


**2023**



# Annual **REPORT**

**PROTECTING WILDLIFE THROUGH FIELD  
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## President's Report



*CVWO President Brian Taber*

Our long-time friend, volunteer, and faithful supporter **Bettye Fields** of Newport News passed away at 97 in 2021, and she remembered the Observatory in her will with a very generous gift. Our Board is discussing ways to make a lasting impact with her gift, including possible land purchase to promote wildlife conservation. Other ideas include grants to students and wildlife organizations and for educational signage.



*Bettye Fields. Photo provided by Brian Taber*

Bettye volunteered with the Observatory at Kiptopeke and she also volunteered with the Williamsburg Bird Club, Hampton Roads Bird Club and the Virginia Society of Ornithology, conducting spring counts, Christmas counts and more. She was honored with an Observatory Service Award in 2007. She supported our Kiptopeke Challenge team birding competition from the very beginning in 1995, always including a hand-written "good luck!" message.

We will report more on the details about the usage of her wonderful gift as opportunities develop.

**Joe Beatty** was an outdoorsman and great volunteer, not only for the Observatory but for a number of other organizations, including the Eastern Shore of Virginia National Wildlife Refuge. He passed away in September 2023. Joe helped the Observatory on a regular basis for many years at the Songbird Banding Station at Kiptopeke, where he was a skilled net-runner and educator. He helped out daily at the Kiptopeke Hawkwatch, where he helped find distant birds and cheered everyone with his vast knowledge. He also gave cultural and natural history tours all around Northampton County. He quietly did maintenance on the boardwalk at the Northampton County Park that eventually became Edward S. Brinkley Preserve. He was a career public school teacher and administrator in Montgomery County, Maryland.



*Joe Beatty with Anna Stunkel. Photo by Steve Thornhill*

Our four-year Kiptopeke Hawkwatcher Anna Stunkel reflects, "Joe was so welcoming to me and to our educators. He delighted in being a tour guide, showing us the most interesting spots on the Shore." The Kiptopeke hawkwatching community dearly misses and fondly remembers Joe, who was 77 years old.

*Brian Taber*

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# Fall 2023 Kiptopeke Hawkwatch Report

*By Sage Church*



*Visitors at the Kiptopeke Hawkwatch Platform. Photo by Brian Taber*

The Delmarva Peninsula is a South facing peninsula that comes to a point in coastal Virginia. This peninsula acts as a funnel for Southbound migrating birds during the fall. At the Southern tip of the peninsula is Kiptopeke State Park where the Kiptopeke Hawkwatch has been observing and counting migratory raptors since 1977. This fall was the 47<sup>th</sup> consecutive year of the Kiptopeke hawkwatch. Full time hawkcounters have been counting since 1995 between the months of September and November.

This year the counting season began on August 24<sup>th</sup> and ended on November 30<sup>th</sup>. Raptors were counted every day during this period except for 5 days that were weathered

out for a total of 94 count days. Two of the weather days were due to the state park closing for a tropical storm, although counting was possible for most of that period. 853.5 hours were spent counting this fall for an average of just over 9 hours per day. 20,705 raptors were counted throughout the fall. This was the first 20,000 raptor season since 2016. This season was also significantly better than the 10-year average of 18,294 raptors. Sixteen raptor species, not including vultures, were recorded from the hawkwatch this season. Over 1,000 individuals were recorded for 6 different species. There were 4,962 Sharp-shinned Hawks, 3,823 American Kestrels, 3,304 Ospreys, 2,134 Broad-winged

Hawks, 1,942 Cooper's Hawks, and 1,785 Merlins.

### **August**

Eleven species and 306 individuals were seen in 59.25 hours in August.



*Andrew Rapp, left, and Sage Church, right, on the hawkwatch platform. Photo by Nancy Barnhart*

### **September**

Twelve species and 6,281 individuals were seen in 264.83 hours in September. This September total is significantly lower than the 10-year average of 7,670 raptors, and this is apparent and elaborated upon in some of the species' accounts.

### **October**

Thirteen species and 12,774 species were seen in 330.75 hours in October. This October total is significantly higher than the 10-year average of 9,399, but it is very similar to the best October totals since 2000 with 14 of the last 22 seasons having October totals between 10,000 and 15,000.

In the first three days of October over 1,000 individuals were seen each day with daily totals of 1,905, 1,721, and 1,446. These three days alone accounted for 5,072 individual raptors which was 24.5% of the total number of raptors observed this season.

In the 14-day period of September 30th through October 13th 10,664 raptors were observed, accounting for 51.5% of the total number of raptors observed this season.

### **November**

Fourteen species and 1,344 individuals were seen in 198.75 hours in November. This November total is somewhat higher than the 10-year average of 1,197. Only two seasons since full time counting began have had less than 1,000 raptors in November.

### **Species Accounts**

**Osprey** make up the bulk of our first 2 weeks of the season typically and then start to taper off as the accipiters and falcons start to pick up in late September. Peak movements for Osprey this season were between September 12th and September 21st with 1,112 (33.7%) of our 3,304 individuals seen during that time with our single day high count for the season being 209 recorded on September 27th. This season had slightly more Osprey than the 10-year average of 2,900 individuals. An Osprey was observed on every single day of the count until the 26th of October. There was a surprise 10 Osprey day on November 10th after not having a double digit Osprey day since October 18th.

**Bald Eagles** are a tricky species to count here at Kiptopeke. Many recognizable immature individuals pass by the platform multiple times a day/multiple days in a row. Therefore, it is important to be cautious when it comes to counting Bald Eagles and we only count birds that are moving with intent and that we do not recognize. That being said, every counter has to make judgment calls on some of these Bald Eagles leaving more room for error when it comes to counting them than with any other species. With this in mind, 548 migratory Bald Eagles were counted this fall which is significantly higher than the 10-year average of 469 individuals. November 3rd was the best Bald Eagle day with 40 individuals, there was a steady stream of birds for almost 2 hours that morning.



*Bald Eagles with tangling talons. Photo by Steve Thornhill*

757 **Northern Harriers** were observed this season. This was the best harrier year for Kiptopeke since 2010 and the first year with more than 673 birds since then. This season had significantly more harriers than the 10-year average of 522 individuals. The harrier flight was steady throughout the season but peaked in the first 5 days of October with 154

individuals. This 5-day stretch made up 20% of the season total for harriers. The peak Northern Harrier flight came on October 2 with 49 individuals. August had 19 harriers, September had 167, October had 420, and November had 151. The percentage of total harriers per month were 3, 22, 55, and 20, respectively. The September numbers for Northern Harriers were very similar to past years, but both October and November had significantly higher numbers of harriers than most other seasons in the past 20 years.

4,962 **Sharp-shinned Hawks** passed over the hawk platform this fall. This was almost the same as the 10-year average of 4,923. However, Sharp-shinned Hawks are one species that has experienced a severe decline since the start of this hawkwatch and others like it. This species is a great example as to why hawkwatches like Kiptopeke are so important in understanding the trends of raptor populations. This year may have been on par with the 10-year average for this species but compared to the 20-year average of 6,001 we can see that there has been a steep decline in Sharp-shinned Hawks in recent years. Many seasons even further back had significantly higher numbers of Sharp-shinned Hawks. Even without a full-time counter until the 1995 season, many of the pre 2000s seasons had over 10,000 Sharp-shinned Hawks a season. The peak flight window for this species was September 30th through October 13th with 1,181 individuals on the 1st of October alone. 3,532 Sharp-shinned Hawks passed through during this 14-day period, accounting for 71.2% of the season total for this species. Sharp-shinned Hawks as a species accounted for 24% for the total raptors counted this fall. The 10-year average for the proportion of total

raptors that are Sharp-shinned Hawks is 26.3% with the most recent five years having much lower proportions of Sharp-shinned Hawks than the previous five. This is reflected in a noticeable drop in total Sharp-shinned Hawks in recent years, and a drop in total raptors as well.

This season 1,942 **Cooper's Hawks** passed over the platform. This total was almost identical to the 10-year average of 1986. The peak flight for Cooper's Hawks was between September 30th and October 13th with 952 individuals, making up 49% of the total Cooper's Hawks for the season. The peak single day count was 145 on October 11th. During most of this period there were significantly more Sharp-shinned Hawks than Cooper's Hawks on each day, but as the Sharp-shinned Hawk peak started to wane the proportions got close to a 1:1 ratio between the two species. There were only three days with over 100 Cooper's Hawks this fall.

We had one surprise immature **American Goshawk** on November 3rd! Last season was a great goshawk season with 3 individuals, but it is never a guarantee that any will pass through in each fall. The 10-year average for goshawks is 1.5 with zero in 5 of those 10 seasons.

