COASTAL VIRGINIA WILDLIFE OBSERVATORY
EST. 1994

2022

# Annual REPORT

**PROTECTING WILDLIFE THROUGH FIELD RESEARCH, EDUCATION AND HABITAT CONSERVATION FOR OVER 25 YEARS**

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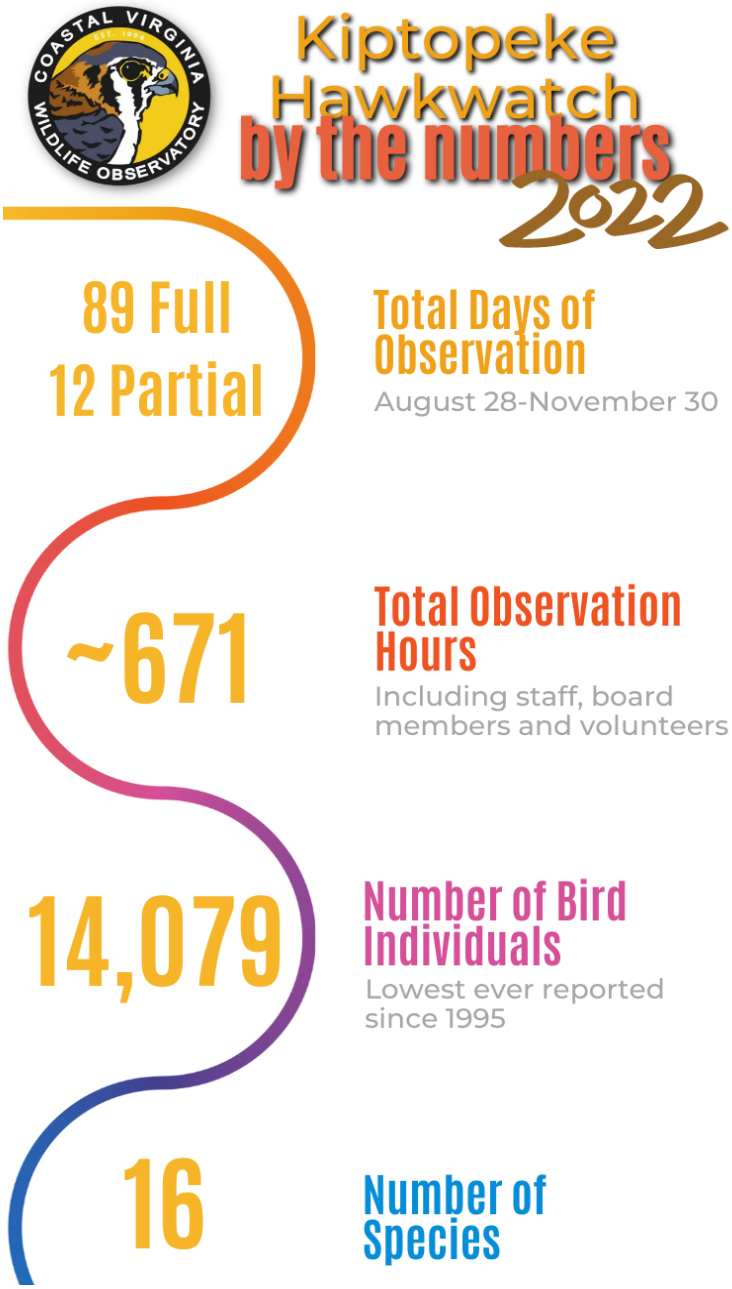
# PRESIDENT'S MESSAGE

# RAPTOR RESEARCH

## Kiptopeke Hawkwatch Report Summary

Prepared by Brian Taber




Located at the southern tip of the Delmarva Peninsula, Kiptopeke State Park offers a spectacular opportunity to witness the southbound fall migration of hundreds of migratory bird species, particularly raptors. The fall of 2022 was the 46th consecutive year of the hawkwatch and the 28th consecutive year that CVWO has staffed a full-time hawkcounter to monitor the fall migration of raptors at Kiptopeke State Park. In addition, an assistant hawkcounter/educator/monarch biologist was hired and was present for a large majority of the season.

From August 28 to November 30, a total of 14,079 migrant raptors of 14 species were counted over ~670 observation hours at the Kiptopeke hawk platform. Six full days of counting were lost due to weather, with an additional twelve days of partial counting also attributed to the weather. The five most numerous species in order of decreasing abundance were: American Kestrel (n=3,373), Sharp-shinned Hawk (n=2,950), Osprey (n=2,212), Cooper's Hawk (n=1,762), and Merlin (n=977). All data collected were entered into the Hawkcount.org online database (which is maintained by the Hawk Migration Association of North America) and the Dunkadoo database.

The 2022 season total of 14,079 individual raptors was well below the ten-year average of 18,220. In fact, it is the lowest total number of raptors tallied since CVWO started hiring full-time counters in 1995. Additionally, this is only the sixth time since 1995 that fewer than five raptor species (not including vultures) had seasonal totals of 1,000+ (the other years being 2020, 2012, 2008, 2002 and 2001). Including both vulture species, 16 species of raptors were recorded, which matches the previous 10-season average.

Raptors **significantly above** their previous 10-season averages include the following:

| | |
|---|---|
| Bald Eagle | +21% |
| Northern Goshawk | +50% |
| Red-shouldered Hawk | +56% |

Raptors **near** their previous 10-season averages include the following:

| | |
|---|---|
| Northern Harrier | -10% |
| Broad-winged Hawk | -11% |
| Golden Eagle | +0% |
| American Kestrel | -8% |

Raptors **slightly below** their previous 10-season averages include:

| | |
|---|---|
| Cooper's Hawk | -11% |

Raptors **significantly below** their previous 10-season averages include:

| | |
|---|---|
| Osprey | -26% |
| Sharp-shinned Hawk | -41% |
| Red-tailed Hawk | -27% |
| Merlin | -34% |
| Peregrine Falcon | -48% |

No Rough-legged Hawks, Swainson's Hawks, or Swallow-tailed Kites were tallied this season.

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## Monthly Reports from the Platform

***Andrew Rapp & Jason Bojczyk at Kiptopeke Hawkwatch***

*AUGUST*

A total of 73 raptors comprised of nine migrant species were recorded in August. The total effort was four days comprised of 32.5 hours, conducted by Nancy Barnhart. No days were affected by the weather. The three most numerous raptors in order of decreasing abundance were Osprey (n=39), Bald Eagle (n=11) and Red-tailed Hawk (n=6). The highest daily total and number of raptor species both occurred on August 29, with 25 raptors tallied, comprised of seven species. All three Mississippi Kites of the season were tallied in August, with a peak of two individuals on August 29.

*SEPTEMBER*

A total of 5,779 raptors comprised of eleven migrant species were recorded in September. The total effort was 29 days comprised of 267 hours. One full day was lost due to weather, with an additional two days shortened due to weather. The three most numerous raptors in order of decreasing abundance included the American Kestrel (n=1,905), Osprey (n=1,649) and Merlin (n=474). The highest daily total of raptors occurred on September 15 with 979 raptors tallied. September 15, 17, 24, 27, 28 and 29 all recorded eleven species of migrant raptors, the highest diversity for the month. Three species had their seasonal raptor peaks on two days including the following:

| | | |
|---|---|---|
| Osprey | n=273 | 9/15 |
| American Kestrel | n=396 | 9/15 |
| Broad-winged Hawk | n=194 | 9/24 |

Compared to the previous ten Septembers, it was a significantly below-average September for total raptors (-24%) and the fewest number of raptors recorded in September since 2013. The number of 1,000+ days (0) was just below the 10-year average of one per September. The number of 500+ days (2) was significantly below the 10-year average of five. In fact, there is only one other season (not impacted by a delayed start and with a full-time counter) with two or fewer days of 500+ raptors in September (2012). The number of 250+ days (9) was near the 10-year average of ten and the number of 100+ days (17) was near the 10-year average of 18. The number of days with less than 50 raptors (7) was near the 10-year average of six.

Raptors **near** the previous 10-season September average include:

| | |
|---|---|
| Northern Harrier | +0% |
| Red-tailed Hawk | -11% |
| American Kestrel | -4% |

Raptors **slightly above** the previous 10-season September average include:

| | |
|---|---|
| Bald Eagle | +14% |
| Broad-winged Hawk | +10% |
| Red-shouldered Hawk* | +400% |

* (Second-highest September and significantly above 10-year September average)

Raptors **significantly below** the previous 10-season September average include:

| | |
|---|---|
| Osprey | -20% |
| Sharp-shinned Hawk | -66% (third lowest September ever) |
| Cooper's Hawk | -34% |
| Merlin | -36% |
| Peregrine Falcon | -70% (lowest September on record) |

When treated as individual species, Swainson's Hawk, Mississippi Kite and Swallow-tailed Kite, have been recorded on less than half the last ten Septembers. Collectively, at least one of these species was seen in September during seven of the past ten seasons. Unfortunately, none of these species were tallied in September of 2022.

***OCTOBER***

A total of 7,655 raptors comprised of 12 migrant species were recorded in October. The total effort was 31 days comprised of 229 hours. No full days were lost due to weather, but eight days were shortened due to weather. The three most numerous raptors in order of decreasing abundance were Sharp-shinned Hawk (n=2,384), American Kestrel (n=1,437), and Cooper's Hawk (n=1,408). The highest daily total of raptors occurred on October 7, with 910 raptors tallied. The highest diversity of raptors occurred on October 30, with 12 migrant species recorded. Along with November 9, this was the most diverse day of migrant raptors for the season. Nine species had (or tied) their seasonal raptor peaks on six days:

| | | |
|---|---|---|
| Peregrine Falcon | n=117 | 10/1 |

| | | |
|---|---|---|
| Merlin | n=112 | 10/7 |
| Bald Eagle | n=48 | 10/8 |
| Sharp-shinned Hawk | n=374 | 10/8 |
| Cooper's Hawk | n=167 | 10/8 |
| Red-shouldered Hawk | n=18 | 10/22 |
| Northern Harrier | n=47 | 10/28 |
| Red-tailed Hawk | n=27 | 10/28 |
| Golden Eagle | n=1 | 10/30 and 5 November dates |

Compared to the previous ten Octobers it was a significantly below-average October for total raptors (-19%) and the lowest number of raptors recorded in October since 2017; the second lowest October since full-time counting began. The number of 1,000+ days (0) was slightly below the 10-year average of 1.5 per October. The number of 500+ days (2) was significantly below the 10-year average of 5. The number of 250+ days (14) was near the 10-year average of 12.5, and the number of 100+ days (20) was slightly below the 10-year average of 23. The number of days with less than 50 raptors (9) was significantly above the 10-year average of 4.4.

Raptors **near** the previous 10-season October average include:

| | |
|---|---|
| Northern Harrier | +4% |
| Cooper's Hawk | +4% |

Raptors **significantly above** the previous 10-season October average include:

| | |
|---|---|
| Bald Eagle | +82% |
| Red-shouldered Hawk | +150% |
| Red-tailed Hawk | +51% |

Raptors **slightly below** the previous 10-season October average include:

| | |
|---|---|
| American Kestrel | -13% |
| Golden Eagle | -50% |

Raptors **significantly below** the previous 10-season October average include:

| | |
|---|---|
| Sharp-shinned Hawk | -29% |
| Broad-winged Hawk | -45% |
| Merlin | -31% |
| Peregrine Falcon | -40% |

At least one Rough-legged Hawk or Swainson's Hawk was tallied in 4 of the last 10 seasons in October, but neither species was recorded this October.

***NOVEMBER***

A total of 572 raptors comprised of 13 migrant species were recorded in November. Total effort was 25 days comprised of 142.25 hours. Five full days were lost due to weather, with an additional two days shortened due to weather. The three most numerous raptors in order of decreasing abundance were the Sharp-shinned Hawk (n=146), Red-tailed Hawk (n=134), and Red-shouldered Hawk (n=71). The highest daily total of raptors occurred on November 2, with 97 raptors tallied. The highest diversity of raptors occurred on November 9, with 12 species recorded. Two species had (or tied) their seasonal peaks on eight days.

| | | |
|---|---|---|
| Northern Goshawk | n=1 | 11/8, 11/23, 11/29 |
| Golden Eagle | n=1 | 11/2, 11/9, 11/14, 11/15, 11/19 |

Compared to the previous ten Novembers it was a significantly below average November for total raptors (-57%) and the lowest November total since full-time counting began. The number of 100+ days (0) was significantly below the 10-year average of four. The number of days with less than 50 raptors (26) was significantly above the 10-year average of 20.

Raptors **near** the previous 10-season November average include:

| | |
|---|---|
| Northern Goshawk | +50% |
| Red-shouldered Hawk | +4% |
| Golden Eagle | +25% |
| American Kestrel | -19% |
| Peregrine Falcon | -8% |

Raptors **slightly below** the previous 10-season November average include:

Osprey (-58%)
Broad-winged Hawk (-64%).

Raptors **significantly below** the previous 10-season November average include:

| | |
|---|---|
| Bald Eagle | -63% |
| Northern Harrier | -65% |
| Sharp-shinned Hawk | -62% |
| Cooper's Hawk | -65% |
| Red-tailed Hawk | -62% |
| Merlin | -79% |

At least one Rough-legged Hawk or Swainson's Hawk was tallied in 4 of the last 10 seasons in November, but neither species was recorded this November.

