done well.

**The following is a list of the species known to have bred (excepting the Painted Bunting) in all or any of the years 1999 to 2004 together with the number of pairs located in each year.**

SPECIES	1999	2000	2001	2002	2003	2004
Pied-billed Grebe	5				1	7
Anhinga		5				
American Bittern						1
Least Bittern	3	4	8	6	15	7
Great Blue Heron						5
Little Blue Heron		2				
Cattle Egret	413	103				
Green Heron	9	20	25	54	43	38
Fulvous Whistling-Duck	25	1				1
Wood Duck	1		1	2	1	1
Mallard	3	1				
Mottled Duck	12	13	7	12	4	
Bald Eagle	1	1	1	1	1	1
Cooper's Hawk		4	1	3	2	3
Red-shouldered Hawk	4	6	9	6	4	5
Red-tailed Hawk	6	11	6	6	8	6
Northern Bobwhite	40	38	65	89	125	87
King Rail				2	14	18
Purple Gallinule	21	23	17	40	51	54
Common Gallinule	104	129	126	146	214	305
American Coot	5					2

Killdeer	6	1	6	11		
Black-necked Stilt	6	7	18	30	1	1
Eurasian Collared-Dove			1	1	1	3
White-winged Dove					3	
Mourning Dove	32	14	29	23	22	26
Common Ground-Dove	40	59	116	98	236	191
Yellow-billed Cuckoo	7	10	16	26	48	49
Barn Owl	1	4		4	4	6
Great Horned Owl	2	5	7	9	8	13
Barred Owl	3	2	4	2	4	3
Common Nighthawk	5	4	13	8	12	16
Chuck-will's-widow	5	2	1	5	20	20
Red-bellied Woodpecker	27	39	58	56	76	94
Downy Woodpecker	12	14	31	37	39	38
Northern Flicker	5	5	10	12	10	18
Pileated Woodpecker	3	3	8	10	8	13
Great Crested Flycatcher	17	10	13	25	30	33
Loggerhead Shrike	6	5	5	6	6	5
White-eyed Vireo		5	3	13	14	16
Blue Jay	26	25	42	49	62	70
Fish Crow	6	11	6	4	6	10
Barn Swallow	25	48	52	44	34	36
Tufted Titmouse	3	3	7	9	16	16
Carolina Wren	79	69	153	162	185	171
Northern Mockingbird	55	51	59	62	61	60
Brown Thrasher	7	12	20	20	22	38
European Starling	16	11	8	11	9	7
Northern Parula	2	2	10	6	10	7
Yellow-breasted Chat		19	7	25	56	103
Eastern Towhee	10	48	72	91	206	207
Northern Cardinal	179	176	320	380	575	593
Blue Grosbeak	41	59	76	74	87	81
Indigo Bunting	11	32	54	65	96	157
[Painted Bunting]	8	9	19	20	19	22
Dickcissel	13	8			4	4
Red-winged Blackbird	545	1,109	932	826	2,582	1,537
Eastern Meadowlark	9	22	12	15	26	43
Common Grackle	25	26	45	32	26	45
Boat-tailed Grackle	225	134	152	111	164	154
Brown-headed Cowbird	1	1	3	4	5	8

Orchard Oriole	1	1	10	15	26	22
House Sparrow	1	1	1	2	1	
<b>Totals</b>	<b>2,117</b>	<b>2,428</b>	<b>2,665</b>	<b>2,770</b>	<b>5,193</b>	<b>4,477</b>
Less Painted Bunting males	8	9	19	20	19	22
Total breeding population	2,109	2,419	2,646	2,750	5,174	4,455
Less the Red-winged Blackbirds	545	1,109	932	826	2,582	1,537
Trend totals	1,564	1,310	1,714	1,924	2,592	2,918
Less the Cattle Egrets	413	103				
<b>Totals that are comparable</b>	<b>1,151</b>	<b>1,207</b>	<b>1,714</b>	<b>1,924</b>	<b>2,592</b>	<b>2,918</b>

To a degree the totals above do not give a clear picture so I have manipulated them, something that one is not meant to do. As I have made these manipulations transparent I hope they are acceptable.

I firstly took off the Painted Buntings as they were not actually breeding, that seems reasonable. I took off the Red-winged Blackbirds as their population was totally dependent on what man had done to the fields i.e. mowed or not mowed. Their numbers did not and could not indicate any trend. Finally I took off the Cattle Egrets as their population depended on whether they bred in the survey area or further south.