**187 Red-shouldered Hawks** this season made for the 2nd best season for this species in the history of the Kiptopeke hawkwatch. The 2009 season had 194 individual Red-shouldered Hawks. This season's total was well above the 10-year average of 104. The peak single day total for this species was 23 on November 3<sup>rd</sup>. There were 4 days this season with 10 or more Red-shouldered

Hawks. 120 (64.2%) of the 187 individuals were recorded in November.

As a coastal hawkwatch site, **Broad-winged Hawks** are not usually seen in large numbers, but 2,134 Broad-winged Hawks were a big highlight of this season.



*Broad-winged Hawk. Photo by Steve Thornhill*

This was one of three seasons in the history of Kiptopeke hawkwatch to have over 2,000 Broad-winged Hawks. The other two seasons with over 2000 Broad-winged Hawks were 1995 and 1996. This season's total was over double the 10-year average of 900 individuals a season. The average since full time counting began in 1995 is 1,152 individuals. Most of the increase in that average compared to the 10-year average is due to abnormally high numbers of Broad-winged Hawks in 1995 and 1996. The majority of this season's Broad-winged Hawks came between September 30th and October 4<sup>th</sup> with over 100 individuals on each of those days. 1,401 Broad-winged Hawks were counted during that 5-day period. This made up 66% of the entire season total for this species. On October 3<sup>rd</sup> there were 668 Broad-winged Hawks, this was 31.3% of the season total. October 3<sup>rd</sup> marked the highest single day total of Broad-winged Hawks from Kiptopeke since 1996 and was more than are

counted in an entire season many years. The rarest bird of the season came on October 23<sup>rd</sup> when a Dark Morph Broad-winged Hawk was spotted soaring well East of the hawkwatch with a group of vultures! This individual marked the first confirmed record of a Dark Morph Broad-winged Hawk in the state of Virginia and is one of very few ever recorded from East Coast hawkwatch sites.

585 **Red-tailed Hawks** were recorded this season. This is similar to the 10-year average of 529 individuals. Most of these individuals were recorded in the month of November with 339 individuals, making up 58% of the season total. The peak single day total for this species was 54 on November 3<sup>rd</sup>.

Two **Rough-legged Hawks** passed over Kiptopeke this fall. An immature light morph bird made two passes on October 18<sup>th</sup> and a dark morph bird came through on November 1<sup>st</sup>. This species has become increasingly difficult to see at Kiptopeke and in much of the East in the last decade, so it was a real treat to get two this year. There have only been 8 other individuals in the past 10 seasons, with a high count of 4 in 2017. This season's Rough-legged Hawks were the 37<sup>th</sup> and 38<sup>th</sup> ever recorded from this site. Both of this season's individuals came on Northwest winds after cold fronts.

One **Swainson's Hawk** graced the platform this fall on October 23<sup>rd</sup>. This bird was just an hour or so behind the much rarer dark morph Broad-winged Hawk. Swainson's Hawks are a rare but somewhat regular fall migrant on East Coast hawkwatches, but any year with one is a good year. The 10-year average for this species is 1.1, with none in three of those seasons. This year's individual was the 49<sup>th</sup>

individual ever recorded from the Kiptopeke hawkwatch.

**Golden Eagles** were one of the highlights of this season. The first one was seen on November 1<sup>st</sup>, and there was at least one on each of the first 6 days of November. The season ended with 18 total Golden Eagles, the first double digit year since 2017 and tied for the 3<sup>rd</sup> highest total in the history of the Kiptopeke hawkwatch. The 10-year average of 6.3 individuals was almost tripled this season. Seventeen of these individuals were hatch year birds and one was a subadult. Each bird was carefully studied and photographed to ensure that they were different individuals.

The **American Kestrel** flights started off very slow this season with only 1,029 kestrels in September making this the lowest September total for American Kestrels in the history of the count. 2,721 American Kestrels in October is the highest October count for this species since 1999 and greatly helped the season totals for this species. In total 3,823 American Kestrels were counted this year which was just slightly above the 10-year average of 3,649 individuals. The kestrel numbers over the past 10 years are very consistent with very little variation and this year fit in despite the delayed peak flight period. 1,463 kestrels were recorded in the first 8 days of October, accounting for 38% of the season total. A secondary peak between October 11<sup>th</sup> and 15<sup>th</sup> produced 859 more kestrels which was another 22.5% of the season total. There were 13 total days with over 100 kestrels with the peak single day count of 473 on October 2<sup>nd</sup>. At least one kestrel was seen every count day between August 25<sup>th</sup> and November 6<sup>th</sup>.



1,785 **Merlins** were counted this season. This was significantly higher than the 10-year average of 1,495 individuals. Unlike some species, Merlin numbers have only dropped off slightly since the late 1990s, with rather consistent annual totals since full time counting began. Peak Merlin movements this season came between September 27<sup>th</sup> and October 5<sup>th</sup> with 847 individuals during that 9-day period. This accounted for 47.5% of the total Merlin numbers this season. There were 4 days with over 100 Merlins this season, including an incredible season high count of 273 individuals on September 27<sup>th</sup>.

648 **Peregrine Falcons** this season was 14% lower than the 10-year average of 754 individuals. The peak flight period for this species this season was October 1<sup>st</sup> through 13<sup>th</sup> with 512 individuals during that period. This accounted for 79% of the season total. The peak single day total for the season was on October 13<sup>th</sup> with 93 individuals.

Four **Mississippi Kites** were counted this season. One in August and 3 in mid-September. This was slightly above the 10-year average of 2.6 individuals, but this average does not accurately represent the trends of Mississippi Kites at this site. This is a species that has been expanding Northward in recent years. A Mississippi Kite was first recorded at this hawkwatch site in 1998 and then again in 2001. There was not another Mississippi Kite record at Kiptopeke until 5 were seen in the 2015 season. Since then, they have been nearly annual, and will likely only continue to increase. There were 28 total records of this species from Kiptopeke before this season with 10 of those being in 2020.

## Non-Raptor Observations

It was also an excellent year for many other species from the hawk platform this fall. A total of 188 species were seen from the hawk platform this year. A few major highlights included:

- 2<sup>nd</sup> ever Common Raven for the Eastern Shore of Virginia,
- 2<sup>nd</sup> Roseate Spoonbill for the hawkwatch,
- 2<sup>nd</sup> Anhinga for the hawkwatch,
- 2 Buff-breasted Sandpipers,
- Western Kingbird,
- 2 Ash-throated Flycatchers,
- Clay-colored Sparrow.

Notable high counts from the hawkwatch this season included:

- 4,118 Barn Swallows on August 27<sup>th</sup>
- 88 Cliff Swallows on September 7<sup>th</sup>
- 63 Green Herons on September 14<sup>th</sup>
- 2,313 Northern Flickers on October 1<sup>st</sup>
- 14 American Golden-Plovers on October 6<sup>th</sup>
- 460 Fish Crows on November 11<sup>th</sup>
- 12,767 American Robins on November 12<sup>th</sup>
- 348 American Pipits on November 15<sup>th</sup>

Also of note was a Common Nighthawk on November 4-6 which represents a new late date for the state of Virginia.

Andrew Rapp and I also gathered data on migratory dragonflies this fall. This is baseline data, but we are excited to see what we can learn about their migratory patterns. To learn

more about this project please read Andrew's comprehensive report on dragonflies.

This season was a truly incredible experience with too many amazing birds to highlight and wonderful people to thank, but I will give it my best effort. First off, I want to thank Brian Taber, Nancy Barnhart, and the Coastal Virginia Wildlife Observatory for providing me with the opportunity to count raptors at Kiptopeke this fall. The amazing work that CVWO does, and the people that keep it going, are truly inspiring. I also cannot thank my co-counter Andrew Rapp enough, for all the hours he put in alongside me this fall, while also conducting morning flight counts and tagging monarchs.



*Smiling faces of volunteers, friends, and visitors on the Kiptopeke Hawkwatch Platform. Photo provided by Nancy Barnhart*

The Kiptopeke Hawkwatch has one of the most amazing communities around it that I have ever had the privilege of being a part of, and I want to thank the many volunteers, friends, and visitors who spent time on the here this fall. This season would not have been what it was without this community. A special thank you to Bob Ake, Paul Anderson, Harry Armistead, Mario Balitbit, Rudy Cashwell, Lynn Davidson, Betsy Foster, Chris Foster, Wes Hetrick, Deborah Humphries, Rose Leong, Scott McConnell, Adrianna Nelson, Tracy Tate, Steve Thornhill, Wayne Valentine, Hal Wierenga, and Kent Woodruff.

Funding for the seasonal staff at the Hawkwatch was provided in part from the Mary Pulley Wildlife Preservation Fund of the Mathews Community Foundation.

I would also like to thank Sean Dixon and Kiptopeke State Park for their continued support and collaboration. I hope to see everyone back on the platform next fall.