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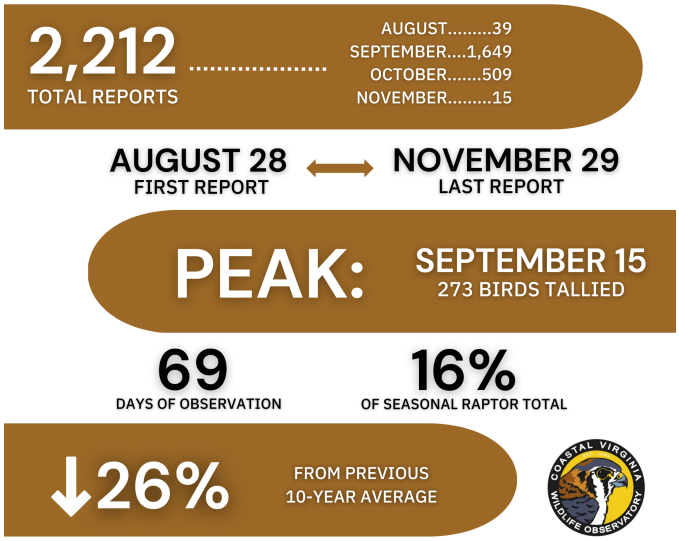
## Species Accounts

***Osprey***

# OSPREY



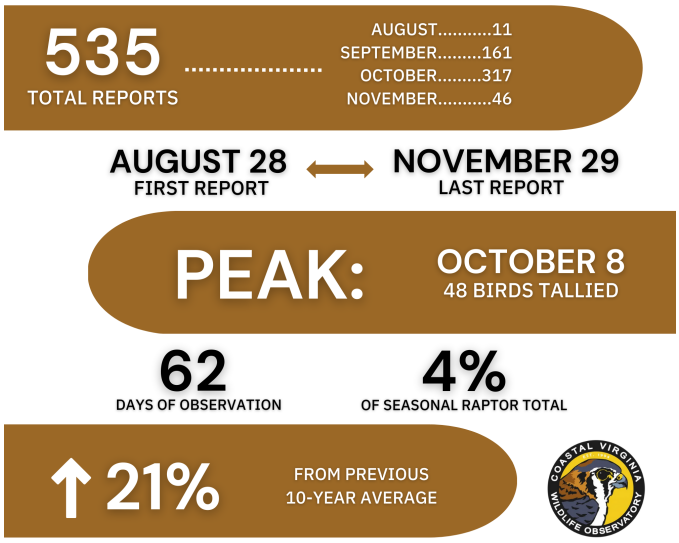

A total of 2,212 Osprey were recorded this season (39 in August, 1,649 in September, 509 in October, and 15 in November). The first migrant was recorded on August 28 and the last migrant was recorded on November 29. Osprey peaked on September 15, with 273 birds tallied. Migrants were recorded on 69 days of observation and accounted for 16% of the seasonal raptor total. Compared to the previous ten seasons, Osprey were down 26% from the average. Interestingly, both the number of 100+ Osprey days (7) and 200+ days (3) this season exceeded the previous 10-season average of six and two respectively. The top seven daily totals of 273, 217, 205, 141, 136, 119, and 114 accounted for 55% of its season total. All seven peak dates occurred between September 2 and October 1. The 205 Osprey tallied on September 8 is tied for the second earliest 200+ day in the history of the count. The 217 tallied on October 1 is the first 200+ day in October since 2010. Like several other raptor species this season, Osprey got off to a fantastic first half of September, but inexplicably dried up during its typical peak 2-week period (September 18-October 1). The 273 birds recorded on September 15 is the 31st highest day count ever and the 11th highest count in the last ten years.

*Bald Eagle*

*Bald Eagle | Blake Sperow*

A total of 535 Bald Eagles were recorded this season (11 in August, 161 in September, 317 in October, and 46 in November). The first migrant was recorded on August 28 and the last migrant was recorded on November 29. They peaked on October 8, with 48 birds tallied. Migrants were recorded on 62 days of observation and accounted for 4% of the seasonal raptor total. Compared to the previous 10 seasons, Bald Eagles were up 21% from the average.

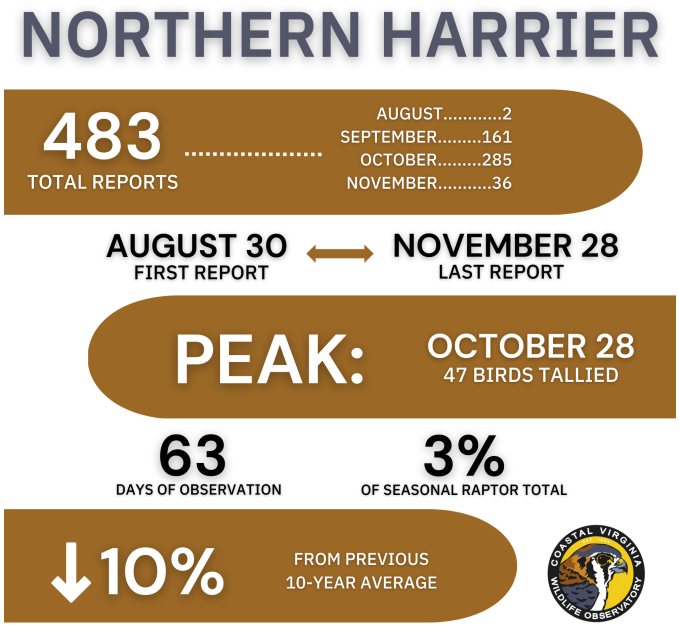
# BALD EAGLE




The top seven daily totals of 48, 44, 31, 30, 26, 23, and 22 accounted for 42% of its season total. All seven peak dates occurred between September 28 and October 22. The 48 birds on October 8 is the second-highest day count of migrant Bald Eagles.

On October 12, 19 migrant Bald Eagles were recorded between 12-1 p.m., which is almost certainly the highest Bald Eagle hour in the history of the count. The 44 Bald Eagle day was the third-highest Bald Eagle day count ever. Incredibly, two of the top three Bald Eagle days in the history of the count occurred within just five days of each other. Despite this, the season total of Bald Eagles was only the fourth highest in the history of the count, largely due to a poor showing from October 23 through the remainder of the season. In fact, the 46 Bald Eagles recorded in November is the lowest November total since 2014.

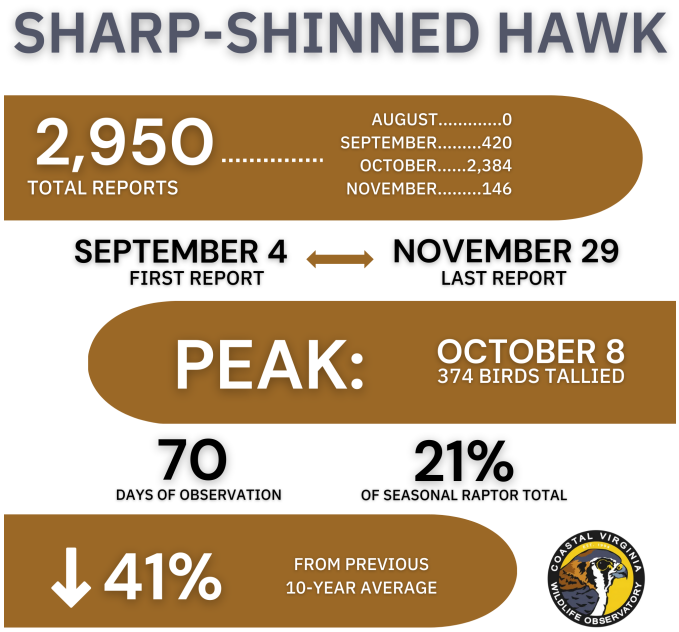
*Northern Harrier*




A total of 483 Northern Harriers were recorded this season (2 in August, 161 in September, 285 in October, and 36 in November). The first migrant was recorded on August 30 and the last migrant was recorded on November 28. They peaked on October 28, with 47 birds tallied. Migrants were recorded on 63 days and accounted for 3% of the seasonal raptor total. Compared to the previous 10 seasons, Northern Harriers were down 10% from the average. The top seven daily totals of 47, 43, 28, 26, 25, 25, and 25 accounted for 45% of its season total. All seven peak dates occurred between September 15 and October 29. The 47 birds on October 28 is tied for the 50th highest day count of Northern Harriers in the history of the count and the fourth-highest daily total in the past 10 years.

*Sharp-shinned Hawk*

A total of 2,950 Sharp-shinned Hawks were recorded this season (420 in September, 2,384 in October, and 146 in November). The first migrant was recorded on September 4 and the last migrant was recorded on November 29. They peaked on October 8, with 374 birds tallied. Migrants were recorded on 70 days and accounted for 21% of the seasonal raptor total. Compared to the previous 10 seasons, Sharp-shinned Hawks were down 41% from the average. The top seven daily totals of 374, 293, 179, 178, 127, 119, and 116 accounted for 47% of its season total. All seven peak dates occurred between October 7 and October 28.




Like several other species, Sharp-shinned Hawks never really had any peak during their typical peak period (September 25-October 8), and the start of the peak period this season began when its peak period typically ends in a given season. The 420 Sharp-shinned Hawks tallied this September was the third-fewest in the history of the count. The remnants of Hurricane Ian did slowly work their way up the Delmarva Peninsula between September 30 through October 5 and perhaps somehow had an unknown impact on their migration. This seems to be unlikely as there were seemingly favorable conditions for Sharp-shinned Hawks to peak during their normal peak period, as well as favorable conditions pre-Ian remnants, during Ian remnants, and post-Ian remnants. Just before the typical start

of the peak period for Sharp-shinned Hawks (September 20-23), there were seemingly favorable conditions each day for hawks to move in peak numbers (light-moderate WNW-NW winds); it didn't happen. Prior to the remnants of Hurricane Ian (September 26-29) had favorable light-moderate NW-NE winds and immediately after the remnants of Ian, on October 6, had light WNW winds. Additionally, October 1, 2, and 5 had at least six hours of counting per day, without any significant Sharp-shinned Hawk movement. Adding to the confusion is the fact that Cape Henlopen, DE had these same conditions affect that location from September 30 through October 5 and that site had its highest Sharp-shinned Hawk season since 2011. Cape May, NJ also had its second-highest Sharp-shinned Hawk season since 2013, despite facing similar weather conditions from October 1-4.

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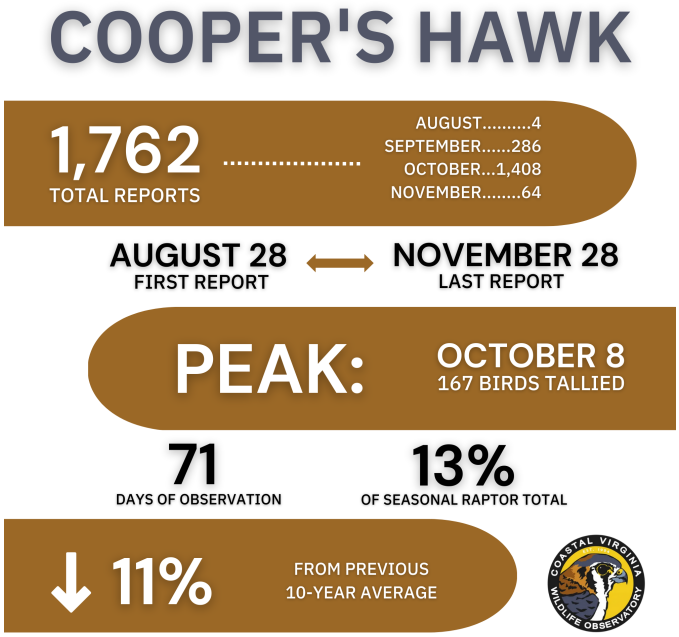
*Cooper's Hawk*

A total of 1,762 Cooper's Hawks were recorded this season (4 in August, 286 in September, 1,408 in October, and 64 in November). The first migrant was recorded on August 28 and the last migrant was recorded on November 28. They peaked on October 8, with 167 birds tallied. Migrants were recorded on 71 days and accounted for 13% of the seasonal raptor total. Compared to the previous 10 seasons, Cooper's Hawks were down 11% from the average. The top seven daily totals of 167, 145, 103, 103, 99, 90, and 88 accounted for 45% of its season total. All seven peak dates occurred between October 7 - 28. Unlike Sharp-shinned Hawks, the two highest counts this season both occurred during the typical peak week for Cooper's Hawk (October 5-11).

*Cooper's Hawks | Steve Thornhill*

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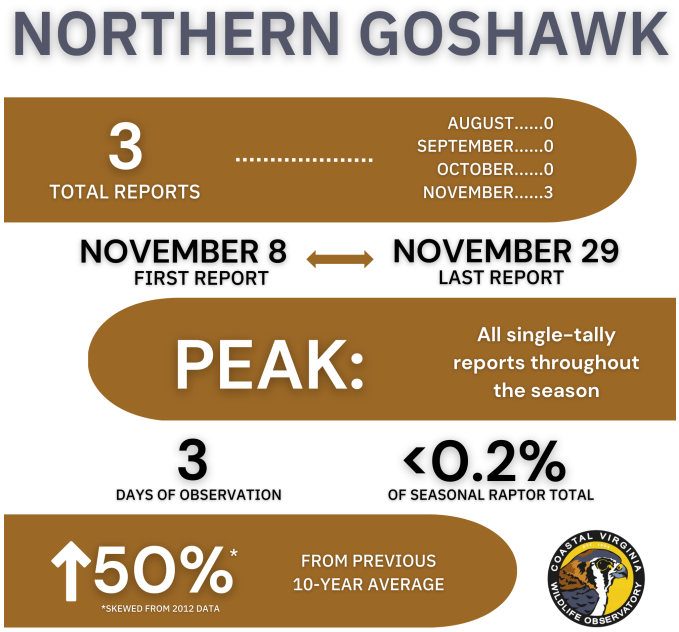
*Northern Goshawk*




A total of 3 Northern Goshawks were recorded this season, all of which occurred in November. All

three Goshawks were recorded between November 8 and 29, with singles tallied each day. Compared to the previous 10 seasons, Northern Goshawks were up 50% from the average. However, this is largely skewed because of the 11 Northern Goshawks tallied in 2012. Only half of the past 10 seasons recorded at least one Goshawk. The three tallied this season are the most since 2014 when 6 were tallied.