What I hope I am left with is the great bulk of the breeding population from which I could see any trends in the population i.e. steps 1 to 3. If you look at just the last line you can now see how the basic breeding population has been growing year on year and that the steps are clearly visible.

## APPENDIX D

### Butterflies

I have not kept a daily log of these insects. All I have recorded is the first date on which each species was seen in each calendar year. Thus the cycle is different from the bird report which runs from August 15 to August 14. Below I have listed all the species that have been seen from August 15, 1998 to December 31, 2003. I am however only detailing the records for the years 1999 to 2003.

Species	1999	2000	2001	2002	2003
Pipevine Swallowtail	2.9.99		5.27.01		
Polydamus Swallowtail	2.9.99	3.7.00	2.18.01	3.14.02	2.23.03
Zebra Swallowtail	3.19.99		6.10.01	4.24.02	3.24.03
Black Swallowtail	1.27.99	2.8.00	2.14.01	2.3.02	2.2.03
Giant Swallowtail	3.13.99	3.3.00	2.21.01	2.20.02	3.2.03
Eastern Tiger Swallowtail	2.9.99	2.16.00	2.21.01	2.20.02	1.2.03
Spicebush Swallowtail	3.23.99	3.7.00	2.28.01	3.6.02	3.24.03
Palamedes Swallowtail		9.10.00	3.11.01	3.27.02	6.16.03
Checkered White	1.1.99	1.1.00	1.14.01	2.3.02	3.19.03
Cabbage White	2.3.99	1.1.00	4.8.01	3.10.02	3.5.03
Great Southern White	1.1.99	1.11.00	2.28.01	2.6.02	2.15.03
Orange Sulphur		9.21.00	2.21.01	5.30.02	6.16.03
Southern Dogface	1.12.99		8.22.01	8.14.02	6.11.03
Cloudless Sulphur	1.7.99	1.1.00	2.7.01	1.16.02	2.15.03
Orange-barred Sulphur	5.4.99	4.6.00			
Large Orange Sulphur					5.29.03

<b>Species</b>	<b>1999</b>	<b>2000</b>	<b>2001</b>	<b>2002</b>	<b>2003</b>
Barred Yellow	3.19.99	1.4.00	2.25.01	1.20.02	1.22.03
Little Yellow	2.9.99	1.11.00	5.4.01	1.24.02	2.23.03
Sleepy Orange	2.3.99	1.1.00	2.14.01	2.3.02	1.30.03
Dainty Sulphur	3.18.99	1.1.00	4.6.01	2.24.02	3.5.03
Great Purple Hairstreak				5.6.02	5.15.03
Banded Hairstreak				5.30.02	
White M Hairstreak	2.3.99	1.18.00	12.21.01	5.1.02	
Gray Hairstreak		4.19.00	5.20.01	1.27.02	5.15.03
Red-banded Hairstreak		8.30.00	3.27.01		
Cassius Blue	1.29.99	3.25.00			
Ceraunus Blue			5.8.01	4.17.02	
American Snout	3.16.99	3.30.00	2.18.01	3.6.02	2.19.03
Gulf Fritillary	1.10.99	1.1.00	1.14.01	1.7.02	1.2.03
Zebra	1.27.99	1.1.00	9.23.01	1.16.02	1.5.03
Variegated Fritillary		4.6.00	5.27.01	5.9.02	4.27.03
Phaon Crescent		3.30.00	7.29.01	6.2.02	5.7.03
Pearl Crescent	8.13.99	1.14.00	2.21.01	1.24.02	
Question Mark	4.6.99	3.14.00	5.6.01	3.17.02	4.21.03
American Lady	2.9.99	1.11.00	2.25.01	2.6.02	3.5.03
Painted Lady	1.11.99	1.1.00	1.24.01	1.7.02	1.11.03
Red Admiral	1.1.99	1.1.00	1.1.01	1.7.02	1.11.03
Common Buckeye	1.11.99	1.1.00	2.7.01	2.3.02	1.5.03
White Peacock	1.1.99	1.1.00	6.10.01	3.17.02	4.21.03
Red-spotted Purple	4.14.99				
Viceroy	3.16.99	1.7.00	2.28.01	1.24.02	1.9.03
Hackberry Emperor		5.30.00	4.4.01	4.10.02	6.11.03
Tawny Emperor	4.9.99	3.27.00	4.6.01	4.7.02	4.13.03
Carolina Satyr	3.18.99	1.4.00	2.28.01	7.25.02	4.24.03
Monarch	1.11.99	1.1.00	3.11.01	1.16.02	1.2.03
Queen	1.12.99	1.1.00	2.28.01	2.3.02	1.5.03
Silver-spotted Skipper	3.30.99	3.7.00	3.11.01	3.24.02	8.20.03
Long-tailed Skipper	2.9.99	1.4.00	3.22.01	4.7.02	4.24.03
Dorantes Skipper	8.20.99		8.22.01	2.3.02	5.26.03
Southern Cloudywing		5.13.00			
Confused Cloudywing	4.14.99		2.28.01		
Juvenal's Duskywing		5.4.00			
Horace's Duskywing	2.9.99	4.30.00	5.4.01	4.10.02	4.24.03
Zarucco Duskywing			4.22.01		
Common Checkered-Skipper		2.11.00	2.21.01	2.17.02	2.23.03