# 2023 College Creek Hawkwatch

*By Brian Taber*

This was the 27th consecutive late winter and spring season of the College Creek Hawkwatch, located on the James River, 3 miles southeast of Williamsburg, conducted by Coastal Virginia Wildlife Observatory. It's the only late winter and spring hawkwatch annually run in Virginia. It was conducted from February 28 through May 31. The hawkwatch completed 82 days (4th highest) and 228.25 hours (2nd highest). The total of 2708 birds is the highest. The species total was 14, which is the average.

The protocol remained the same as in the previous 26 seasons: a daily watch was conducted, weather permitting, between about 9 a.m. and 1 p.m., Eastern Standard Time. This has been shown to be the period when hawks and vultures typically cross the river, apparently taking advantage of the air warming in the morning. Attempts to see birds crossing earlier and later in the day have not been met with success. Also, these mostly morning counts regularly tend to show these flights both beginning and ending, usually with a bell-shaped curve. All hawks and vultures crossing the river headed north were tallied.

The biggest days were 217 on Mar 5, which was the 4<sup>th</sup> biggest day ever; 176 on Mar 7; 148 on Mar 1; 143 on Mar 24 and 132 on Mar 6. The 1<sup>st</sup> week in March was by far the best week of the season. There were 7 days of 100+ birds this season, which compares to 3 such days last year and 11 the year before that.

The season ended on an unusual stretch of north, northeasterly, and easterly winds. Typical winds are southwest. Beginning on May 14, the final 15 days had north, northeasterly, or easterly winds on all but 1

day. Daily totals were under 20 on all but 2 days.

Species accounts; compared to all 27 years:

- Black Vultures, at 120, were 6<sup>th</sup>, the highest all-time.
- Turkey Vultures at 2236 was all-time highest and accounted for 83% of the total.
- Ospreys at 95 were 2<sup>nd</sup> lowest since 2003. Before that, coverage and totals were much less, no explanation for the apparent decrease.
- Bald Eagles at 106 were 10<sup>th</sup> highest.
- Northern Harriers at 27 were 15<sup>th</sup> best.
- Sharp-shinned Hawks at 24 were tied for 3<sup>rd</sup> lowest, continuing a slow recent trend.
- Cooper's Hawks at 30 were 2<sup>nd</sup> best and the 1<sup>st</sup> time Cooper's outnumbered Sharp-shinned Hawks.
- Red-shouldered Hawks at 16 were all-time best.
- Broad-winged Hawks at 9 were tied for 11<sup>th</sup> best.
- Red-tailed Hawks at 27 tied for 9<sup>th</sup> lowest ever. Might they be staying farther north?
- American Kestrels at 9 were 3<sup>rd</sup> lowest. Only 1 day recorded more than 1. It's a species of concern across the east.
- Merlins at 4 is right on the 10-year average.
- Peregrines, at 1, are not seen annually.
- Mississippi Kite was 2; the average is 1.

Monthly totals:

- March with 1845 birds was all-time best and propelled the season with 68% of the total.
- April at 553 was 11th<sup>th</sup> best.
- May at 296 was 8th best.

Birds per hour by month:

- February was 4
- March was 19
- April was 8
- May was 5

Birds per hour for the season was 11.9.

The 1,000<sup>th</sup> bird of the season, a milestone we track, was seen on March 15, the earliest date for that. The season was also earliest to reach 2,000 on April 5.

Adult Bald Eagles were regularly seen overhead and over Kingsmill and Hog Island, presumably breeding birds, which again caused us to be very conservative. No adult Bald Eagles were recorded as migrating.

Another interesting way of looking at the data is to see on how many days a particular species was recorded. The numbers below show those days, out of a total of 82 days of coverage:

- Black Vulture recorded on 35 days
- Turkey Vulture 72
- Osprey 38
- Bald Eagle 44
- Northern Harrier 18
- Sharp-shinned Hawk 17
- Cooper's Hawk 22
- Red-shouldered Hawk 9
- Broad-winged Hawk 7
- Red-tailed Hawk 16
- American Kestrel 8
- Merlin 4
- Peregrine Falcon 1
- Mississippi Kite 2

The non-raptor highlights included American White Pelicans on many dates; Tundra Swan flyovers on several dates; Black-bellied Plovers and Black Terns on May 19 and May 22; Glossy Ibis and Sandhill Crane over Hog Island on April 16; Ruddy Turnstone on May 18. Most unusual were Bottlenose Dolphins on April 15, May 11, and May 19.

The 2023 daily totals were entered into the database at Hawkcount.org, which also sends the data to eBird.

There were visitors on many days from several states and countries. We handed out brochures and answered questions. Posts were again made regularly to the VA List Serve and on the Blog at the website of CVWO and on its Facebook page. Many thanks to dedicated regular volunteers Bill Williams, Nancy Barnhart, and Deborah Humphries for coverage.



*Final day at College Creek Hawkwatch May 31, 2023.  
Photo by Nancy Barnhart*



Season Totals with 10-year average in parentheses.

<b>Species</b>	<b>2023 Total (10-year average)</b>	<b>Peak Flight &amp; Date</b>	<b>Date Range of Occurrence</b>
Black Vulture	120 (123)	22 on March 1	2-28 to 5-27
Turkey Vulture	2236 (1593)	202 on March 5	2-28 to 5-27
Osprey	95 (162)	7 on May 11	3-1 to 5-18
Mississippi Kite	2 (1)	1 on May 2 & 18	5-2 to 5-18
Swallow-tailed Kite	0		
Bald Eagle	106 (110)	11 on March 7	2-28 to 5-26
Northern Harrier	27 (30)	4 on April 3	3-5 to 5-19
Sharp-shinned Hawk	24 (40)	4 on April 4	3-6 to 5-5
Cooper's Hawk	30 (15)	3 on March 24 & April 4	3-2 to 5-29
Red-shouldered Hawk	16 (7)	4 on March 5	2-28 to 4-15
Broad-winged Hawk	9 (8)	2 on April 18 & May 4	4-4 to 5-15
Red-tailed Hawk	27 (29)	3 on March 9 & April 15	3-6 to 4-27
American Kestrel	9 (15)	2 on April 4	3-4 to 5-19
Merlin	4 (5)	2 on April 15	3-26 to 5-2
Peregrine	1 (under 1)	1 on March 20	3-20
Unidentified	2		
<b>Total</b>	<b>2708 (2146)</b>	<b>217 on March 5</b>	<b>February 28 to May 31</b>

# 2023 CVWO Monarch Migration Project

*By Andrew Rapp, Monarch Biologist*

## Monarch Migration Project – Why it Matters.

2023 was the 26th season of the CVWO Monarch Migration Project on the Eastern Shore of Virginia. Monarch point counts, roost counts, and tagging are conducted in this project. Formal and informal educational presentations are given to visitors to Kiptopeke State Park and the Eastern Shore of Virginia National Wildlife Refuge as well as other locations.

Populations of Monarchs are measured in the fall and winter at overwintering sites in Mexico. The number of hectares of Oyamel trees covered with roosting butterflies allows for calculation of Monarch populations. The latest report in February of 2024 from these overwintering sites showed an almost 60% decline in their population from the previous year. This was the second smallest hectare coverage on record, according to Monarch Watch at Kansas University. Drought along the migratory route affected nectar sources for migrating Monarchs.

The CVWO project continues to provide data to track numbers of migrating Monarchs and weather conditions and changes. It contributes to tracking migratory routes and any changes in them which in turn can affect management decisions.

The educational efforts of this project are important for public environmental knowledge and awareness, public participation in Monarch habitat establishment and conservation, and public input into land management decisions and regulations. – *Nancy Barnhart, CVWO Monarch Migration Project Coordinator*



*Andrew Rapp with tagged Monarch at Kiptopeke State Park. Photo by Nancy Barnhart*

## Introduction

The 26th season of the Coastal Virginia Wildlife Observatory (CVWO) Monarch Migration project ran from September 1st through November 30th, 2022. The tagging of Monarchs was conducted at various locations, including Eastern Shore of Virginia NWR (ESVNWR), Kiptopeke State Park (KSP), and Bay Creek Community.

## Sites

**Eastern Shore of Virginia National Wildlife Refuge** offers a range of habitats favorable for migrating Monarchs. A lantana behind the Refuge Visitor Center was a favorite for all butterflies in the first month of the count. This season started much less dry than the 2022 so there was more variety of flowering plants around the refuge in early September. Fennel and Goldenrods flowered by early October providing a good food source for Monarchs. Ramp Road offered Groundsel blooms which came and went quickly at the end of September. One of the best sites in the early season was the southernmost tip of the peninsula - Wise Point. This area is closed to the public but offers a great variety of Groundsel and Goldenrods. Because Wise Point is at the southernmost tip of the peninsula, on northern wind days, large concentrations of Monarchs gathered in the bushes and trees in the area.