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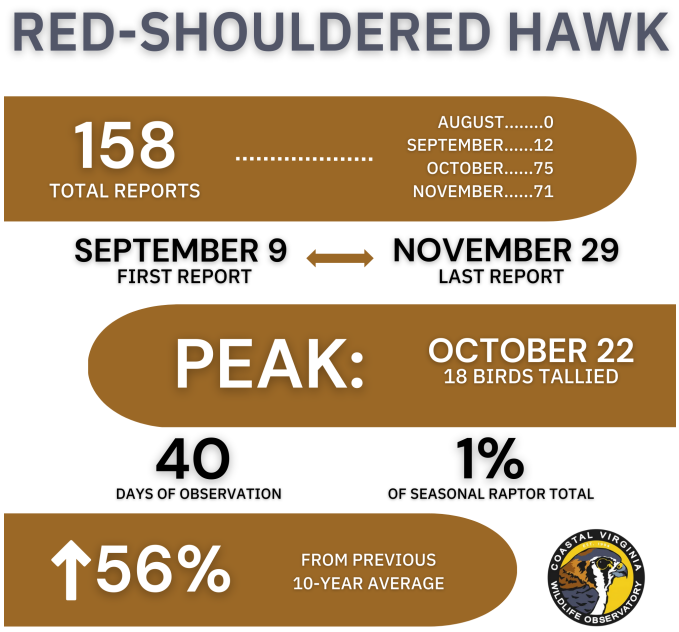
*Red-shouldered Hawk*




A total of 158 Red-shouldered Hawks were recorded this season (12 in September, 75 in October, and 71 in November). The first migrant was recorded on September 9 and the last migrant was recorded on November 29. They peaked on October 22, with 18 birds tallied. Migrants were recorded on 40 days and accounted for 1% of the seasonal raptor total. Compared to the previous 10 seasons, Red-shouldered Hawks were up 56% above the average. The top seven daily totals of 18, 12, 11, 9, 9, 8, and 8 accounted for 48% of its seasonal raptor total. All seven peak dates occurred between October 12th and November 14. It was an excellent season for Red-shouldered Hawks and the 158 tallied this season is the third-highest season in the history of the count. It also was the second-highest September season (12 birds) and the second-highest October season (75 birds) in the history of the count.

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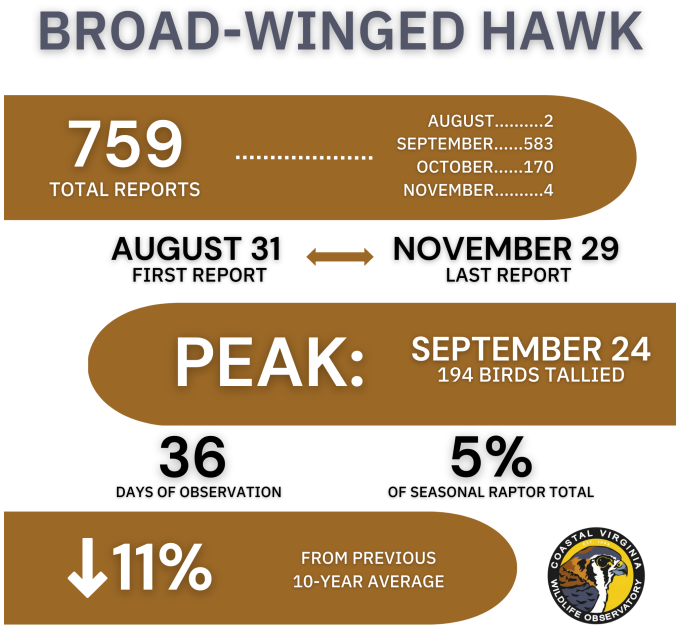
*Broad-winged Hawk*

*Broad-winged Hawks | Steve Thornhill*

A total of 759 Broad-winged Hawks were recorded this season (2 in August, 583 in September, 170 in October, and 4 in November). The first migrant was recorded on August 31 and the last migrant was recorded on November 29. They peaked on September 24, with 194 birds tallied. Migrants were recorded on 36 days and accounted for 5% of the seasonal raptor total. Compared to the previous 10 seasons, Broad-winged Hawks were down 11% from the average.




The top seven daily totals of 194, 83, 83, 61, 56, 50, and 36 accounted for 74% of its seasonal raptor total. All seven peak dates occurred between September 15 and October 8. The Broad-winged Hawk tallied between 1-2 p.m. on November 29 is the latest (confirming this shouldn't be largest) in

the history of the count. This mark very narrowly beats out the previous records of between 11 a.m. - 12 p.m. on 11/29/1997 and between 9-10 a.m. on 11/29/2020.

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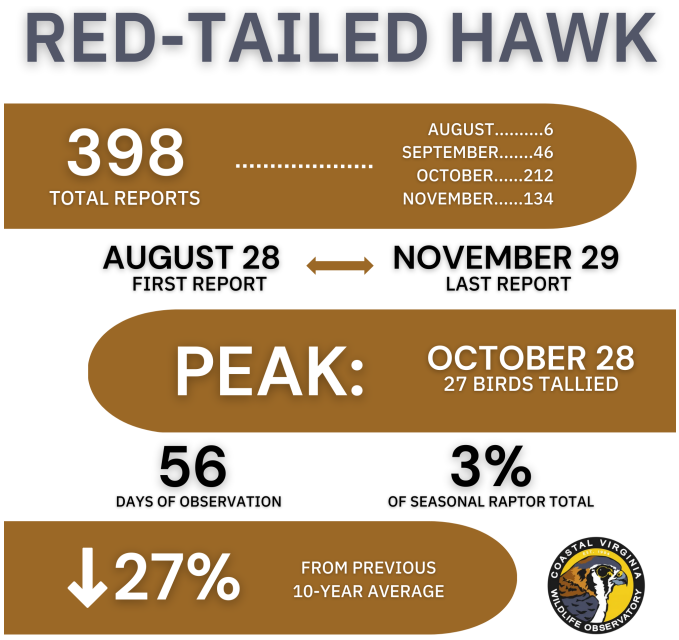
*Red-tailed Hawk*

A total of 398 Red-tailed Hawks were recorded this season (6 in August, 46 in September, 212 in October, and 134 in November). The first migrant was recorded on August 28 and the last migrant was recorded on November 29. They peaked on October 28, with 27 birds tallied. Migrants were recorded on 56 days and accounted for 3% of the seasonal raptor total. Compared to the previous 10 seasons, Red-tailed Hawks were down 27% from the average. The top seven daily totals of 27, 26, 25, 25, 23, 23, and 21 accounted for 43% of its seasonal raptor total. All seven peak dates occurred between October 22 and November 8. The 398 Red-tailed Hawks tallied this season is the fewest since 2015.

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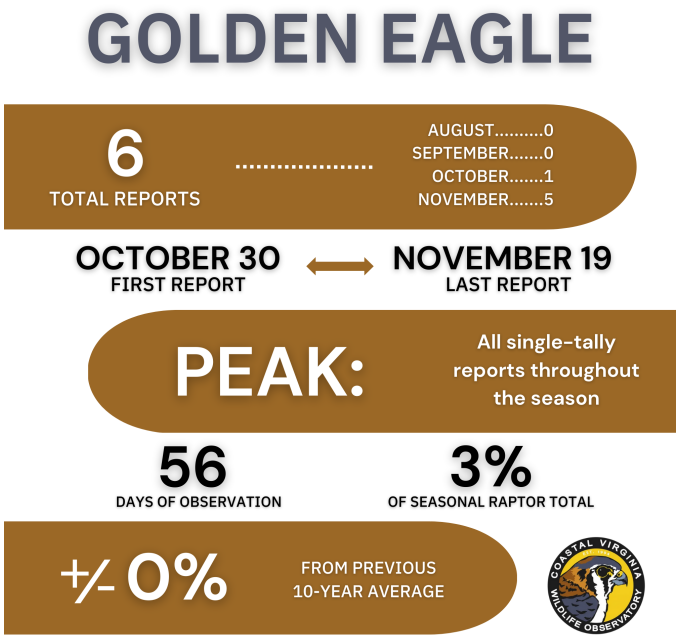
*Golden Eagle*

A total of six Golden Eagles were recorded this season (1 in October, 5 in November). All 6 Golden Eagles were recorded between October 30th and November 19, with singles tallied each day. Compared to the previous 10 seasons, Golden Eagles were right at the average of six.

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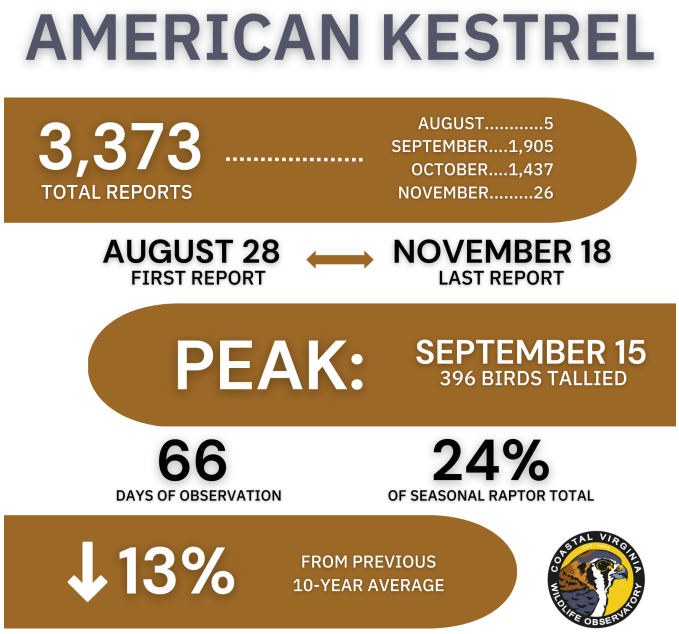
*American Kestrel*

A total of 3,373 American Kestrels were recorded this season (5 in August, 1,905 in September, 1,437 in October, and 26 in November). The first migrant was recorded on August 28 and the last migrant was recorded on November 18. They peaked on September 15, with 396 birds tallied. Migrants were recorded on 66 days and accounted for 24% of the seasonal raptor total. Compared to the previous 10 seasons, American Kestrels were down 13% from the average.

*American Kestel | Steve Thornhill*

The top seven daily totals of 396, 248, 234, 233, 204, 174, and 143 accounted for 48% of its seasonal raptor total. All seven peak dates occurred between

September 14 and October 15. Kestrels got off to an excellent start this season, with the second-largest number recorded in the first half of September since 2005. With the 396 tallied on September 15, nearly a week before the typical peak week for Kestrels, it seemed like Kestrels were going to have one of the best seasons in a long time. Unfortunately, Kestrels really cooled off during the peak week, with only one of the top seven days this season (the seventh-highest day) occurring during the typical best week (September 21-27). In fact, Kestrels went from being 29% above the 10-year average for the first 3 weeks of September to 4% below the 10-year average just a week later. The 396 tallied on September 15 was the seventh-highest count for Kestrels in the last ten years. The three consecutive 100+ Kestrel days from October 14-16 totaling 543 birds is nearly unprecedented that late in the season. The excellent start and finish to the Kestrel season makes it that more surprising that they were down 13% from the 10-year average.

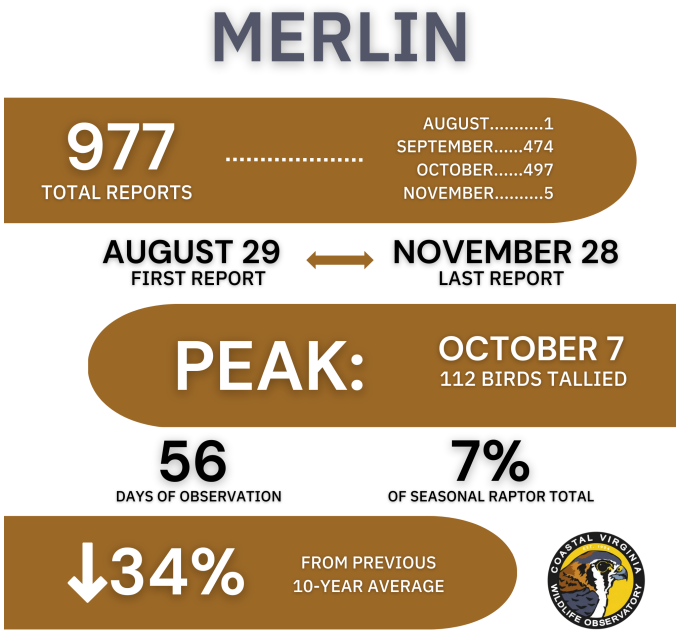



*Merlin*

A total of 977 Merlins were recorded this season (1 in August, 474 in September, 497 in October, and 5 in November). The first migrant was recorded on August 29 and the last migrant was recorded on November 28. They peaked on October 7, with 112 birds tallied. Migrants were recorded on 56 days and accounted for 7% of the seasonal raptor total. Compared to the previous 10 seasons, Merlins were down 34% from the average. The top seven daily totals of 112, 98, 74, 68, 55, 50, and 49 accounted

*Merlin | Steve Thornhill*

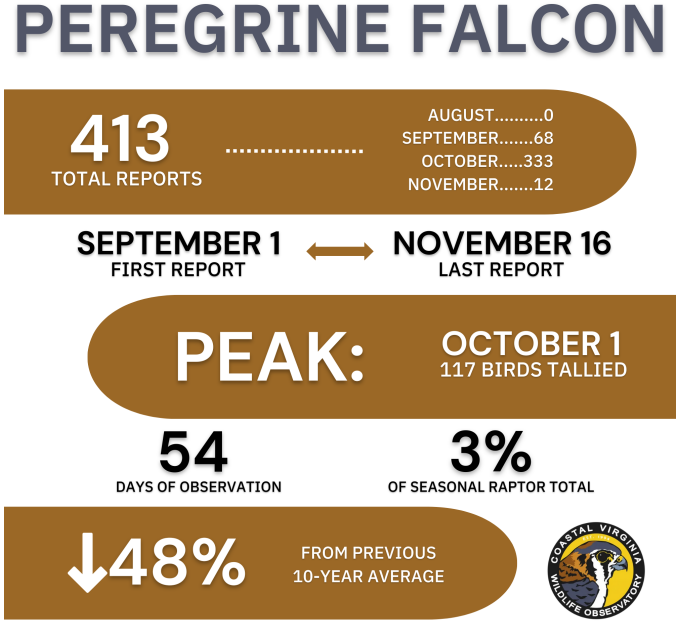
for 52% of its seasonal raptor total. All seven peak dates occurred between September 9 and October 7. Merlin was another species that got off to an excellent start, with the most recorded in the first half of September since 2006. With the 74 tallied on September 9, more than 2 weeks earlier than the typical peak period, it seemed like Merlins were going to have an excellent season. Unfortunately, only one of the top seven days this season occurred during the typical peak for Merlins (September 24-30). By the end of September, Merlins were already down 36% from the previous 10-year average.