<b>Species</b>	<b>1999</b>	<b>2000</b>	<b>2001</b>	<b>2002</b>	<b>2003</b>
Tropical Checkered-Skipper	4.1.99	1.1.00	2.7.01	2.3.02	1.30.03
Swarthy Skipper			7.11.01		
Clouded Skipper	5.1.99	1.11.00	2.28.01	6.16.02	4.27.03
Southern Skipperling	5.29.99	2.23.00	5.2.01	2.3.02	4.24.03
Fiery Skipper	5.1.99	1.1.00	3.22.01	1.24.02	3.26.03
Whirlabout	3.30.99	1.1.00	7.4.01	6.10.02	
Southern Broken-Dash					5.21.03
Northern Broken-Dash		6.30.00			
Sachem	1.29.99	5.2.00		5.30.02	3.24.03
Dun Skipper				7.3.02	
Eufalia Skipper		4.26.00		7.31.02	
Twin-spot Skipper	5.29.99	1.7.00	4.29.01	5.12.02	
Brazilian Skipper					8.27.03

There were 68 species recorded from August 15, 1998 to December 31, 2003

## APPENDIX E

### Dragonflies and Damselflies

I have not kept a daily log of these insects. All I have recorded is the first date on which each species was seen in each calendar year. Thus the cycle is different from the bird report which runs from August 15 to August 14. Below I have listed all the species that have been seen during the survey from August 15, 1998 to December 31, 2003. Here I detail the first dates for the years 1999 to 2003.

Species	1999	2000	2001	2002	2003
Ebony Jewelwing	6.14.99				
Common Spreadwing		4.30.00			
Variable Dancer		5.30.00	5.8.01	6.10.02	6.1.03
Familiar Bluet	5.14.99	3.18.00		5.20.02	
Purple Bluet	4.14.99				
Atlantic Bluet	5.4.99	1.4.00			5.18.03
Florida Bluet		3.21.00	2.25.01		5.29.03
Vesper Bluet			3.25.01		
Citrine Forktail	3.23.99	2.16.00	4.16.01	2.3.02	2.23.03
Fragile Forktail	2.10.99	1.1.00	2.11.01	1.24.02	2.19.03
Rambur's Forktail	3.23.99	1.11.00	2.21.01	1.24.02	3.5.03
Southern Sprite	5.10.99	5.2.00		4.21.02	5.29.03
Duckweed Firetail		4.19.00	4.8.01	5.1.02	5.7.03
Comet Darner	2.19.99				9.10.03
Common Green Darner	1.1.99	1.1.00	1.17.01	1.3.02	1.2.03
Blue-faced Darner	7.4.99	3.7.00	5.4.01		
Regal Darner	3.18.99	4.15.00	3.27.01	3.19.02	4.13.03