**Kiptopeke State Park** also offers a range of habitats for migrating Monarchs. I found KSP to be a much better place to find Monarchs in the later season October onwards after the Groundsel dried up at ESVNWR. The Hawkwatch field adjacent to the southeast of the Hawkwatch was a phenomenal spot for Monarch tagging. The variety of Goldenrods and Blue Mistflowers in the Hawkwatch field kept the Monarchs happy from October all the way through early November. The dunes also hosted Seaside Goldenrod which in late October was coated with Monarchs.

The ideal route for late season Monarch tagging starts in the Hawkwatch field then runs down to the beach just south of the pier walking the dunes and then taking the Peregrine Falcon trail back to Baywoods Trail to then hop on the Brown Pelican Trail which leads to the Sunday Fields.

**Bay Creek Community** holds a huge variety of habitats in their conservation easement. Pollinating plants seen in my late season visits include Goldenrods, Fennel, and Asters. This site would be a great additional site in the early season when flowering plants are scarcer in the region.

## Tagging

This season 598 Monarchs were tagged using all the tags acquired from Monarch Watch. Two tags were damaged and deemed unsafe to place on Monarchs. Each individual was sexed and measured before release. These details help us understand if a certain size or sex Monarch is more successful in reaching their wintering grounds. This data can also be used to compare to previous years data to see if there are any changes in size or proportions of sex captured. More on both the measurements and sex ratio can be found below. This year 125 Monarchs were tagged at the ESVNWR, 466 at KSP, and seven at Bay Creek Community.



*Andrew Rapp in the field. Photo by Pam Scrima*

### Nectar Sources

Like last year, there were few flowering plants in the early season which made for slow tagging in the early season. Most flowering plants were in the gardens at Eastern Shore of Virginia NWR and Kiptopeke State Park. Eastern Shore of Virginia NWR garden offered more variety of flowering plants which spread the pollinating butterflies away from just Lantana. As the season progressed, Hurricanes and tropical storms brought rain for the Goldenrods, Horsemints, and Groundsels to bloom. Mid to late September was the peak for Groundsel which housed the first large pushes of Monarchs. Then the Goldenrods took over from late September through later October. The Goldenrods represent several different species that are challenging to identify but regardless were a magnet flower for Monarchs in the dunes and fields alike. Narrow-leaved Sunflower was a plant I didn't see last season but was utilized by the Monarchs this year. Narrow-leaved Sunflower bloomed from early to mid-October. Mid to late October also saw the increase in Oxeye Daisy and Spotted Horsemint in the Sunday Fields which Monarchs also utilized when there was too much competition for the Goldenrod. Just in time as the Goldenrods lost peak bloom, Blue Mistflowers started blooming and offered the only flower from late October into early November. The edge of the Hawkwatch field and Sunday fields offered patches of Mistflower which were frequently attended even on poor Monarch flights.



## Sex Ratio

Of the 598 Monarchs tagged, 420 (70.2%) of the individuals were male and 178 (29.8%) individuals were female. This ratio of male-to-female Monarchs is to be expected in the area. For context last year the ratio was 65% male and 35% female.

## Wing Length

This year all 598 Monarchs caught were measured. Forewing measurements came from measuring the length of the forewing from the tip to where the forewing attaches to the Monarch's abdomen. Hindwing measurements came from measuring the length of the hindwing from the central edge to where the hindwing attaches to the Monarch's abdomen. The average Monarch had a forewing of 51.7mm and a hindwing measurement of 31.5mm. Male Monarchs averaged measurements of 51.8mm and 31.7mm. Female Monarchs averaged measurements of 51.3mm and 31.2mm. Despite female Monarchs averaging a smaller overall wing, the smallest monarch captured was a male. The smallest Monarch caught had a forewing measurement of 42mm and a hindwing measurement of 27mm. The largest Monarch on the other hand had measurements of 57mm and 35mm forewing and hindwing respectively.

## Recaptures

Of the 598 Monarchs tagged, 10 were recaptured in the same area in the following days. One individual was caught two days after it was originally tagged. Last year one Monarch was recaptured six days after it was initially tagged. No individual was recaptured more than once. One individual was tagged in the morning at the Hawkwatch field and recaptured later in the day in the Sunday fields located 0.7 miles to the south. This season, there were no foreign Monarch recaptures. There were far fewer recaptures this year than last year, possibly due to more continuous day migration conditions encouraging more movement while last year there were fewer days of proper conditions for migration stalling individuals for upwards of five days.

This upcoming spring, if not sooner, Monarch Watch will provide a comprehensive list of recaptured and/or rediscovered Monarchs. CVWO will use this information to determine if any Monarchs tagged at CVWO sites were found within overwintering sites.

## Pollinating Plant Usage

This season each Monarch's plant usage was noted upon capture. Any Monarch captured in flight with no association with plants was recorded as Air. Any Monarch captured resting on a surface away from any flower was recorded as Resting. It should be noted that all Monarch tagging concluded on October 18th which means the plants below should be viewed as important plants through the middle of the season. Blue Mistflower last season became a critical plant for Monarch tagging late season. If the tagging continued through the end of the year, there would have been a higher number of Blue Mistflower and likely other species. Goldenrods, Spotted Horsemint, and Blue Mistflower were the most important species for Monarchs in the region this year. Plant gardens at both Kiptopeke State Park and Eastern Shore of Virginia NWR offered a variety of pollinating plants filling the gaps before or between native plants flowerings.

*Plant Usage by Number of Monarchs captured*

Aster ( <i>Symphotrichum</i> sp.)	3 Monarchs captured	Narrow-leaved Sunflower	7
Beautyberry	1	Passionflower	5
Blue Mistflower	67	Purple Vervain	2
Butterfly Milkweed	2	Queen Anne's Lace	1
Fennel	1	Sea Lavender	1
Goldenrods	289	Spotted Horsemint	163
Joe Pye Weed	1	Resting	12
Lantana	3	Air	40



*Andrew Rapp on the hunt for Monarchs. Photo by Nancy Barnhart*

## Education

Education about Monarch migration is essential to this position. Throughout the season I gave formal presentations to three different bird clubs and the Bay Creek Community. I gave countless informal presentations to hundreds of guests who made the grave mistake of walking too close or asking a question about what I was doing.

## Conclusion

The fall of 2023 season was a complete success with all the Monarch tags being used and a multitude of educational presentations. This season I continued my morning flight surveys at Sunset Beach. End of season numbers can be distributed upon request by emailing [parularapp@gmail.com](mailto:parularapp@gmail.com).

I am incredibly grateful to Kiptopeke State Park for hosting me and to Coastal Virginia Wildlife Observatory for this opportunity. I am also grateful to all the visitors and locals that made Sage and me feel at home and part of the community.

# 2023 Williamsburg Area Butterfly Count

By Adrienne Frank

Our **10<sup>th</sup> Annual Williamsburg Area Butterfly Count** was held August 12, 2023. The weather was great for the butterflies. At 9:00 am, it was about 80 degrees, and the temperature went up into the 90s. Some of our hearty observers remained counting until a little after 5 pm.

There were small groups that ventured out into 7 sectors within the 15-mile diameter circle. Three people observed butterflies in their home gardens and those data were compiled in the geographic sectors.

Forty-six (46) butterfly species were identified and 1,878 individuals. This year was a slightly lower species count, and we missed some typical butterflies such as the Clouded Sulphur, Hackberry Emperor, Northern Pearly-eye, Common Sootywing, and Swarthy, Aaron's and Dion Skippers.

The highest count numbers were in 2019 with 53 species and 3037 individuals found. Over all ten years of annual counts, 65 total species have been observed. The average annual number was 49 species and average individuals 1714.

Two species had new high counts: Cabbage White (41 up from 36) and Fiery Skippers (335 up from 289). This year, the greatest number for a species was Eastern Tiger Swallowtail (378), followed by Fiery, Sachem, and Silver Spotted Skipper.



*Eastern Tiger Swallowtail. Photo by Joni Carlson*

Each of the 7 sectors, reported varied species. Here are some highlights:

- The Gloucester sector, in its 4<sup>th</sup> year, had 8 observers. They had 29 species and 220 individuals. They found the only Appalachian Brown (3) and had high numbers for Summer Azures and Eastern Tailed Blues.



*Zabulon Skipper, female. Photo by Joni Carlson*

- Williamsburg City primarily covers the gardens of Colonial Williamsburg. They had two Tawny Emperors, almost mistaken as a Variegated Fritillary. The team had the highest number of Fiery Skippers (172), Silver Spotted Skippers (48), and Zabulon Skippers (15). One team member surveyed the William & Mary gardens by herself and saw 11 species and 78 individuals.
- The Lower York sector had three species not seen by other sectors: Pipevine Swallowtail (1), Gemmed Satyrs (5), and Salt Marsh Skippers (13). However, they did not have a Northern Pearly-eye or a Dion Skipper often seen each year. New Quarter Park's woods and proximity to Queen's Creek yields some marsh butterflies not seen in other sectors.