*Peregrine Falcon*

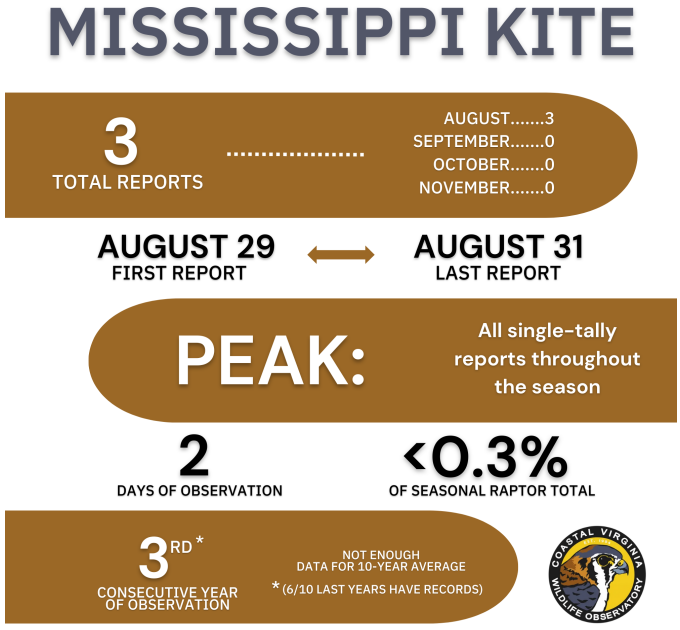
*Peregrine Falcon | Steve Thornhill*

A total of 413 Peregrine Falcons were recorded this season (68 in September, 333 in October, and 12 in November). The first migrant was recorded on September 1 and the last migrant was recorded on November 16. They peaked on October 1, with 117 birds tallied. Migrants were recorded on 54 days and accounted for 3% of the seasonal raptor total. Compared to the previous 10 seasons, Peregrine Falcons were down 48% from the average. The top seven daily totals of 117, 38, 20, 19, 19, 15, and 14 accounted for 55% of its seasonal raptor total. All seven peak dates occurred between September 25 and October 16. It was a very disappointing season for Peregrine Falcons. The 68 tallied in September and the 413 tallied for the season were both the fewest since full-time counting began and down 70% and 48%, respectively. The 117 tallied on October 1 alone accounted for 28% of the seasonal raptor total. This was the 22nd-highest daily total for Peregrine Falcons in the history of the count and the seventh-highest count in the last ten years. Unlike most species with significantly below-average totals this season, three of the seven peak daily totals occurred during its typical peak week (October 1-7).Other hawk watching sites known for high seasonal totals of Peregrine Falcons were also below average this season. Cape May, NJ had the sixth-lowest total since 1995 and the Florida Keys Hawkwatch had its lowest season (not impacted by weather) since 2010. Additionally, Cape Henlopen, DE had its third-lowest Peregrine Falcon season since full-time counting began in 2008.



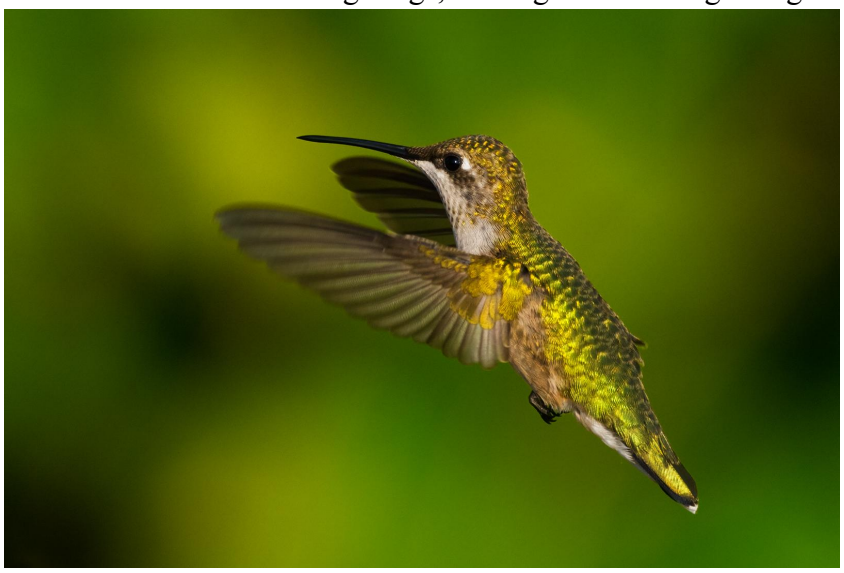

*Mississippi Kite*

A total of 3 Mississippi Kites were recorded this season, all of which occurred in August. All three Mississippi Kites were recorded between August 29 and August 31, with a peak of 2 on August 29. This is the third year in a row Mississippi Kites were recorded. Six of the last ten seasons have now recorded at least one Mississippi Kites, and this is likely to increase with increased observer effort in August.



*\Non-Raptor Highlights*

A total of 172 species were recorded from the hawk platform this season. The following two tables include the most notable sightings, starting from the beginning of the season.



***Ruby-throated Hummingbird | Steve Thornhill***

*Table X. Non-Raptor Highlights (9/1-10/20)*

| | 9/1 | 9/2 | 9/8 | 9/9 | 9/10 | 9/14 | 9/15 | 9/16 | 9/23 | 9/24 | 9/27 | 9/29 | 10/2 | 10/6 | 10/8 | 10/9 | 10/10 | 10/11 | 10/12 | 10/14 | 10/15 | 10/16 | 10/18 | 10/20 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **American Goldfinch** | | | | | | | | | | | | | | | | | | | | 148 | | | | |
| **American White Pelican** | | | | | | | | | | | | | | | | | | | | | | | | 19 |
| **Barn Swallow** | | | 653 | 1267 | 560 | | | | | | | | | | | | | | | | | | | |
| **Blue Jay** | | | | | | | | | | | | | 109 | | 3833 | 2100 | | 810 | 340 | 960 | 1790 | 1750 | | 2110 |
| **Bobolink** | 280 | 113 | 120 | | | 186 | 139 | 247 | | | | | | | | | | | | | | | | |
| **Cape May Warbler** | | | | | | | | 4 | 9 | | | | | | | | | | | | | | | |
| **Chuck-will's-widow** | | | | | | | 1 | | | | | | | | | | | | | | | | | |
| **Clay-colored Sparrow** | | | | | | 1 | | | | | | | | | | | | | | | 1 | | | |
| **Dickcissel** | | | | | | | | | | | 1 | | 1 | 1 | 1 | | 1 | | | 4 | | 1 | 1 | |
| **Eastern Kingbird** | 214 | 176 | | | | | | | | | | | | | | | | | | | | | | |
| **Great Blue Heron** | | | | | | | 22 | | | | | | | | | | | | | | | | | |
| **Green Heron** | | | | | | | 51 | | | | | | | | | | | | | | | | | |
| **House Finch** | | | | | | | | | | | | | | | | | | | | | 49 | | | |
| **Lark Sparrow** | | | 1 | | | | | | | | | | | | | | | | | | | | | |
| **Lazuli/Indigo Bunting** | | | | | | | | | | 1 | | | | | | | | | | | | | | |
| **Northern Flicker** | | | | | | | | | | 228 | | | | 100 | 168 | 1473 | | | | | | | | |
| **Northern Parula** | | | | | | | | | | | | | | 26 | | | | | | | | | | |
| **Northern Waterthrush** | | | | | | | | 6 | | | | | | | | | | | | | | | | |
| **Orchard Oriole** | | | | | | | | | | | | | 1 | | | | | | | | | | | |
| **Pine Siskin** | | | | | | | | | | | | | | | | 2 | | | | | | | | |
| **Purple Finch** | | | | | | | | | | | | | | | | 2 | | | 2 | | | | | |
| **Purple Martin** | | 348 | | | | | | | | | | | | | | | | | | | | | | |
| **Red-bellied Woodpecker** | | | | | | | | | | | | | | 26 | | 54 | | | | | | | | |
| **Red-breasted Nuthatch** | 1 | | | | | | | | | | | | | | | 15 | | | | | 14 | | | |
| **Red-headed Woodpecker** | | | | | | | | | | | | | | 8 | | | | | | | | | | |
| **Rufous/Allen's Hummingbird** | | | | | 1 | | | | | | | | | | | | | | | | | | | |
| **Tree Swallow** | | | | | | | | | 618 | | | 1100 | | | 1500 | 700 | | | | | 1000 | | | |
| **Warbler sp.** | | | | | | | | 1 | | | | 109 | | | | | | | | | | | | |
| **White-breasted Nuthatch** | | | | | | | | | | 1 | | | | | | | | | | | | | | |
| **Wood Thrush** | | | | | | | | | | | | | | | 1 | | | | | | | | | |
| **Yellow-bellied Sapsucker** | | | | | | | | | | | | | | 18 | | 58 | | | | | 17 | | | |
| **Yellow-headed Blackbird** | | | | | | 1 | | | | | | | | | | | | | | | | | | |
| **Yellow-rumped Warbler** | | | | | | | | | | | | | | | | | | | | 340 | 1 | 650 | | |

*Table X. Non-Raptor Highlights (10/21-11/29)*

| | 10/21 | 10/22 | 10/23 | 10/25 | 10/26 | 10/25 | 10/26 | 10/27 | 10/28 | 10/29 | 10/30 | 11/2 | 11/3 | 11/4 | 11/6 | 11/8 | 11/9 | 11/12 | 11/13 | 11/14 | 11/16 | 11/17 | 11/19 | 11/21 | 11/29 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **American Goldfinch** | | | | | | | | 177 | | | | 120 | | | | | | | | | | | 329 | 280 | |
| **American Pipit** | | | | | | | | | 34 | | | 26 | | | | | | | | | | | | | |
| **American Robin** | | | | | | | | 4810 | | 970 | | 2190 | | | | 2260 | | | 750 | 3500 | | | 963 | 810 | |
| **Barn Swallow** | | | | | | | | | | | | | | 1 | | | | | | | | | | | |
| **Black-billed Cuckoo** | | | | | | | | | | | | | | | | 1 | | | | | | | | | |
| **Blue Jay** | | | | | | | | 110 | 350 | | | | | | | | | | | | | | | | |
| **Blue-gray Gnatcatcher** | | | | | | | | 1 | | | | | | | | | | | | | | | | | |
| **Bobolink** | | | | | | | | | | 1 | | | | | | | | | | | | | | | |
| **Brown-headed Cowbird** | | | | | | | | | 1900 | | | | | | | | 500 | | | | | | | | |
| **Cape May Warbler** | | | | | | | | | | | | | | | | | | | | | | | 1 | | |
| **Common Loon** | | | | | | | | | | | | | | | | | | | | | | | 31 | | |
| **Dickcissel** | | | | | | | | | 1 | | | 1 | | | | | | | | | | | | | |
| **Double-crested Cormorant** | | 340 | | | | | | | | | | | | | | | | | | | | | | | |
| **Eastern Bluebird** | | | | | | | | | 75 | | | | | | | | | | | | | 1 | | | |
| **Evening Grosbeak** | | | | | | | | | | 1 | | | 1 | | | | | | | | 1 | | | | 1 |
| **Grasshopper Sparrow** | | | | 1 | 1 | 1 | 1 | | | | | | | | | | | | | | | | | | |
| **Indigo Bunting** | | | | | | | | 1 | | | | | 1 | | | | | | | | | | | | |
| **Killdeer** | | | | | | | | | 133 | | | | | | | | | | | | | | | | |
| **Lapland Longspur** | | | | | | | | | | | | | | | | | | | | | | 1 | | | |
| **Lark Sparrow** | | | | | | | | | | | | | | 1 | | | | | | | | | | | |
| **Northern Parula** | | | | | | | | | | | | | 1 | | | | | | | | | | | | |
| **Pine Siskin** | | | | | | | | 1 | | | | 4 | | | | 3 | 3 | | 8 | | | | 9 | 95 | |
| **Prarie Warbler** | 1 | | | | | | | | | | | | | | | | | | | | | | | | |
| **Purple Finch** | | | | | | | | 41 | | 9 | | 19 | | | | 8 | | | | | | | 7 | | 5 |
| **Red Crossbill** | | | | | | | | | | | | | | | | | | | | | | | | | 1 |
| **Red-bellied Woodpecker** | | | | | | | | | | | | | | | | | 13 | | | | | | | | |
| **Red-winged Blackbird** | | | | | | | | 4650 | | 2330 | | 970 | | | | 3000+ | 1400 | | | | | | 2250 | 1530 | |
| **Ruby-throated Hummingbird** | 1 | 1 | 1 | | 1 | | 1 | | 1 | | 1 | 1 | | | 1 | | | | 1 | 1 | 1 | | | | |
| **Rusty Blackbird** | | | | | | | | | 222 | | | | | | | | | | | | | | | | |
| **Swamp Sparrow** | | | 1 | | | | | | | | | | | | | | | | | | | | | | |
| **Tree Swallow** | | | | | | | | 500 | 485 | 2000 | | | | | | | | | | | | | | | |
| **Tundra Swan** | | | | | | | | | | | | | | | | | | | 185 | | | | | | |
| **Yellow-billed Cuckoo** | | | | | | | | | | | 1 | | | | | | | | | | | | | | |
| **Yellow-rumped Warbler** | | 500 | 500 | | | | | 850 | 445 | | | | | | | | | | | | | | | | |

- September 1: Eastern Kingbird (214), Red-breasted Nuthatch (1), and Bobolink (280)
- September 2: Eastern Kingbird (176), Purple Martin (348), and Bobolink (113)
- September 8: Barn Swallow (653), Lark Sparrow (1), and Bobolink (120)
- September 9: Barn Swallow (1,267)
- September 10: Rufous/Allen's Hummingbird (1) and Barn Swallow (560)
- September 14: Clay-colored Sparrow (1), Yellow-headed Blackbird (1), and Bobolink (186)
- September 15: Chuck-will's-widow (1), Great Blue Heron (22), Green Heron (51), and Bobolink (139)
- September 16th: Bobolink (247), Northern Waterthrush (6), Cape May Warbler (4), and Warbler Sp. (131)
- September 23rd: Tree Swallow (618) and Cape May Warbler (9)
- September 24th: Northern Flicker (228), White-breasted Nuthatch (1), and Lazuli/Indigo Bunting (1)
- September 27th: Dickcissel (1)
- September 29th: Tree Swallow (1,100) and Warbler Sp. (109)