<b>Species</b>	<b>1999</b>	<b>2000</b>	<b>2001</b>	<b>2002</b>	<b>2003</b>
Swamp Darner	5.1.99	3.7.00	3.22.01	3.24.02	3.24.03
Twilight Darner	4.1.99	1.21.00	6.10.01	1.20.02	5.4.03
Cyrano Darner	4.23.99	8.6.00	7.29.01		3.29.03
Phantom Darner		1.1.00	8.29.01	8.11.02	
Two-striped Forceptail	5.1.99	5.16.00	4.16.01	5.15.02	5.15.03
Gray-green Clubtail	3.23.99	5.2.00	3.22.01		5.12.03
Cypress Clubtail	4.1.99			3.10.02	
Dragonhunter			7.27.01		
Prince Baskettail	3,23.99	3.18.00	3.22.01	3.19.02	3.24.03
Sepia Baskettail	5.14.99	3.18.00	7.29.01		5.4.03
Florida Baskettail	2.10.99	1.18.00		1.27.02	1.11.03
Four-spotted Pennant	4.20.99	3.18.00	4.16.01	3.31.02	4.13.03
Amanda's Pennant		7.4.00			
Halloween Pennant	4.20.99	3.21.00	5.6.01	7.3.02	3.24.03
Banded Pennant		6.3.00	5.8.01		6.26.03
Faded Pennant		3.10.00		7.3.02	6.1.03
Scarlet Skimmer	1.1.99	1.1.00	7.18.01	3.24.02	4.24.03
Pin-tailed Pondhawk		3.25.00	4.19.01	5.6.02	3.12.03
Eastern Pondhawk	1.29.99	2.29.00	1.17.01	1.24.02	3.2.03
Little Blue Dragonlet	6.22.99	3.18.00	5.4.01	4.28.02	4.6.03
Blue Corporal		3.3.00			
Golden-winged Skimmer	4.20.99	4.6.00	4.8.01	4.10.02	4.27.03
Bar-winged Skimmer					4.24.03
Slaty Skimmer	3.25.99	4.19.00	4.6.01	4.14.02	4.24.03
Needham's Skimmer			5.20.01	4.17.02	
Great Blue Skimmer		8.27.00	6.7.01	6.10.02	6.11.03
Marl Pennant			5.20.01		
Hyacinth Glider	2.17.99	3.14.00	3.11.01	3.22.02	3.12.03
Roseate Skimmer	1.1.99	1.1.00	1.28.01	1.24.02	3.24.03
Blue Dasher	2.10.99	2.29.00	2.25.01	2.3.02	3.5.03
Wandering Glider	5.1.99	1.1.00	4.2.01	3.22.02	3.9.03
Spot-winged Glider	4.9.99	8.27.00	5.24.01	9.29.02	5.26.03
Eastern Amberwing	2.10.99	1.18.00	2.21.01	3.19.02	3.12.03
Carolina Saddlebags	1.29.99	2.23.00	2.11.01	2.10.02	1.2.03
Black Saddlebags	1.11.99	3.27.00	4.2.01	3.6.02	2.26.03
Red Saddlebags	4.9.99		5.20.01	7.17.02	4.16.03

So far during the survey a total 53 species have been identified, of these 13 were damselflies.

## APPENDIX F

### Amphibians and Reptiles

I have not kept a daily log of these creatures. All I have recorded is the first date on which they were seen in each calendar year. Thus the cycle is different from the bird report which runs from August 15 to August 14. Below I have listed the species seen from August 15, 1998 to December 31, 2003. I have only detailed those seen in the years 1999 to 2003.

Species	1999	2000	2001	2002	2003
Southern Toad				3.17.02	1.30.03
Greenhouse Frog	5.10.99			3.24.02	2.15.03
Southern Cricket Frog	5.10.99		8.5.01	8.11.02	5.29.03
Spring Peeper					1.2.03
Green Treefrog				3.14.02	2.23.03
Barking Treefrog	4.6.99	7.23.00	4.6.01	4.24.02	3.9.03
Squirrel Treefrog	5.10.99		2.28.01	4.28.02	2.26.03
Cope's Gray Treefrog				3.14.02	1.2.03
Southern Chorus Frog			6.20.01		2.15.03
Ornate Chorus Frog			2.11.01		2.26.03
Little Grass Frog	6.29.99	6.30.00	2.14.01	2.3.02	2.9.03
Eastern Narrow-mouthed Frog	4.23.99	5.2.00	5.27.01	4.28.02	4.27.03
Bull Frog	4.23.99	4.6.00	4.11.01	3.24.02	3.5.03
Pig Frog	3.19.99	3.21.00	2.25.01	3.10.02	1.5.03
Bronze Frog	5.25.99		4.11.01		4.6.03
Southern Leopard Frog	4.23.99	1.1.00	1.17.01	1.7.02	1.2.03