- Upper York County team included two butterfly experts from out-of-town, who were very good at identifying skippers, such as the Tawny-edged, Broadwing, and Delaware. They had the high numbers for American Snout and Red-banded Hairstreak. I think that they drove the most of any group (38 miles).
- Upper James City County had high numbers of Eastern Tiger Swallowtails (104, most of them nectaring on Lantana, along a long driveway), high numbers for Spicebush Swallowtails (32), and Cabbage Whites (27). The team found the only Painted Lady, Longtail Skipper, and Northern Broken Dash.
- Freedom Park and the Warhill Tract kept this team busy counting the highest number of Variegated Fritillaries (17) and the only Southern Broken-dash skipper.

132 individuals, in that one location. They had the highest number of Sleepy Oranges (33 as compared to the next highest number: 8) and Zebra Swallowtails (15).



*Young bobcat. Photo by Deborah Humphries*



*Butterflies at Sweethaven Lavender Farm. Photo by Shirley Devan*

- The Centerville Corridor had the most incredible sighting – a young Bobcat, out in the open near the schools on Jolly Pond Road. When they visited the Lavender Farm with the field of zinnias, they counted 23 species and

# 2023 Chippokes Butterfly Count

By Joni Carlson

This count includes parts of Surry County as well as the tip of James City County that includes Jamestown Island, Jamestown Settlement, Jamestown Beach Event Park, and the Jamestown Marina.

We kept our eyes on the overcast skies and worried about the forecast of rain all day. Indeed, heavy downpours started close to 2:00 pm so we ended the count at then.

We tied for the highest number of volunteers (34) over the 25 YEARS of count history.

We were still able to observe 601 individuals and 44 species (one more species than last year) with **TWO NEW** species to add to our count sheet: the Reversed Roadside and Swarthy Skippers.



Swarthy Skipper. Photo by Joni Carlson



Reversed Roadside Skipper. Photo by Ken Lorenzen

The most numerous of the 44 species were:

- Eastern Tailed-Blue – 98
- Eastern Tiger Swallowtails – 88
- Common Buckeye – 64



Earl Hodnett gives Teta Kain and Andee a ride around his farm in search of butterflies. Photo by Ken Lorenzen



Southern Pearly-eye. Photo by Ken Lorenzen



*The largest team counted in the Jamestown sector.  
Photo provided by Shirley Devan*



*Hoary Edge Skipper. Photo by Brian Taber*



# 2023 Delmarva Tip Butterfly Count

*By Brian Taber*

July 30, 2023 was the 25<sup>th</sup> count for this Delmarva Tip Butterfly count around Northampton County on the Eastern Shore of Virginia. Capeville is center of this count's 15-mile diameter circle.

Twenty observers spread out in five parties from the tip of the shore north to Oyster, surveying both bay side and seaside sites including private properties as well as Kiptopeke State Park, Eastern Shore of Virginia National Wildlife Refuge (ESVANWR), and the Brinkley Preserve.

The 20 butterfly enthusiasts tallied 44 species and 1016 individuals.

Most numerous species:

- Cabbage White 209
- 'Summer' Spring Azure 84
- Silver-spotted Skipper 79
- American Snout 79
- Common Buckeye 74
- Eastern Tailed-Blue 73
- Black Swallowtail 69
- Spicebush Swallowtail 62

Notable observations were 16 Monarchs, one Gulf Fritillary, one Juniper Hairstreak, and one Viceroy.



*Salt-marsh Skipper. Photo by Jeanette Navia*



*Gulf Fritillary. Photo by Shirley Devan*



*Butterfly enthusiasts gather at ESVANWR before setting off to count butterflies.*



# 2023 Dragonfly Report from Kiptopeke Hawkwatch

By Andrew Rapp, Monarch Biologist

## Introduction

This is the first complete season that Dragonflies have been surveyed from the Kiptopeke Hawkwatch. Dragonflies were recorded from September 1<sup>st</sup> through November 30<sup>th</sup>. At least seven Odonata species migrate through the Eastern Shore of Virginia. Those species are Swamp Darner (*Epiaeschna heros*), Common Green Darner (*Anax junius*), Comet Darner (*Anax longipes*), Black Saddlebags (*Tramea lacerata*), Carolina Saddlebags (*Tramea carolina*), Spot-winged Glider (*Pantala hymenaea*), and Wandering Glider (*Pantala flavescens*). There are also several species of vagrant dragonflies that can be seen throughout the fall season that travel on the winds hundreds of miles away from where they emerged. Our efforts aimed to better understand when the seven focal species migrate, when certain species peak, and what conditions are best for migration.

## Methods

Any migrating Odonata actively moving south over the Hawkwatch are recorded. Individuals that are feeding around the fields and clearing about the hawkwatch that do not move south are not counted. Individuals that move over the tree line that actively feed in the fields to the south of the hawkwatch are still counted. Care needs to be taken to not record individuals moving back and forth around the platform.

## Species Accounts

The **Swamp Darner** is the largest species recorded migrating past the watch. Swamp Darners are primarily an early season migrant outnumbering Common Green Darners in the early season and being a favorite snack of migratory falcons. At a distance Swamp Darners can be identified by their amber wings, long slightly down curved abdomen, and dark brown-black body with green stripes.

**Common Green Darners** are one of the easily recognized migratory species across the country. This species peaks in late September but is typically the most numerous dragonfly across the season. At a distance Common Green Darners can be identified by light amber wings which are slightly more amber on females, long straight abdomen, green eyes and thorax, a silvery patch connecting the abdomen and thorax, and male abdomens are blue while females are a dull brown.

The **Comet Darner** is less known than the other two darners. This species has expanded north at a fast rate in the past 30 years across much of the coastal plain and piedmont of Virginia. Comet Darners are an early season species being effectively gone by early October. At a distance Comet Darners can be identified by their clear wings, long straight abdomen, green eyes and thorax, more protrusive frons, and male abdomens are red while females are a rusty brown.

**Black Saddlebags** are common across the state. At a distance Black Saddlebags are distinctive with a black colored saddle, overall black color, and some individuals have several yellow spots on the abdomen.

**Carolina Saddlebags** are widespread but less common than Black Saddlebags. Any red or brown colored Carolina Saddlebags can be safely assumed to be Carolina Saddlebags. Red Saddlebags are highlighted below in depth but are much rarer. At a distance Carolina Saddlebags have a red or light brown saddle, red or brown body, and shorter body. Carolina Saddlebags have a more extensive saddle extending beyond the anal loop, a darker purple face, and black spots on S8-9 wrap around the bottom of the abdomen.

**Red Saddlebags** are a perplexing species. Red Saddlebags closely resemble Carolina Saddlebags which leads to a lot of oversight. They can be confidently identified by a reduced saddle retained within the anal loop, the saddle has a large circular hole close to the body, small black spots retained on top of S8-9, and a red face. This species should be identified with extreme care. One was captured and inspected in hand, another seen landed briefly, and others on the far end of a reduced saddle.

**Spot-winged Gliders** are widespread due to their highly mobile lifestyle. At a distance Spot-winged Gliders can be identified by their slightly larger structure and wings, dull reddish-brown color, and small spot along the body on the hindwing.

**Wandering Gliders** are the most widespread species of Odonata in the world. Wandering Gliders are known to migrate hundreds of miles across the Indian Ocean to get to West Africa from India. At a distance Wandering Gliders can be identified by their clear wings, yellow overall color, less direct and more shaky flight than Spot-winged Glider, and shorter wings overall than Spot-winged Gliders.

## **Discussion**

Sunny conditions were the most important environmental factor to promote Odonata migration. North winds paired with sunny conditions produced the largest flights, but north winds with overcast conditions did not produce large flights. Weather dates occurred throughout the season leading to dips in numbers which affect the linear model predictions in Figure 2. Continual effort to record Odonata from the Kiptopeke Hawkwatch will fill dataless days throughout the season helping paint a more accurate understanding of peak flights of individual species. Several other species were seen from the hawkwatch but were not deemed migratory. Species seen flying overhead but not recorded include Blue Dasher, Eastern Pondhawk, Great Blue Skimmer, Twelve-spotted Skimmer, and Blue-faced Meadowhawk. It may be an oversight by not counting these species, but no known migration occurs in these species.

Swamp Darner	329
Common Green Darner	1573
Comet Darner	22
Black Saddlebags	351
Carolina Saddlebags	78
Red Saddlebags	5
Spot-winged Glider	260
Wandering Glider	78

Figure 1. Season totals of migratory Odonata from Kiptopeke Hawkwatch 2023.