- October 2nd: Blue Jay (109), Orchard Oriole (1), and Dickcissel (1)
- October 6th: Yellow-bellied Sapsucker (18), Red-headed Woodpecker (8), Red-bellied Woodpecker (26), Northern Flicker (100), Northern Parula (27), and Dickcissel (1)
- October 8th: 88 species-the highest number recorded from the platform this season, Northern Flicker (168), Blue Jay (3,833), Tree Swallow (1,500), Wood Thrush (1), Dickcissel (1)
- October 9th: Yellow-bellied Sapsucker (58), Red-bellied Woodpecker (54), Northern Flicker (1,473), Blue Jay (2,100), Tree Swallow (700), Red-breasted Nuthatch (15), Purple Finch (2), and Pine Siskin (2)
- October 10th: Dickcissel (1)
- October 11th: Blue Jay (810)
- October 12th: Blue Jay (340) and Purple Finch (2)
- October 14th: Blue Jay (960), American Goldfinch (148), Yellow-rumped Warbler (340), and Dickcissel (4)
- October 15th: Yellow-bellied Sapsucker (17), Blue Jay (1,790), Tree Swallow (1,000), Red-breasted Nuthatch (14), House Finch (49), Clay-colored Sparrow (1), Yellow-rumped Warbler (700)
- October 16th: Blue Jay (1,750), Yellow-rumped Warbler (650), and Dickcissel (1)
- October 18th: Dickcissel (1)
- October 20th: American White Pelican (19) and Blue Jay (2,110)
- October 21st: Prairie Warbler (1) and Ruby-throated Hummingbird (1)
- October 22nd: Ruby-throated Hummingbird (1), Double-crested Cormorant (430), and Yellow-rumped Warbler (500)
- October 23rd: Ruby-throated Hummingbird (1), Swamp Sparrow (30), and Yellow-rumped Warbler (500)
- October 25th: Grasshopper Sparrow (1)
- October 26th: Ruby-throated Hummingbird (1) and Grasshopper Sparrow (1)
- October 27th: Blue Jay (110), Tree Swallow (500), Blue-gray Gnatcatcher (1), American Robin (4,810), Purple Finch (41), Pine Siskin (1), American Goldfinch (177), Red-winged Blackbird (4,650), and Yellow-rumped Warbler (850)
- October 28th: Ruby-throated Hummingbird (1), Killdeer (133), Blue Jay (350), Tree Swallow (485), Eastern Bluebird (75), American Robin (1,970), American Pipit (34), Purple Finch (69), Pine Siskin (2), American Goldfinch (105), Red-winged Blackbird (3,240), Brown-headed Cowbird (1,900), Rusty Blackbird (222), Yellow-rumped Warbler (445), and Dickcissel (1)
- October 29th: Tree Swallow (2,000), American Robin (970), Evening Grosbeak (1), Purple Finch (9), Bobolink (1), and Red-winged Blackbird (2,330)
- October 30th: Yellow-billed Cuckoo (1) and Ruby-throated Hummingbird (1)
- November 2nd: Ruby-throated Hummingbird (1), American Robin (2,190), American Pipit (26), Purple Finch (19), Pine Siskin (4), American Goldfinch (120), Red-winged Blackbird (970), and Dickcissel (1)
- November 3rd: Evening Grosbeak (1), Northern Parula (1), and Indigo Bunting (1)
- November 4th: Barn Swallow (1) and Lark Sparrow (1)
- November 6th: Ruby-throated Hummingbird (1)
- November 8th: Black-billed Cuckoo (1), American Robin (2,260), Purple Finch (8), Pine Siskin (3), and Red-winged Blackbird (3,000+)
- November 9th: Red-bellied Woodpecker (13), Pine Siskin (3), Red-winged Blackbird (1,400), and Brown-headed Cowbird (500)
- November 12th: American White Pelican (3)
- November 13th: Tundra Swan (185), Ruby-throated Hummingbird (1), American Robin (750), and Pine Siskin (8)

- November 14th: Ruby-throated Hummingbird (1) and American Robin (3,500)
- November 16th: Ruby-throated Hummingbird (1) and Blue Grosbeak (1)
- November 17th: Eastern Bluebird (62) and Lapland Longspur (1)
- November 19th: Common Loon (31), American Robin (963), Purple Finch (7), Pine Siskin (9), American Goldfinch (329), Red-winged Blackbird (2,520), and Cape May Warbler (1)
- November 21t: American Robin (810), Pine Siskin 95), American Goldfinch (280), and Red-winged Blackbird (1,530)
- November 29th: Evening Grosbeak (1), Purple Finch (5), and Red Crossbill (1)

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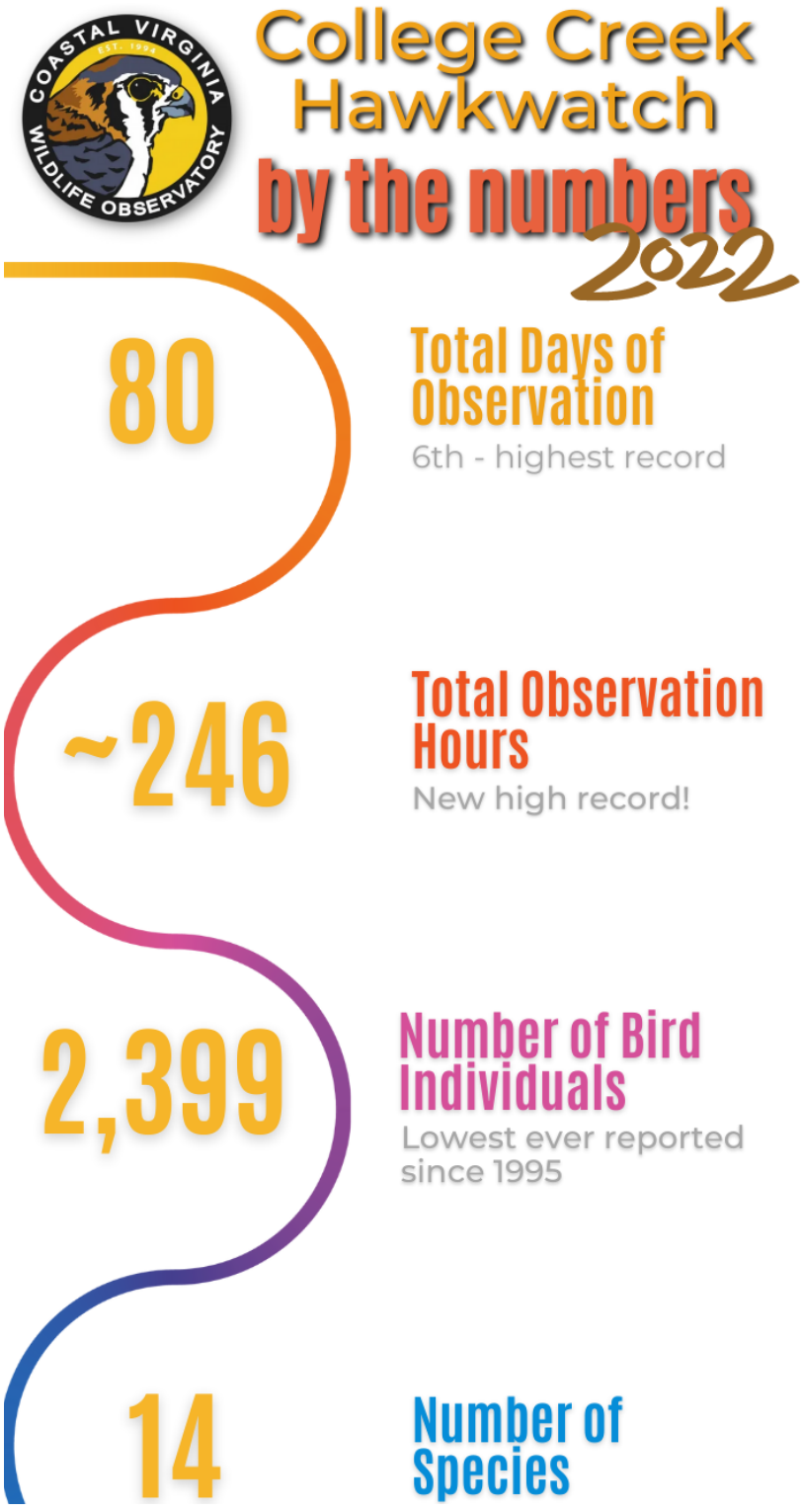
Acknowledgements
Prepared by Andrew Rapp
Thanks to Coastal Virginia Wildlife Observatory and Brian Taber for the opportunity to count raptors back on the East Coast again. Thanks to the staff of Kiptopeke State Park for providing the lodging at the Dutton House and their quick response to any issues that arose throughout the season. A huge thanks to Andrew Rapp for his help in all aspects throughout the season. It's been a while since I've had a field job with another co-worker and his enthusiasm throughout the season reminded me of just how great a season can be, shared with another person. Thanks to everyone that assisted in helping spot birds and providing conversations throughout the season, especially Bob Ake, Harry Armistead, Nancy and Ken Barnhart, Jessie Bright, Rudy Cashwell, Lynn Davidson, Wes Hetrick, Roberta Kellam, Rose Leong, Brian Taber, Tracy Tate, Steve Thornhill, Wayne Valentine, and Hal Wierenga. Although this was the fewest number of raptors tallied in a season, it sure didn't feel like it with all of the great people that came to visit this season.

**<insert photos for blank space>**

# College Creek Hawkwatch

Prepared by Brian Taber




This was the 26th 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 March 1 through May 31, 2022.

The protocol remained the same as in the previous 25 seasons; a daily watch was conducted, weather permitting, between 9 a.m. and 1 p.m., Eastern Standard Time. This has been shown to be the time 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 of record occurred on March 3 (143), May 2 (117) and May 4 (103). These three 100+ bird days compare to eleven such days last year, which was an all-time high for that mark. May 2, 2022, is the third-highest reported day for May.The 1,000$^{th}$ bird of the season, a milestone that is tracked, was recorded on March 25. The earliest date to reach that mark is March 20 in **WHAT YEAR**.

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 adults were recorded as migration.

| | | |
|---|---|---|
| Black Vultures | 66 | 2nd all-time |
| Turkey Vulture* | 1819 | 3rd all-time |
| Osprey** | 125 | 3rd lowest since 2003 |
| Bald Eagle | 116 | 4th all-time |
| Northern Harrier | 45 | 3rd all-time |
| Sharp-shinned Hawk*** | 26 | tied for 4th lowest |
| Cooper's Hawk | 19 | 5th all-time |
| Red-shouldered Hawk | 14 | 2nd all-time |
| Broad-wing Hawks | 16 | 4th all-time |
| Red-tailed Hawk^ | 22 | 3rd lowest |
| American Kestrel^^ | 19 | |
| Merlins | 5 | average |
| Mississippi Kite | 2 | (> annual average of 1) |

* Accounts for 76% of total observations
** Before 2003 coverage and totals were much less; no explanation for the apparent decrease
*** Continuing a slow recent trend
^ Might they be staying further north
^^ Higher than 10 of the past 11 years, but the numbers are still quite low all-time; no day recorded more than 1; it's a species of concern across the east

**Number of days Species Observed (out of 80 total days):**

| | |
|---|---|
| Black Vulture | 42 |
| Red-shouldered | 10 |
| Turkey Vulture | 70 |
| Broad-winged Hawk | 11 |
| Osprey | 38 |
| Red-tailed Hawk | 13 |
| Bald Eagle | 42 |
| American Kestrel | 19 |
| Northern Harrier | 26 |
| Merlin | 5 |
| Sharp-shinned Hawk | 18 |
| Peregrine Falcon | 3 |
| Cooper's Hawk | 16 |
| Mississippi Kite | 2 |

**Monthly totals:**

| | | |
|---|---|---|
| March | 1264 | 4th best all-time |
| April | 683 | 4th best all-time |
| May | 452 | 2nd best all-time |

**Birds/Hour by month:**

| | |
|---|---|
| March | 13 |
| April | 9 |
| May | 6 |

Average Birds/hour for the season was 10

**The non-raptor highlights included:**

- American White Pelican
- Tundra Swan
- Northern Gannet (March 6 and March 19)
- Lesser Black-backed Gulls
- Glossy Ibis
- Semi-palmated Plovers
- Black-bellied Plovers
- Whibrel (13 on May 22

*Season Totals with 10-Year Averages*

| Species | Total (10 yr) | Peak Flight (date) | Range of occurrence |
|---|---|---|---|
| **Black Vulture** | 166 (109) | 18 (3/8/22) | 3/1 - 5/29/22 |
| **Turkey Vulture** | 1819 (1499) | 136 (3/3/22) | 3/1 - 5/31/22 |
| **Osprey** | 125 (162) | 10 (5/2/22) | 3/3 - 5/13/22 |
| **Mississippi Kite** | 2 (1) | 1 (5/14 & 5/17/22) | 5/4 - 5/17/22 |
| **Swallow-tailed Kite** | 0 (0) | n/a | n/a |
| **Bald Eagle** | 116 (106) | 8 (3/30 & 5/13/22) | 3/2 - 5/21/22 |
| **Northern Harrier** | 45 (29) | 5 (5/2/22) | 3/3 - 5/13/22 |
| **Sharp-shinned Hawk** | 26 (42) | 3 (3/21/22) | 3/1 - 5/16/22 |
| **Cooper's Hawk** | 19 (14) | 3 (5/2/22) | 3/8 - 5/20/22 |
| **Red-shouldered Hawk** | 14 (6) | 4 (3/11/22) | 3/1 - 5/2/22 |
| **Broad-winged Hawk** | 16 (7) | 3 (4/12) | 4/12 - 5/18/22 |
| **Red-tailed Hawk** | 22 (32) | 3 (3 Total Dates) | 3/1 - 5/18/22 |
| **American Kestrel** | 19 (33) | 1 (19 Total Dates) | 3/6 - 5/13/22 |
| **Merlin** | 5 (5) | 1 (5 Total Dates) | 3/17 - 5/1/22 |
| **Peregrine** | 4 (<1) | 2 (3/6/22) | 3/6 - 5/20/22 |
| **Unidentified** | 1 | n/a | n/a |
| **Total** | 2399 (2033) | 143 (3/3/22) | 3/1 - 5/31/22 |

## The Big Sit

Prepared by Lynn Davidson

(DOES ANYONE HAVE A PHOTO?? Sarah emailed Lynnn to ask)

CVWO participated in "The Big Sit!" again this fall on October 8, 2022. Founded by the New Haven (Connecticut) Bird Club, this annual international event is co-sponsored by Bird Watcher's Digest and Swarovski Optik. The goal is to tally as many species as possible in one day, all from within a restricted 17-foot diameter circle (either sitting or standing!). A total of 119 Big Sit circles were registered from 34 States and 3 other countries this year.