<b>Species</b>	<b>1999</b>	<b>2000</b>	<b>2001</b>	<b>2002</b>	<b>2003</b>
American Alligator	1.1.99	1.1.00	1.4.01	1.3.02	1.2.03
Common Snapping Turtle	5.7.99	4.15.00	2.18.01	2.17.02	2.15.03
Stinkpot			5.8.01		
Loggerhead Musk Turtle	11.3.99				
Striped Mud Turtle	10.29.99	3.10.00	1.24.01	3.10.02	
Box Turtle	6.19.99	5.2.00			
Florida Cooter	1.27.99	1.1.00	1.17.01	2.17.02	2.19.03
Florida Redbelly Turtle	1.1.99	1.1.00	1.7.01	1.10.02	1.7.03
Chicken Turtle	1.19.99	2.25.00	1.14.01	3.22.02	3.19.03
Gopher Tortoise		7.30.00	7.4.01		7.4.03
Florida Softshell	1.1.99	1.4.00	1.14.01	1.20.02	1.2.03
Green Anole	3.16.99	2.11.00	2.11.01	1.24.02	1.2.03
Brown Anole	3.13.99	2.11.00	2.14.01	2.3.02	1.19.03
Six-lined Racerunner	5.18.99	3.3.00	4.6.01	3.17.02	
Ground Skink		4.15.00			
Broad-headed Skink	4.26.99		2.25.01		
South-eastern Five-lined Skink	3.30.99	6.6.00		3.17.02	4.24.03
Mole Skink	3.25.99	7.23.00			
Eastern Glass Lizard			8.2.01		3.19.03
Island Glass Lizard	6.19.99				
Florida Green Water Snake			2.7.01	3.24.02	
Brown Water Snake	1.27.99				5.4.03
Banded Water Snake	2.10.99	1.1.00	2.11.01	2.17.02	3.12.03
Brown Snake					4.2.03
Striped Crawfish Snake	11.12.99	7.19.00			
Garter Snake		6.14.00	8.29.01	4.28.02	5.4.03
Ribbon Snake	10.8.99	1.14.00	8.16.01	3.24.02	4.30.03
Racer	5.25.99	3.30.00	3.25.01	3.17.02	2.12.03
Rough Green Snake		10.9.00	5.6.01		
Corn Snake	7.12.99	5.7.00	4.11.01	3.17.02	5.7.03
Rat Snake	4.23.99	3.27.00	4.11.01	3.17.02	3.12.03
Cottonmouth	6.22.99	3.25.00		6.2.02	9.10.03
Eastern Diamondback					3.9.03

There were 16 Amphibians and 33 Reptiles seen since August 15, 1998.

## APPENDIX G

### Mammals

I have not kept a daily log of these mammals. All I have recorded is the first date on which they were seen in each calendar year. Thus the cycle is different from the bird report which runs from August 15 to August 14. Below I have listed all the species that have been seen from August 15, 1998 to December 31, 2003. I have only detailed those seen in the years 1999 to 2003.

Species	1999	2000	2001	2002	2003
Virginia Opossum	4.26.99	2.21.00	1.1.01	1.24.02	1.2.03
Southern Short-tailed Shrew	8.27.99	2.29.00	7.15.01		1.2.03
Nine-banded Armadillo	3.18.99	12.6.00		5.30.02	4.30.03
Eastern Cottontail	4.26.99	1.14.00	1.1.01	1.24.02	1.2.03
Marsh Rabbit	5.22.99	2.29.00	1.1.01	1.7.02	1.2.03
Gray Squirrel	1.7.99	1.11.00	3.11.01	2.6.02	1.5.03
Southern Flying Squirrel	6.25.99	3.14.00	1.14.01	9.22.02	1.9.03
Marsh Rice Rat	9.8.99	4.11.00			
Eastern Harvest Mouse				7.3.02	
Cotton Mouse	7.6.99	5.16.00			
Hispid Cotton Rat	2.19.99	1.1.00	2.7.01	1.20.02	1.2.03
Round-tailed Muskrat				9.22.02	4.27.03
Norway Rat	4.17.99	5.21.00	8.22.01		
House Mouse		10.20.00			
Coyote	12.30.99	1.21.00	3.11.01		1.19.03
Red Fox	3.18.99	1.7.00	1.21.01	1.13.02	2.26.03
Gray Fox	5.18.99	2.11.00	3.18.01		4.27.03
Raccoon	1.29.99	1.1.00	1.4.01	1.7.02	1.5.03

<b>Species</b>	<b>1999</b>	<b>2000</b>	<b>2001</b>	<b>2002</b>	<b>2003</b>
Long-tailed Weasel				5.23.02	
Spotted Skunk	3.18.99				
River Otter	1.1.99	1.7.00	1.1.01	1.10.02	1.2.03
Bobcat	3.16.99	5.21.00	1.1.01	1.3.02	1.11.03
Florida Panther					5.15.03

A total of 23 species have been seen since August 15, 1998.