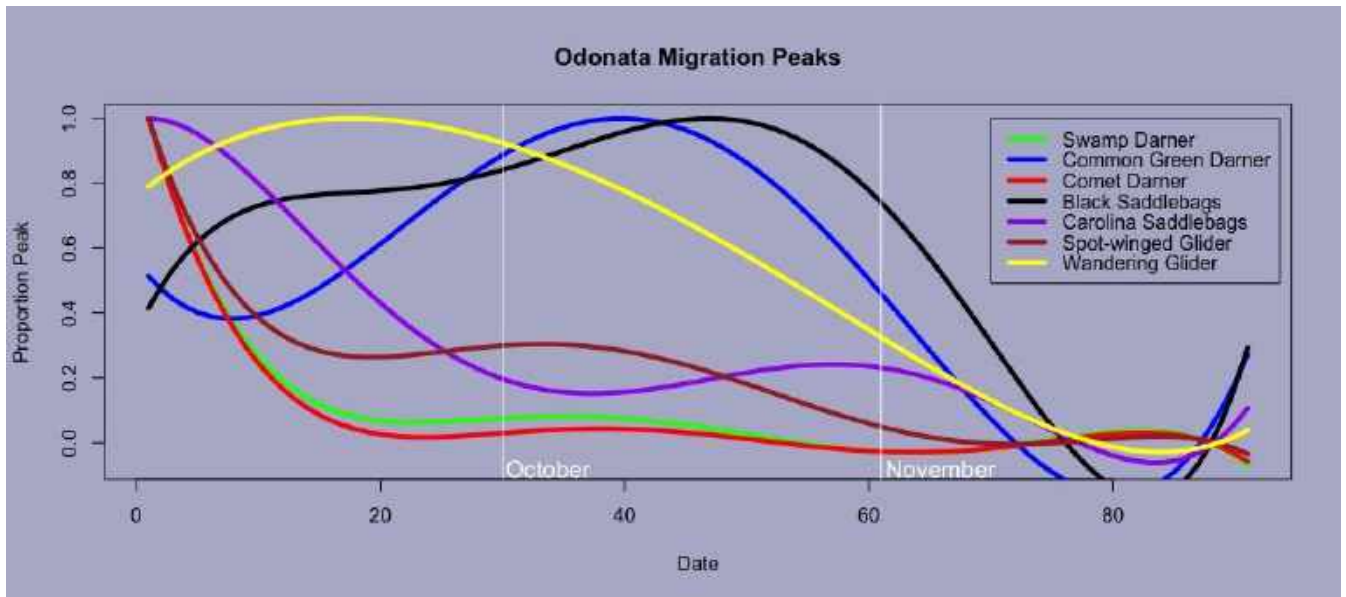


Figure 2. Odonata Peak Migration by species predicted from 2023 daily data. The linear models used to produce these lines do not best represent the late season. None of the species should expect an uptick late season.

# Pollinator Garden at First Landing State Park

*By Sheila Scoville*

When Brian Taber announced that he would be moving the butterfly garden at the Jamestown Marina last spring, board member Sheila Scoville harvested a selection of plants to build a new pollinator garden behind the Trail Center at First Landing State Park.

In a joint effort with the J. P. Doherty Foundation, over 30 native species were planted in two beds. The challenge has been to see which plants in each of the beds would thrive in variable patterns of sun and shade. Halfway through the summer, plants started to define what would survive and what would thrive.

While butterflies and bees are easily the most visible pollinators, Virginia Tech experts tell us that native fly species are actually the most abundant pollinators.



*Photographs by Brooke Schara*

# 2023 Waterbird Project

by Dave Youker

The CVWO Waterbird Team devoted the 2023 field work to documenting the volume and diversity of bird species frequenting Craney Island Dredged Materials Management Area (CIDMMA) in Portsmouth, Virginia. Breeding activity was focused on three species: Black-necked Stilts, American Oystercatchers, and Least Terns.

## Overall 2023 Results

The final survey of the year, completed 21 December, was the 46<sup>th</sup> for 2023. This culminated the 16<sup>th</sup> year of documented surveys dating back to 2008. Survey data have been entered into the Cornell Laboratory of Ornithology's eBird database, and breeding data have been shared with the Norfolk District Office of the United States Army Corps of Engineers (USACE).

For 2023, a total of 218,865 birds comprised of 219 species were documented during 300 observation hours over 46 weeks between 5 January – 21 December. The average number of species per survey was 79, and the average number of birds was 4,758. The single-day high-count for the total number of birds was 10,437 on 10 August (71 species); the lowest single-day total was 997 on 15 June (74 species). Waterbird species included 3 rail species, 3 grebe species, 2 loon species, Double-crested Cormorant, 2 pelican species, 32 shorebird species, 6 gull species, 8 tern species, Black Skimmer, 10 heron-egret-ibis species, 2 bittern species, and Roseate Spoonbill. CIDMMA had Virginia's highest 2023 totals for 9 waterbird species: 874 Northern Shovelers on 14 September;

746 Green-winged Teal on 16 March; 97 Black-necked Stilts on 3 August; 743 American Avocets on 14 September; 8 Buff-breasted Sandpipers on 7 September; 895 Lesser Yellowlegs on 17 August; 26 Wilson's Phalaropes on 24 August; 9 Red-necked Phalaropes on 1 June; and 6508 Semipalmated Sandpipers on 10 August.

## Northern Bobwhite

The Waterbird Team had recorded this species annually since 2009, but was last recorded on 26 August 2021. Fears that the Northern Bobwhite had been extirpated from the CIDMMA were relieved when a single bird was observed on two consecutive surveys during July.

## Breeding Activity of Selected Species

### *Black-necked Stilt*



*Black-necked Stilt. Photo by Dave Youker*



*Black-necked Stilt chicks. Photo by Dave Youker*



The first Black-necked Stilts (14 total) were observed on 6 April. Breeding evidence was noted on 1 June with a single bird sitting on a nest. Three downy young were observed on 29 June. The highest number of nests located was five, and the largest number of young seen at one time was 16.

#### *American Oystercatcher*

This was the fourth year an American Oystercatcher attempted to breed on the southernmost Elizabeth River expansion dike. Three downy young were observed on 18 May and again the following week. However, the young were not seen following those sightings. Again, the presence of Fish Crows and other area predators may have had a detrimental effect on successfully raising young. A pair was observed copulating on 8 June, but no further nesting activity was observed. The same color-banded oystercatcher seen in previous years was again observed from 16 March – 27 July. The red band with white alpha-numeric lettering indicated the band had been placed on the bird in Georgia.

#### *Least Tern*



*Least Tern and egg. Photo by Dave Youker*

On 4 May, the Team observed the season's first Least Terns (17). Significant construction activity kept the terns moving around the facility, and as they settled down into restricted-access areas the USACE staff took over monitoring the breeding activity. Eight colonies were identified consisting of 72 adults with 31 incubating birds. Productivity was again low due to a combination of mammalian predation, high-volume vehicular traffic, and periods of excessive heat and dryness. The facility continued to be used as a staging area with a high count of 421 birds observed on 3 August.

#### **New Species for CIDMMA**

There were four species observed during 2023 that had not been previously identified during the 16 years of documented surveys. These additions bring the Team's cumulative species total to 277 (279 if the probable escapees Black Swan and Mandarin Duck are included).

#### *Razorbill*

A single bird was recorded on 16 February. This species had not previously ever been recorded at the CIDMMA facility.

#### *Acadian Flycatcher*

Two birds were recorded on 8 June. This species had not previously ever been recorded on the CIDMMA facility.

### *Barn Owl*



*Barn Owl. Photo by Dave Youker*

A single Barn Owl was recorded on 12 October. This species had been recorded two previous times, the last being in 2012. Prior to that, it had not been recorded since 1981.

### *Rough-legged Hawk*

A single bird was recorded on 9 November. This species had been recorded six previous times, the last being in 1998. It was recorded four times during the winter of 1994-95, and there was a single recording in 1989.

### **AudioMoth Deployment for Possible Eastern Black Rail Detection**

This was the final year of the three-year study to determine the presence of Eastern Black Rails at CIDMMA. A vocalizing Black Rail was documented at this facility in June 2017. Following the approval from the Norfolk District Office of USACE and necessary equipment acquisition, three AudioMoth devices were deployed around the facility. During 2023, one device was deployed along the north perimeter road and the other two were along the south perimeter road.

All three devices recorded sounds from 10 p.m. – midnight and 3- 5 a.m. beginning 1 April. The north perimeter device became corroded and ceased working on 1 May. The other devices continued working until their removal on 3 August. All equipment was

subsequently removed, and the sites restored to their original status.

While numerous birds, insects and amphibians were recorded, no Black Rails were recorded during this or the previous two years.