For CVWO's 24th consecutive year, the middle of the Kiptopeke State Park Hawkwatch platform became ground zero for the all-day affair. From the Hawkwatch platform, waterbirds are barely visible through a much-diminished gap in the western treeline where the Chesapeake Bay and decaying

concrete ships at the former ferry slip had been easy to see in the past. The adjacent forest, shrubs, and meadows provide habitat for numerous landbirds, and, of course, the location is prime for migrants of all types. As with all birding events, the species count is very weather dependent; rain and wind can greatly reduce the count by limiting detection of flight calls, especially at night. The passage of a cold front that brings migrants into the area is of key importance for a fun and successful Big Sit.

The weather for the event did not include a strong cold front this year, but it was favorable with light easterly winds, partly cloudy skies, and temperatures around 60 degrees at daybreak. The count began before dawn (at 5 a.m.) with the squawk of a great blue heron, whinny of an Eastern screech-owl, and flight calls of a few thrushes. At first light, Northern Mockingbird, Carolina Wren, Gray Catbird and Brown Thrasher were among the earliest to be tallied. “Sitters” found only 21 species by 7 a.m.; however, they tallied 58 species by 8 a.m. New species continued to be added, including a fly-by Dickcissel (8:26 a.m.), and the list became respectable by mid-morning. By 1 p.m. the tally stalled out at 84 species with a Blue Grosbeak, an unusual bird for our Sit. Just after sunset, a few more species were added, including Snowy Egret, White Ibis, and two pairs of dueting Great Horned Owls. The last bird of the day was a Black-crowned Night-Heron at 7 p.m. The final count of 88 species was the second highest in 24 years and among the highest counts overall – tied for 7th place. For more details, see The Big Sit! Website: https://www.thebigsit.org/. More than a dozen people participated this year. Some of the primary Sitters were CVWO Hawk Counters Jason Bojczyk and Andrew Rapp, as well as Lynn Davidson, Hal Wierenga, Bob Anderson, Rudy Cashwell, George Armistead, Todd Day, Michael Veit, Tom & Diane Rapp, and Linda & Pete Millington.

## SONGBIRD RESEARCH

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### PROW Report

### Purple Martin Report

Prepared by Cheryl Jacobson & Shan Gill

Currently The Purple Martin Project consists of five locations with support to one additional location. Those locations are Chickahominy Riverfront Park with two poles, New Quarter Park with one pole, VIMS with one pole, York River State Park with one pole, and Ford’s Colony with one pole and a second pole soon to be installed (has this happened??). Support is provided to the Sunoco Station that now has seven metal houses, three of which have been donated by the Williamsburg Bird Club. Data for each location is provided below.

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***Chickahominy Riverfront Park:***

***Purple Martins at Chickahominy Riverfront Park | Cheryl Jacobson***

This location has been the most successful with the fledging of approximately 53 Purple Martin chicks. Gourd checks were completed on June 9 and July 1 with eggs and chicks counted. At that time, 39 chicks were counted in twelve active gourds with more eggs to

hatch. Also, there were an estimated 35 plus Purple Martins around the colony, which at that time consisted on one pole. Therefore, a second pole was installed and Purple Martins immediately entered the new seven gourds. Challenges at this location have been Tree Swallows which were successfully kept out of the gourds by constant monitoring and wasps which were killed and their nests removed.

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***VIMS:***

Initially in May, three Purple Martins were seen entering gourds with four more later seen flying overhead. In mid-May, the weather became very cold and the Martins were not seen at this location, however, the colony about a mile away continued to have Martins. The gourd check in August showed the beginning of two Martin nests; it is expected that this colony will be successful next season.

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***New Quarter Park and York River State Park:***

Neither of these colonies has been successful although Martins have been seen flying overhead at New Quarter Park. The monitors at both locations have been very conscientious in monitoring and keeping Bluebirds and a pair of Tree Swallows out of the gourds. I have been very impressed with the patience and perseverance of these monitors. At: www.wild-bird-watching.com/attracting-purple… When it comes to attracting Purple Martins, one has to be willing to never give up. Some get them in a year or two and others may take five years or more years. You'll have to decide how much patience you have. It took me four years to attract Purple Martins and 2022 will be my 16th year hosting Purple Martins. **This seems unnecessary for annual report.** A good insect supply is critical and now that York River State Park has installed a large native plant garden near the colony there seem to be many more insects. Of concern is the frequency of mowing by county staff at New Quarter Park, although the river is very close and is a source of some insects.

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***Ford's Colony:***

*Purple Martins Chicks | Cheryl Jacobson*

This is also a successful colony which has consisted of a metal house and one pole with fifteen gourds. At this location, the gourds were not checked during nesting season so the number of hatchlings can only be estimated, with a possible 25. When the gourds were checked in August, there were a possible seven nests removed. A problem to be solved is that four of the gourds that contained nests were very wet inside. Although there had been heavy rains at all the locations, this is the only location with soaked
nests. It is apparent that it will be important to do gourd checks at least twice in order to determine the number of eggs and chicks and to check for wetness. The metal house was

predated by a Cooper's Hawk which broke the outer rail and forced his head into the house compartments. The hawk was seen at the house repeatedly but it is unknown if it was able to predate the hatchlings or if they were all able to enter inner compartments. There were six nests in the house when it was taken down in August to be replaced by a pole and gourds which can not be predated so easily.

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***Sunoco Station:***

Although this is not officially one of our project colonies, CVWO has now donated three metal houses to add to the existing four. They have the equipment to weld and repair the houses and are there all hours of the day to prevent predation. This season they estimate that they had 200 plus martins at their colony.

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***2023 Nesting Season Plan***

1. Collect more exact data by doing gourd checks around June 9 and July 1 at every location with nesting Martins
2. Support and maintain existing colonies: The Northern Virginia Purple Martin Project lead advised that it's likely to see the number of nesting Martins at CVWO's two colonies double. The two pole systems at these locations will facilitate the hanging of numerous more gourds. It's estimated that we will need about 40 more gourds will be needed for these two locations. A Troyer's horizontal gourd with a vented cap costs $34.25 each. We will also need maintenance supplies and nesting materials. I will request $500.00 from each of our three supporting clubs, Williams Bird Club, CVWO. and HRC Master Naturalist. ***Sarah recommends removing this or saying waht action came of it. Was the budget approved or are materials awiting board approval?***
3. Project Lead will continue to assist and support the monitors at the five locations and will recruit and train new monitors as needed. The current monitors include

***York River State Park:***
Sherry Hancock
Bill Hancock

***New Quarter Park:***
Mary Ellen Hodges
Anne Nordin
Nancy Barnhart

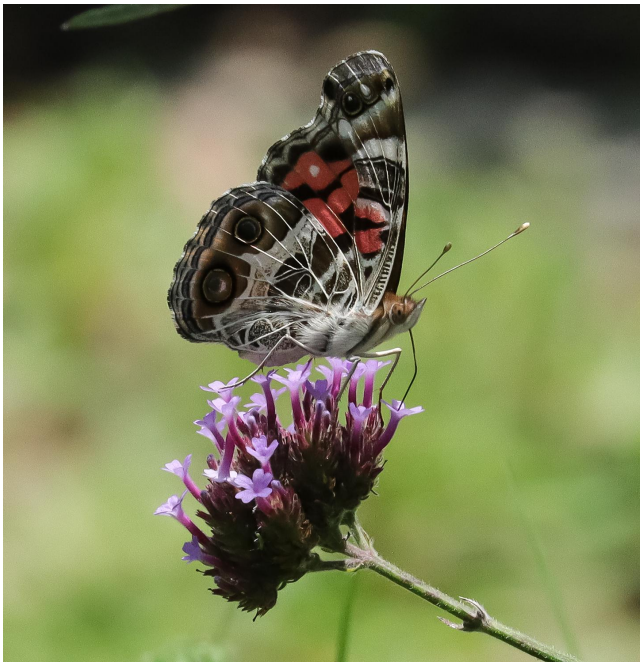
***Chickahominy Riverfront Park and Fords Colony:***
Bill Vanzetta
Trish Stahlhut
Bob Stahlhut

***VIMS:***
Judy Jones
Janet Harper

## Christmas Bird Count

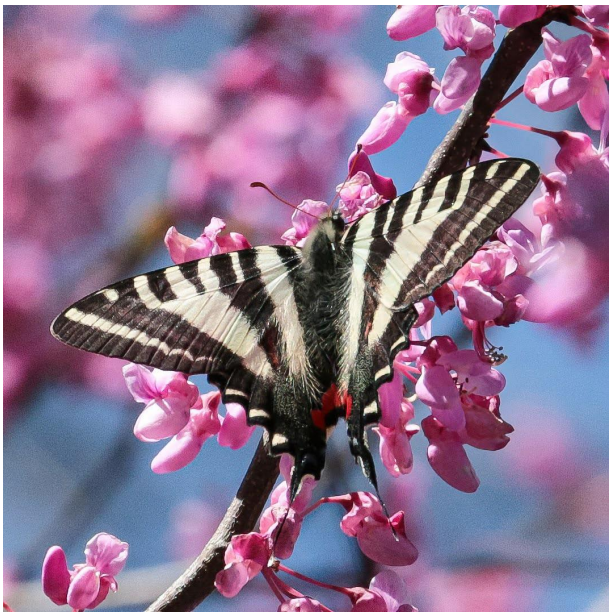
Coming soon!

# BUTTERFLY RESEARCH



*American Lady | Deborah Humphries*

*Common Buckeye | Jim Easton*



*Zebra Swallowtail | Deborah Humphries*

## Monarch Migration Report

Prepared by Andrew Rapp

The 25th season of the CVWO Monarch Migration project ran from September 1 through November 10. As a part of this program, pilot transects were surveyed at the Eastern Shore of Virginia National Wildlife Refuge (ESVNWR) and Kiptopeke State Park (KSP). The main sight surveyed at ESVNWR was the Butterfly Trail which runs behind the visitor center to the bunker parking lot. The sight surveyed at KSP was the Sunday fields which can be accessed by the Brown Pelican Trail. The transect surveys intended to measure all butterfly diversity within a constant route. These surveys were completed advantageously when raptor migration allowed and should be viewed as a pilot study. Conducting a constant transect survey over a multi-year period can give insight into changes in not only Monarchs but other butterfly diversity which can show more in-depth trends in diversity. The tagging of Monarchs was conducted at various locations, including ESVNWR, KSP, Pickett's Harbor Natural Area Preserve and Magothy Bay Natural Area Preserve.

*Sites*

## (ANY AERIAL PHOTOS OR GENERAL PHOTOS OF THE SITES?)

Eastern Shore of Virginia National Wildlife Refuge offers a range of habitats favorable for migrating Monarchs. Lantana behind the Refuge Visitor Center was a favorite for all butterflies in the first month of the count. As mentioned earlier it was an incredibly dry season on the shore so in the early fall, the lantana offered the only nectaring plant on any of the sites that could be tagged. Fennel and Goldenrods were offered around the Visitor Center and along the Butterfly Trail which by October held good habitat 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. Due to the nature of it being the southernmost tip of the peninsula, on northern wind days, large concentrations gathered in the bushes and trees in the area. On September 23, an estimated 190 Monarchs roosted in what appeared to be an Apple tree right off of Route 13.

Kiptopeke State Park also offers a range of habitats for migrating Monarchs. Researchers 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 Mistflower in the Hawkwatch field kept the Monarchs happy from October all the way through early November. The dunes also hosted Seaside Goldenrod which in later 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.

Magothy Bay Natural Area Preserve offers some habitat with a mix of Groundsel and Goldenrods. Monarchs did not seem to stage here in high numbers with only a few detected all season in the preserve. Due to the more mature nature of the fields and wood edges, there was not many areas for flowering plants to thrive without being shaded by trees and tall shrubs.

Picketts Harbor Natural Area Preserve was seldom surveyed due to how grown up the road was allowing for little habitat for Monarchs or butterflies and few flowering plants.

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*Tagging*


This season, 497 Monarchs were tagged using all of the tags that Monarch Watch sent to CVWO. Three tags were damaged and deemed unsafe to place on Monarchs. Each individual upon capture 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, 177 Monarchs were tagged at the ESVNWR, 318 at KSP, and two at Magothy Bay Natural Area Preserve.

### *Nectar Sources*

This fall started with a devastating drought. Because of the drought, there were next to none flowering plants for migrating Monarchs. The one early-season savior was several Lantana bushes at ESVNWR. These bushes were the only flowering plant around and were typically covered in butterflies and looper moths (either Chrysodeixis includens or Trichoplusia ni). As the season progressed, hurricanes brought rain for the Goldenrods and Groundsels to bloom. Mid to late September was the peak for Groundsel which housed the first large pushes of Monarchs. 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. Mid to late October also saw the increase in Oxeye Daisy and Spotted Horse Mint in the Sunday Fields which Monarchs also utilized when there was too much competition for the Goldenrod. Just 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 was frequently attended even on poor Monarch flights.

### *Sex Ratio*

Of the 497 Monarchs tagged, 320 (64%) of the individuals were male, 175 (35%) individuals were female and 2 (<1%) were likely also males but not noted at the time of processing. This ratio of male-to-female Monarchs is to be expected in the area. (FIND PAST SEASONS DATA???).

### *Wing Length*

*(Below) Monarch Biologist, Andrew Rapp, logging Monarch data*

*Andrew Rapp Tagging & Measuring a Monarch Butterfly*

Of the 497 Monarchs tagged, 488 were measured. Temporary misplacement of the ruler led to the nine butterflies not being measured. Forewing measurements came from measuring the length of the forewing from the tip to where the forewing attached 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 51.0 mm and a hindwing measurement of 32.3 mm. Male Monarchs averaged measurements of 51.2 mm and 32.4 mm. Female Monarchs averaged measurements of 50.6 mm and 32.0 mm. Despite female Monarchs averaging smaller overall wings, the smallest monarch captured was a male. The smallest Monarch caught had a forewing measurement of 40 mm and a hindwing measurement of 25 mm. The largest Monarch on the other hand had measurements of 56 mm and 35 mm forewing and hindwing, respectively.