### **Motus Wildlife Tracking System Activity**

The Motus wildlife tracking system has been installed on CIDMMA Spillway 6 at the northwest corner of the facility since November 2018. Technical issues with the system during this year resulted in the system being offline for over 6 months. First, the two marine batteries reached end-of-life and had to be replaced. Second, the cable to the solar panel was damaged and had to be replaced. While there were four detections in 2022 (one Lesser Yellowlegs, two Purple Martins, and one American Kestrel), there were no detections in 2023.

### **Additional CIDMMA Fauna**

The Team keeps anecdotal records of non-avian species detected during surveys. Those recorded for 2023 were as follows.

*Mammals:* coyote, white-tailed deer, Atlantic bottlenose dolphin, mink, muskrat, opossum, river otter, eastern cottontail rabbit, eastern gray squirrel, woodchuck.

*Reptiles:* yellow-bellied slider, diamond-backed terrapin, eastern mud turtle, snapping turtle.

*Amphibians:* carpenter frog, green tree frog, squirrel tree frog, American/southern toad, Fowler's toad, narrow-mouth toad.

*Butterflies:* red admiral, summer azure, common buckeye, pearl crescent, hackberry

emperor, monarch, sleepy orange, clouded skipper, fiery skipper, least skipper, ocola skipper, silver-spotted skipper, clouded sulphur, cloudless sulphur, orange sulphur, black swallowtail, eastern tiger swallowtail, zebra swallowtail, eastern tailed-blue, cabbage white, common wood-nymph.

*Dragonflies:* eastern amberwing, familiar bluet, common green darner, seaside dragonlet, Rambur's forktail, spot-winged glider, wandering glider, ebony jewelwing, four-spotted pennant, Halloween pennant, eastern pondhawk, black saddlebags, bar-winged skimmer, four-spotted skimmer, golden-winged skimmer, Needham's skimmer, slaty skimmer, twelve-spotted skimmer, widow skimmer, common whitetail.

*Snakes:* black racer, rat snake.

### **Acknowledgement**

The Waterbird Team wishes to express its sincere gratitude to the Norfolk District Office of the USACE and CIDMMA staff for their continued support of this field work, especially the long, tedious effort to monitor and document Least Tern, American Oystercatcher and Black-necked Stilt nesting activities. Thanks to Steve Thornhill for providing technical expertise to analyze AudioMoth sound files. Members of the 2023 CVWO Waterbird Team were: Bob Ake, Hugh Beard, David Clark, Deborah Humphries, Alex Minarik, Lee Schuster, Brian Taber, Bill Williams, and Dave Youker.

# Wood Duck Report

*by Dave Youker*

As work on the Harwoods Mill dam at the Newport News Reservoir progressed, water levels were further reduced to approximately four feet below normal. Only one nesting site remained in the water. The oversized, conical predator guards remained effective, although a Ratsnake was found in one box. A low, overhanging branch was the suspected entry method which was promptly removed; however, the nest was abandoned.

It was a slower start to the breeding season this year. An initial check of the boxes was delayed until the end of March to afford plenty of time for breeding to commence. However, only 5 of 7 boxes had activity at that time, and 3 of these boxes had 4 or fewer eggs.

Despite the slow start and the loss of one nest to the snake, it was a successful season. Six of the seven boxes produced young this year, and four boxes had second clutches. Total Wood Duck egg production of 212 was

only a little less than last year (224), but the fledge number of 133 was quite a bit less (186). No reason for the lower fledge rate could be ascertained.



*Female Wood Duck with babies. Photo by Dave Youker*

Nesting began in March as usual. Two boxes were still active in July with one continuing into early August.

Thanks to Newport News Parks and Recreation for their continued support of this project.

# 2023 Prothonotary Warbler Nest Box Monitoring

## NORTHWEST RIVER, CHESAPEAKE VA

By Shirley Devan

Volunteers monitored 82 Prothonotary Warbler nest boxes along the Northwest River in Chesapeake in 2023. Between April 11 and July 25, volunteers visited weekly and checked approximately 50 boxes each week. Over a two-week period, all 82 boxes were checked.

The productivity of the Prothonotary Warblers increased over 2022, but it still was far below the productivity of the years before 2020. We continued to see quite a few eggs abandoned and/or buried throughout the season — ~197 in 2023.



*Prothonotary Warbler banded May 8 at box 41 at Northwest River Park. Photo provided by Shirley Devan*

### 2023:

59 PROW nestlings banded compared to 32 in 2022.

45 (estimated) nestlings fledged without banding compared to 35 in 2022.

We estimated that the female warblers laid about 340 eggs in the 82 boxes. We estimate that 104 hatched and fledged compared to 67 in 2022 an increase of 55%.

## POWHATAN CREEK TRAIL, JAMES CITY COUNTY

By Shirley Devan

Five boxes in the swamp at Powhatan Creek Trail (PCT) were lightly monitored in 2023 because of weather, high water, and volunteer schedules.

We banded a new female PROW at PCT Box 5 incubating 4 eggs. A week later there was one nestling too young to band. We were not able to return to band the nestling.



*Four Prothonotary Warbler eggs May 12 in box 5 at Powhatan Creek Trail*

July 27 Brian Taber reported a dead nestling in PCT Box 3.

Carolina Chickadees nested in the four other boxes early in the season.



## CHICKAHOMINY RIVERFRONT PARK, JAMES CITY COUNTY

By Shirley Devan

Volunteers monitored 12 boxes along Gordon Creek in 2023.

- 13 PROW nestlings were banded.
- 15 (estimated) nestlings fledged without banding
- 2 new females banded — 1 of which was recapped twice at Box R09 after being banded at Box R11

### **Identifying a banded PROW female at Greensprings Interpretive Trail June - July 2023**

By Shirley Devan

From June 4 to July 12, five local photographers were able to grab close-up photos of a banded female entering and exiting a natural cavity very close to the boardwalk/bike trail at Greensprings Interpretive Trail in James City County.



*Female Prothonotary Warbler, with band, at natural cavity June 4. Photo by Paul Griswold*

Thanks to the five photographers who provided the many closeup photos: Jim Easton, Bill Williams, Deborah Humphries, Dave Yeager, and Paul Griswold.

In looking at all the photos of the band on the female, I was able to determine her band # to be 2850 43734. She was banded as a nestling in box R09 at Chickahominy Riverfront Park May 20,

2019. Greensprings Interpretive Trail is about 5 miles from Chickahominy Riverfront Park.



*Paul Yeager's close-up photo of the band on the female Prothonotary Warbler.*

Photographers were able to get photos of the male, the female, and a fledgling from this natural cavity. Rare opportunities indeed!



*Male Prothonotary Warbler at natural cavity June 4. Photo by Shirley Devan*



*Fledgling Prothonotary Warbler June 20. Photo by Deborah Humphries*

The observation of this banded female was the first we had seen of her since she was banded four years ago. We believe she had two clutches in the natural cavity.

## **NEWPORT NEWS**

*by Dave Youker*

The nesting season at Harwoods Mill reservoir began in early April with Carolina Chickadees occupying two boxes. Prothonotary Warblers started a little later but were active by late April/early May. All seven boxes had nesting activity, but only six produced young. The seventh box was a later start (late June) and was subsequently abandoned.

Of the six productive boxes, three had prothonotaries with two boxes having a second clutch. Two boxes had chickadees, and one had Tree Swallows. Total Prothonotary Warbler production was 22. Nine Carolina Chickadees fledged, and one Tree Swallow fledged.

Thanks to Newport News Parks and Recreation for their continued support of this project.

## **DRAGON RUN**

*By Gary Driscote*

For spring and summer 2023, I monitored 22 Prothonotary warbler boxes in two locations along the Dragon Run, primarily in King & Queen County. I started monitoring on March 28 and ended on July 26, 2023.

The results this year were low but better than last year. The average from 2015 through 2021 was approximately 60 fledglings. In 2022, the number was only 28 fledglings. This year, there were 35 fledglings.

**Big Island** – There was activity in 9 of 15 boxes. There were 25 Prothonotary and 3 Carolina Chickadee fledglings at this location.

**Mascot Bridge** – Two boxes out of 7 had activity, and there were 10 Prothonotary fledglings.

The total fledglings were 35 Prothonotary Warblers and 3 Carolina Chickadee fledglings.

# 2023 Purple Martin Report

*By Cheryl Jacobson*

The 2023 season was very successful with at least 125 Purple Martin chicks fledging from three active colonies monitored by CVWO volunteers.

The Chickahominy Riverfront Park colony was extremely active with 23 of the gourds used for nesting. Many of the pairs fledged five chicks. One reason this area is so successful is due to the large number of dragonflies which Purple Martins prefer for their food.