### *Recaptures*

Of the 497 Monarchs tagged, 23 were recaptured in the same area in the following days. One individual was caught six days after it was originally tagged. For both instances the Monarch was tagged in the Sunday fields. One individual was recaptured on three separate days. Two individuals were tagged in the morning at the Hawkwatch field and recaptured later in the day in the Sunday fields which are located 0.7 miles to the south.

This season, there were two foreign Monarch recaptures! One individual was AGMC 645 on October 15 in the KSP Hawkwatch field. The other was AGUA 952 on November 7 in the KSP Sunday fields. Both foreign-tagged Monarchs have been reported but no updates regarding the original tag locations at this time. Two other individuals were captured that had been previously tagged by someone else but the tag had fallen off. Both individuals were given new tags. The loss of the original tag highlights the importance of proper tag application.

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 the origin of recaptured Monarchs and learn if any Monarchs tagged at CVWO sites were found within overwintering sites.

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### *Transect data*

ESVNWR expressed interest in data that could be reproducible on an annual basis. Point count efforts conducted by past Monarch biologists were randomly conducted at locations with Monarchs present or at singular shrubs that were in use at a given time. If point counts locations are constant over a multi-year period of time and the habitat is altered then there is a lot of wasted effort by the Monarch biologists. Transect surveys on the other hand are easily reproducible and factor in changing habitats without wasted effort. The effect of habitat maturation or alteration on butterfly usage is a critical conservation question to be studied on the Eastern Shore of Virginia. The two transects that are easily accessible and have a variety of pollinating plants are the Butterfly Trail at ESVNWR and the Sunday Fields at KSP. Monarch biologists walked the length of the trail down and back counting all species within the survey and making note of time spent. Transects were run at these two sites throughout the season; a total of 34 different species and fluctuations of Monarch numbers were encountered.

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### *Education*

*Andrew Rapp Educating Future Biologists at Kiptopeke State Park*

Monarch migration education is essential for the position of Monarch Biologist. Throughout the season formal presentations were given to four different bird clubs, one group of Virginia Master Naturalists, and one group of ninth and tenth graders from the local Northampton County High School. Countless informal presentations were given to hundreds of guests who made the grave mistake of walking too close or asking a question about what CVWO's Monarch Biologist was working on. Guests ranged as far as Germany.

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### *Dragonfly Recommendation*

A new project this season was to determine if dragonfly migration could be studied on the Eastern Shore. Previous seasons deemed counting dragonflies from the hawkwatch to be impossible due to possible double counting. Dragonflies fly around the hawkwatch fields feeding for longer periods of time than migrating raptors so less emphasis can be placed on answering the question of exactly how many dragonflies pass over on a given day. The questions that can be answered are what conditions cause the mass movement of dragonflies, when do most dragonflies migrate, and how do dragonfly flights coincide with raptor migration? The Monarch Biologist tested the practicality of counting dragonflies on various hawkwatch days as the hawk counter and found it feasible even during large raptor flights. I recommend future hawkwatchers keep hourly counts of migratory dragonfly species the same as they record hawk flights.

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### *Conclusion & Acknowledgement*

*Andrew Rapp & Jason Bojczyk at the Kiptopeke Hawkwatch Platform*

The fall of the 2022 season was a complete success with all the Monarch tags being used, a multitude of educational presentations, and a pilot study on dragonfly migration on the Eastern Shore. The shore during the fall is an incredibly beautiful place to be. What the shore lacks in fall leaves it makes up for in a wide array of blooming flowers. The golden-flowered beaches in late September as well as the purple-flecked fields in the frost are a site deeply engrained in my memories from the shore.

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

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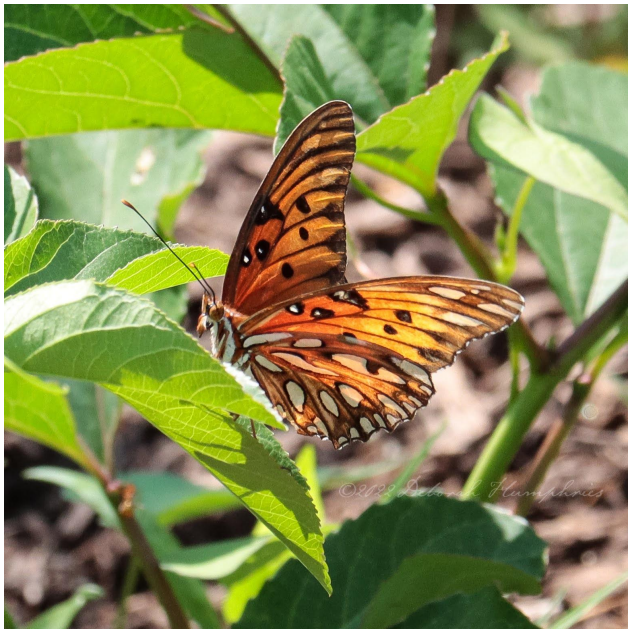
## Chippokes Buttefly Count

Prepared by Nancy Barnhart



*Eufala Skipper | Deborah Humphries*

*Gulf Fritillary | Deborah Humphries*

On July 17, 2022, volunteers conducted the annual Chippokes Plantation State Park butterfly count, sponsored by CVWO. Data from the count were sent to the North American Butterfly Association (NABA) who sponsors counts across the country. A total of thirty-two volunteers spent the day in the field counting a total of 753 individuals representing 43 species. High counts for the day were Common Buckeye, 95, followed by Cloudless Sulfur, 75. The Jamestown Sector had the highest number of species (30), and total sightings (153). Of special note was the first ever Chippokes count observation of a Eufala Skipper. (See below). Participants were Bryan Barmore, Nancy Barnhart, Betty Baucom, Ginny Broome, Sharon Burton, Joni Carlson, Peggy Combs, Chris Conley, Barbara Creel, Shirley Devan, Randy Dove, Teresa Dove, Gary Driscole, Susie Engle, Adrienne Frank, Barbara Giffin, Karen Hines, Deborah Humphries, Melissa Inge, Teta Kain, Alice Kopenitz, Seig Kopenitz, Les Lawrence, Shelby Longmire, Ken Lorenzen, Jeanette Navia, Keith Navia, Lisa Nickel, Patricia Quinn, Brian Taber, Bill Williams, Jeff Wright.

Many thanks to leader Joni Carlson who compiled and submitted the data to NABA and managed volunteers to insure coverage of all six sectors. The areas covered were Jamestown, Hog Island, Surry West, Chippokes Plantation State Park, and the Ferry and Farm Belt sectors. Thanks also to Chippokes Plantation State Park for waiving the parking fee.

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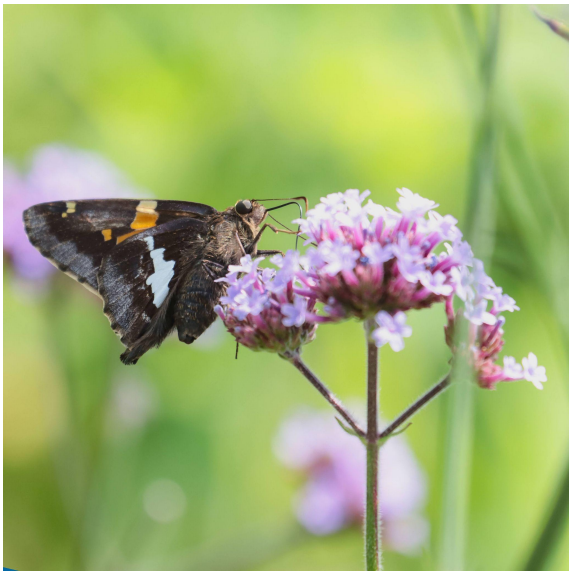
## Williamsburg Area Butterfly Count

Prepared by Adrienne Frank



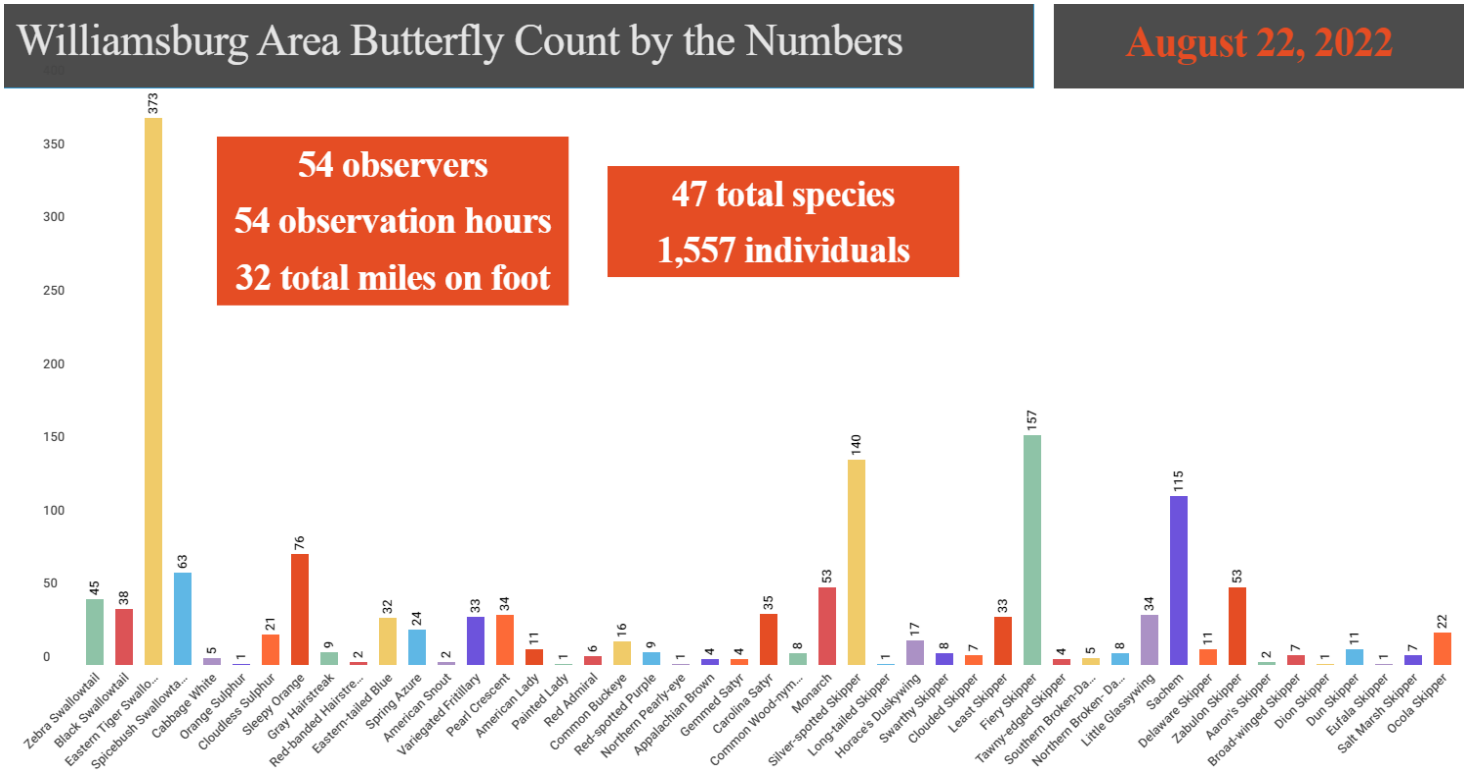
*Silver-spotted Skipper | Deborah Humphries*

The ninth Annual Williamsburg Area Butterfly Count was held on August 13, 2022. The weather was great for observers but was a slow start for butterflies. At 9 a.m., it was just 70 degrees and the butterflies didn't really start flying until late morning. As the day warmed, some of the hearty observers remained to count until almost 5 p.m.

Seven groups and five individuals reported 47 species and 1,557 individuals. This year was low for species count and some typical butterflies such as the Hackberry Emperor, Southern Cloudywing and Common Sootywing were not observed. Three species had new high counts: Sleepy Orange, Common Woodnymph and Swarthy Skipper. This year, the highest single species identification was the Eastern Tiger Swallowtail (373), followed by the Fiery Skipper and Silver-spotted Skipper. New high counts were reported for Sleepy Orange, Common Wood-nymph, Swarthy Skipper and Tawny-edged Skipper. The Eufala Skipper was a first for NABA count and a second record for James City County. Sector reports and highlights are below:

- Upper York County reported two unique species (Painted Lady and Aaron's Skipper). This team had the highest number of Eastern Tiger Swallowtails (81)
- Lower York County had two unique species (Northern Pearly-eye and a Dion Skipper)
- Upper James City County reported high numbers of Broken Dash, Tawny-edged Skipper, Carolina Satyrs and Common Wood-nymphs
- The Centerville Corridor had a new species, the Eufala Skipper, only observed one other time and that was just a few days prior. They had the highest overall count of butterflies
- Freedom Park and the Warhill Tract reported higher numbers of Variegated Fritillaries and Gray Hairstreaks compared to other sectors
- Williamsburg City reported lots of Silver-spotted Skippers, Fiery Skippers and Sachem Skippers. Not observed this year was the Hackberry Emperor, in part, because a Hackberry tree at the Governor's Palace was removed
- In its third year, the Gloucester sector observed more butterflies than in the last 2 years. They had the most Monarchs and the most observers (10)
- Individual contributors observed a Longtail Skipper and 95 total individuals

Since 2014, there has been a range of 47 to 53 species found per year. Over nine years of annual counts has yielded 64 total species. The average number of species is 50 and the average number of individuals per count is 1,692. The number of individuals has ranged from 1014 - 3037.



# WATERBIRD PROJECT

## Waterbirds Annual Report

Prepared by Bill Williams

*Black-bellied Plover | Bill Williams*

The Waterbirds Team focused its 2022 fieldwork on two long-standing field studies: documenting the volume and diversity of bird species frequenting Craney Island Dredged Materials Management Area (CIDMMA) in Portsmouth, Virginia and assessing the status and breeding efforts of Least Terns and American Oystercatchers on Grandview Nature Preserve in Hampton.

### Grandview Nature Preserve Findings

Grandview Nature Preserve was visited in early June as part of the Virginia Department of Wildlife Resources (VDWR) annual Least Tern Survey and American Oystercatcher Survey. During the visit a Least Tern pair was observed completing a nest-exchange on Factory Point at the northeast tip of the preserve. An American Oystercatcher pair was also present, although no evidence of breeding was noted. Significant habitat loss combined with increased boater-access recreation use have profoundly diminished the preserve's capacity to accommodate nesting seabirds or shorebirds.