*Purple Martin with dragonfly at Chickahominy Riverfront Park. Photo by Cheryl Jacobson*

One location, York River State Park, got nesting Purple Martins for the first time and another location, VIMS, found partial martin nests in 6 gourds when they were cleaned in the fall. This is a very good sign that Purple Martins will return this spring. Only one of our five locations, New Quarter Park, had no activity in the gourds although Purple Martins were seen in the air during Bird Club organized bird walks.

Our model has focused on installing poles on public land. Currently there are two poles at

the Chickahominy River Front Park, one at York River State Park, one at New Quarter Park, and one at Virginia Institute of Marine Science, (a state agency). The only installation on private property consists of two poles at Fords Colony, a gated residential community. This colony is also very successful.

To have more comparable data from year to year, I have established data point collection dates for each colony: May 27, June 10, June 24, and July 8. Without the commitment and enthusiasm of the volunteers, the project wouldn't continue to have this amazing success. We are looking forward to the 2024 nesting season.



*First Purple Martin nestlings at York River State Park. Photo by Cheryl Jacobson*

# The Big Sit October 8, 2023

*By Brian Taber*

The Observatory has participated annually since 1999 in this international, one day bird survey event, from a single spot, during fall migration.

It is coordinated by the New Haven Bird Club, and this year CVWO was proud to be a co-sponsor of the \$500 grand prize which went to the Hazel Bazemore Park Hawkwatch Platform in Texas with 129 species.

In 2023 there were 93 Circles from three countries – United States, Guatemala, and Azerbaijan. In addition to CVWO's team on the Kiptopeke Hawkwatch platform, 3 other Virginia teams participated:

- Big Sit! 2023 Algonkian team at Algonkian Park, Loudoun County
- Fredericksburg Flighty Flickers at the Crow's Nest Research Area
- Richmond Audubon Society at the 2<sup>nd</sup> Street Connector Ditch in Richmond

Our Big Sit location, where there are always seasonal staff and volunteers, was led by Andrew Rapp, Sage Church, Lynn Davidson, and Hal Wierenga. They observed from before dawn to evening for over 12 hours.

CVWO's total of 77 species was excellent, our 8<sup>th</sup> highest. There were many highlights this year including Blue-winged Teal, Northern Gannet, American Woodcock, Ruby-throated Hummingbird, Bank Swallow, Gray-cheeked Thrush, Swainson's Thrush, Wood Thrush, and a terrific warbler total of 10.

## **2023 Graduate Student Grants for Ornithological Research**

Alina Grossweiner, a graduate student in Dr. John Swaddle's lab in the Biology Department at William and Mary, received the Bill Akers Research Grant for her research topic: "All that glitters is not water: Exploring polarized light-based attraction to solar panels in birds."

Chi Wei, a PHD Student in Dr. Eric Walters Lab at Old Dominion University, received a Bob Ake Research Grant to help with his research: "Quantifying Virginia wetland birds using two citizen science datasets."

Oleksii Dubovyk, a graduate student in Dr. Eric Walters Lab at Old Dominion University, received a Bob Ake Research Grant to help with his study of "Nest predation as a threat to breeding birds in urban environments of coastal Virginia."



# Conservation Grants Program 2023

*By Brian Taber*

The Observatory was pleased to award conservation grants in 2023 to help support efforts of these organizations:

Grants to **Virginia Society of Ornithology** to sponsor 10 species to support Virginia's Second Breeding Bird Atlas. These grants were in memory of and in honor of CVWO's friends and supporters. These sponsorships will appear in the Atlas description for these species.

- American Kestrel sponsored in memory of Joy Archer
- Least Tern in honor of Bill Akers
- Forster's Tern in memory of Ruth Beck
- Barred Owl in honor of Dr. Mitchell Byrd
- Clapper Rail in honor of Dr. Robert Ake
- Brown Pelican in honor of Harry Armistead
- Acadian Flycatcher in honor of Bill Williams
- Red-eyed Vireo in memory of Joe Beatty
- Boat-tailed Grackle in honor of Lynn Davidson and Hal Wierenga
- Yellow-throated Warbler in honor of Brian Taber

Grant to **Finch Research Network** to match a donation by that non-profit organization to provide a college student joint organization grant, in honor of Ned Brinkley, a friend of both organizations, for finch research to be administered by the Finch Research Network.

**American Birding Association's Youth Camp** to provide a scholarship for a youth to participate in the ABA Summer Youth Birding Camp

**Kéköldi** Hawkwatch in Costa Rica to help fund room and board for a spring hawkcounter at an indigenous peoples preserve

**ProNatura** conservation organization in Veracruz Mexico to support their educational efforts

**Frontiers in Ornithology** to provide support for their annual Youth Symposium

**Birdability** organization to support their inclusion efforts.

# 2023 Coastal Virginia Birdathon

By Sarah O'Reilly

The Coastal Virginia Birdathon (rebranded this year from the Kiptopeke Challenge) was scheduled for September 23 this year, but for the second year running, Mother Nature had her way – bringing unpredictable Virginia weather. Again, this year, teams were given an additional week to complete their birding challenge and to submit their lists by October 1.

Many thanks to the nine teams who raised \$13,690 from over 150 donors.



Nine teams competed in two categories: 24-hour category and Special Venue.

**24-Hour Category:**

**Laughing Falcons win with 102 species!**

Gulls Gone Wild: 93

Wandering Wagtails: 65

ODU Bird Nerds: 61

Machicomico Meadowlarks: 56

Fishing Longlegs: 55

The Old Coots: 44

**Special Venue:**

**The Islanders (Hog Island) win with 81 species!**

Dospreys (on the Kiptopeke Hawkwatch platform): 66 species

**The top three fundraising teams:**

Gulls Gone Wild – \$5319

The Islanders – \$2873

Laughing Falcons – \$2628

Thanks to all the donors and teams for an outstanding event.



*The Islanders: Michelle Gianvecchio, Terry Cuthriell, Deborah Humphries, and Brian Taber at Hog Island*





*Gulls Gone Wild: Shirley Devan, Nancy Barnhart, Joyce Lowry, Jan Lockwood, and Sue Mutell*



*Wandering Wagtails: Carolyn Morgan, Sarah O'Reilly, and Caitlin Kufahl*





*Machicomico Meadowlarks: Sharon Walker, CJ Sweet, Susan Crockett, Dave Yeager, Sherry Rollins, Gee Brownley, Bill Corbin, and Edith Bradbury*

## CVWO Partners

# CVWO Partners

American Bird  
Conservancy

City of Chesapeake  
Parks, Recreation &  
Tourism

Eastern Shore of  
Virginia National  
Wildlife Refuge

Finch Research Network

James City County Parks &  
Recreation

Kiptopeke State Park

Monarch Joint Venture

Hampton Roads Bird  
Club

Hawk Migration  
Association of North  
America

**Teaming with  
Wildlife**

**U.S. Army Corp of  
Engineers (CIDMMA)**

U.S. Fish & Wildlife  
Service

Virginia Department  
of Conservation and  
Recreation

Virginia Master  
Naturalists, Historic  
Rivers Chapter

Virginia Society of  
Ornithology

Williamsburg Bird  
Club

# SUPPORT CVWO



Your donation can make a big difference in 2024. Use the form below to join or renew your 2024 CVWO support and donate to one of our ongoing projects such as the Kiptopeke Hawkwatch, Monarch butterfly research, waterbird research, warbler nest box trails, or graduate student scholarships. No donation is too small and every gift is welcome.

If you are a life member or have already donated in 2024 — many thanks! Perhaps you'd consider another donation to one of our projects or a scholarship!

We look forward to hearing from you!

**I want to support CVWO's 2024 research. Enclosed is my check for:**

Support Level:

- Warbler \$25
- Sparrow \$50
- Thrush \$100
- Falcon \$250
- Eagle \$500 (Life Supporter)

I would like to make an additional donation for:

- Purchase Brian Taber's book, "Riding the Wind: A Birder's Ups and Downs" \$25
- Kiptopeke Hawkwatch
- Monarch butterfly research
- Waterbird research
- Prothonotary Warbler Nest Box Trails
- Annual Scholarships to William and Mary & Old Dominion Graduate Students

Name \_\_\_\_\_

Address \_\_\_\_\_ City \_\_\_\_\_ State \_\_\_\_\_ Zip \_\_\_\_\_

Email (please print clearly) \_\_\_\_\_

May we include your email in our Constant Contact List? Yes \_\_\_ No \_\_\_ (We do not share email addresses.)

If **YES**, are you interested in receiving CVWO's monthly eNewsletter? Yes \_\_\_\_\_ No \_\_\_\_\_

Return this form with your check, payable to CVWO, to: PO BOX 764, Lightfoot, VA 23090

Or you may donate securely and quickly online with PayPal. You don't need a PayPal account ... just visit our website at <https://vawildliferesearch.org/support-cvwo> where you can donate with your credit or debit card.

Thank you! Your interest and generosity are more important than ever!