### Craney Island Dredged Materials Management Area (CIDMMA) Findings

The final CIDMMA survey of the year, completed December 1, was the 42nd for 2022, and the 542nd overall survey-effort dating back to 2008. During those 15 years, the Team has logged 3,223 survey-hours totaling 2,153,744 birds of 271 species. Survey data entered in the Cornell Laboratory of Ornithology's eBird database have been summarized in annual reports submitted to the Norfolk District Office of the United States Army Corps of Engineers (USACE) to support compliance with its Long-term Bird Management Plan for the Craney Island Dredged Material Management Area (Beck 2012).

The Team's 2022 survey work adhered to protocols detailed in a previous CVWO annual research report (Williams, 2020). A total of 174,539 birds of 202 species was documented during 271.9 observation hours over 42 weekly surveys conducted January 6 - December 1, weather permitting. The average number of species per visit was 79. The single-day high-count for the total number of birds was 8,239 on January 6 (83 species); the lowest single-day total was 1,097 posted June 30 (74 species). Waterbirds, including 24 waterfowl species, 4 rail species, American Coot, 2 grebe, 2 loon species, Northern Gannet, Anhinga, Double-crested Cormorant,

American White Pelican, Brown Pelican, 31 shorebird species, 6 gull, 8 tern species, Black Skimmer, and 10 heron-egret-ibis species comprised 47% of all species recorded. CIDMMA had Virginia's highest 2022 totals for 6 waterbird species: 2,768 Northern Shovelers on January 6; 1,870 Green-winged Teal on March 31; 135 Black-necked Stilts on July 21 (113 in view at one site); 750 American Avocets on September 15; 8 Buff-breasted Sandpipers on September 8; and 13 Wilson's Phalaropes on August 4.

***Mottled Duck***

A Mottled Duck was documented on the facility June 2, 2022 making this the third record of this species for CIDMMA. Virginia's first confirmed Mottled Duck was chronicled on the facility during June and July 2018 (Williams et al. 2019). The second CIDMMA occurrence was recorded on three June dates in 2021. Documentation for all three records has been accepted by the Virginia Avian Records Committee.

***Northern Bobwhite***

The Waterbirds Team documented its first Northern Bobwhite on CIDMMA in June 2009 (Williams, 2009). Thereafter, this species was recorded annually through 26 August 2021 (Williams, 2021) including a peak count of 5 on 14 Jan 2016 (Williams, 2016). Because no Northern Bobwhite have been detected since the August 2021 observation, we suspect the species has been extirpated locally.

***American Avocet | Bill Williams***

***American Avocet***

CIDMMA is the only site in Virginia where American Avocets are found year-round and is the only location in the Commonwealth where this species has nested. A nesting attempt was documented on the facility in June 1975 (Dillon, 1979). A pair with 2 downy chicks was recorded there in July 1991 (Armistead, 1992; Clapp, 1997; Kain 1998; Rottenborn and Brinkley, 2007). Team members observed a pair copulating and moving possible nest material on 26 May 2022. Careful scrutiny of the area later that day and over the ensuing weeks failed to find any further American Avocet breeding activity.

***Black-necked Stilt***

The first Black-necked Stilt (one) of the year was noted during the 31 March survey. Breeding evidence was confirmed on 5 May by a pair nest-building in a shallow excavation pit near the southeast corner of the North Cell. That nest contained a 4-egg clutch on 11 May but was subsequently abandoned. The following week the Team located 11 Black-necked Stilt nesting pairs in a complex of deep excavation pits in the southeast corner of the North Cell. Those nest sites were also abandoned over the next few weeks due to an extensive amount of excavation activity coupled with the high volume of traffic of large-capacity earth-removal vehicles.

Subsequent observations revealed the pairs relocated to the western third of the North Cell. The undisturbed area there provided the rough-structured shoreline and vegetative cover near water preferred by this species for

nesting and brood-raising. Small, downy chicks were observed on 7 July. Two weeks later a careful accounting of downy young closely associated with foraging adults revealed at least 17 breeding pairs, the most confirmed during a 2022 survey.

*American Oystercatcher*

***American Oystercatcher | Sarah O'Reilly***

For a third year an American Oystercatcher pair attempted to breed on the southernmost Elizabeth River eastward expansion dike. The previous attempts in 2020 and 2021 were unsuccessful as offspring produced in both years were likely predated by Fish Crows which were frequently observed harassing the youngsters. This year, an adult appeared to be incubating on 14 and 21 April, respectively. Subsequently, no chicks or further evidence of nesting were observed. The presence of Fish Crows and American Bald Eagles around the nest site was believed to have caused the breeding effort to fail. A color-banded American Oystercatcher was documented regularly along the western shoreline from 28 April through 18 August. Its red band with white alpha-numeric lettering indicated the band had been placed on the bird in Georgia.

*Least Tern*

The Team identified three Least Tern colonies occupied by a total of 210 adults on 27 May. Thereafter, USACE staff located 8 colonies occupied by a total of 102 adults. Once the colony sites were identified the perimeter of each was marked with signage restricting access to the area until 1 August. Throughout the breeding season USACE staff assumed responsibility for monitoring each colony to determine breeding activity and reproductive success. Unfortunately, the colonies experienced very low productivity, due to a combination of mammalian predation, high-volume vehicular traffic, and periods of excessive heat and dryness. The USACE staff filed a report of its early June findings with the VDWR for its annual Least Tern Survey.

*Anhinga*

A female Anhinga was observed on the neighborhood pond just east of the CIDMMA office during both the 14 and 21 July surveys. This is noteworthy because this species has become a rare, but regular breeder in southeast Virginia over the last decade. Whether this waterbird will become more routine at CIDMMA in the future is uncertain.

*Bald Eagle*

The Bald Eagle pair that successfully fledged a single offspring from an artificial nest structure off the CIDMMA's northwest corner in both 2020 and 2021 failed to breed in 2022. A strong coastal storm dislodged the nest on 3 January. The pair remained in the vicinity of the damaged nest but did not attempt to renest

## AudioMoth Deployment for Possible Eastern Black Rail Detection

Two of the three AudioMoth stations deployed just below CIDMMA's northeast perimeter road in May 2021 were relocated to sites near the Common Reed Phragmites australis lined down-slope of the southeast corner of

the South Cell. The third station was left intact as originally placed in the middle of the northeast third of the north perimeter road. The relocations were necessitated by the extensive preparation for and subsequent raising of the height of the north perimeter road. The purpose for deploying these devises was to assess the possible presence of Eastern Black Rail Laterallus jamaicensis jamaicensis, a species accorded threatened status with a Section 4 (d) Rule under the 1973 Endangered Species Act. A vocalizing Eastern Black Rail had been documented at this CIDMMA location in June 2017 (Williams, 2017). After that detection, a cursory assessment of the facility's physiography suggested its gently sloping, heavily vegetated, wet seepage microhabitats off both the northeast and southeast corners had the potential of supporting this species during migration and/or during its late spring/early summer breeding season.

AudioMoth is an open-source full-spectrum acoustic logger built around Silicon Labs EFM32 Gecko processor by the Open Acoustic Devices Team. Each credit-card sized (58 × 48 × 15 mm) unit is powered by 3 AA batteries and consists of a printed circuit board, micro-controller and an analog micro-electro-mechanical systems (MEMS) microphone. The device has a recording radius of ~30m and is capable of detecting sounds ranging from audible to ultrasonic frequencies that are then recorded as uncompressed WAV files to a micro-SD card from 8,000 to 384,000 samples/second. An onboard real-time clock allows each unit to be preset to activate specific recording times for each unit.

All three stations were operational from April 1 through September 2, 2022, recording sounds nightly from 10 p.m.– midnight and 3-5 a.m. Analysis of data recorded on 128 of 153 recording-nights (no data from 25 nights for unknown reasons) did not conclusively detect any Black Rail vocalizations. Species that were confirmed included Chuck-wills-widow, Virginia Rail, Clapper/King Rail, Black-necked Stilt, American Oystercatcher, Least Bittern, Yellow-breasted Chat, Common Yellowthroat, Red-winged Blackbird and Song Sparrow.

## Motus Wildlife Tracking System Activity

The Waterbirds Team continued to monitor the Motus wildlife tracking system installed on CIDMMA Spillway 6 in 2018. No data "hits" were recorded by the station during 2022.

## Public Outreach and Publications

The Waterbirds Team made PowerPoint presentations of its 2008 through 2021 CIDMMA fieldwork to the Williamsburg Bird Club in February 2022 and the Cape Henry Audubon Society in April 2022. The Waterbirds Team eBird data provided the foundation for the publication of a comprehensive analysis of its 2009-2020 CIDMMA findings (Guilfoyle et al. 2022).

Mink?? | Bill Williams

## Additional CIDMMA Fauna

The Team keeps anecdotal records of non-avian species detected during its surveys. This year the following were recorded:

**Mammals:** Atlantic bottlenose dolphin, coyote, white-tailed deer, opossum, eastern gray squirrel, eastern cottontail rabbit, red fox, river otter, muskrat, mink, unidentified bat species

**Reptiles:** diamond-backed terrapin, painted turtle, yellow-bellied slider, snapping turtle

**Amphibians:** squirrel tree frog, green tree frog, leopard frog, bull frog, American/southern toad

**Butterflies:** Black Swallowtail, Eastern Tiger Swallowtail, Cabbage White, Clouded Sulfur, Orange Sulphur, Sleepy Orange, Gray Hairstreak, Summer Azure, American Snout, Variegated Fritillary, Pearl Crescent, Mourning Cloak, Common Buckeye, Red-spotted Purple, Tawny Emperor, Monarch, Silver-spotted Skipper, Clouded Skipper, Least Skipper, Broad-winged Skipper

**Dragonflies:** Halloween Pennant, Eastern Pondhawk, Blue Corporal, Bar-winged Skimmer, Widow Skimmer, Needham's Skimmer, Four-spotted Skimmer, Great Blue Skimmer, Wandering Glider, Spot-winged Glider, Eastern Amberwing, Common Whitetail, Carolina Saddlebags, Black Saddlebags

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## Acknowledgements & Literature Cited

The Waterbirds Team wishes to express its sincere gratitude to the Norfolk District Office of the United States Army Corps of Engineers and the Craney Island Dredged Materials Management Area staff for their continued support of the field work the Team is permitted to do. Shannon Rheinheimer, Megan Wood, and Laura Bennett invested considerable effort to post and monitor Least Tern and Black-necked Stilt nesting sites. Steve Thornhill's technical expertise was once again critical for the analysis of three AudioMoth stations' sound files. Members of the 2022 CVWO Waterbirds Team were: Bob Ake, David Clark, Deborah Humphries, Alex Minarik, Lee Schuster, Brian Taber, Bill Williams, and Dave Youker.

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## Wood Ducks Report

Work on the Harwoods Mill dam continued, necessitating low water levels. Most boxes previously located in the water were now on dry land and couldn't be checked from the kayak. Fortunately, the predator guards continued to keep out the snakes. An Eastern Screech-Owl took up roosting in one box but left in time for the ducks to use the box for nesting.

Five of the seven boxes produced young this year, but three boxes had second clutches. Total Wood Duck egg production was 224 with 186 ducklings fledged. Nesting again began in early March, and one box was still active in July.

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

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# ANNUAL KIPTOPEKE CHALLENGE


The annual Kiptopeke Challenge was affected by the predicted forecast of Hurricane Ian to enter the area around the October 1 event date. Participants and the CVWO board made the decision to allow all teams to complete their challenge during a two-week timeframe through the middle of October. Overall, four teams competed in the 24-hour category (Laughing Falcons, the Wandering Wagtails, Fishing Longlegs, and Gulls Gone Wild. Two groups competed in the Special Venue category (Tallying Terns and The Hungry Hybrids) and one group in the 3-hour category (Road Runners).

***Gulls Gone Wild with the Piping Plover Trophy***

The 2022 grand total for funds raised came to $12,446.30 with the Gulls Gone Wild keeping their winning streak going for securing the most funds donated in support of their team. They take home the 2022 Piping Plover Trophy for the second consecutive year. The winners of the challenge categories are listed below.

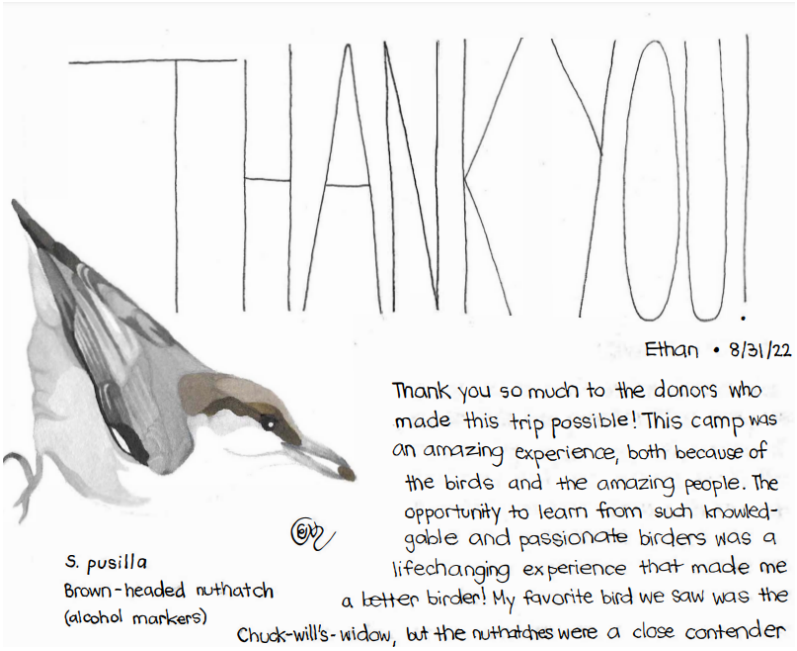
- Special Venue: The Tallying Terns (106 species) - Brian Taber & Maggie Long
- 3-hr: Road Runners (62 species) - Harry Colestock
- 24-hr: The Laughing Falcons (114 species) - David Clark, Andrew Baldelli & Steve Myers

To see the full list of 2022 species, visit here. CVWO looks forward to having you join us for the 2023 event.

# Grants & Outreach

## Conservation Grants

In early 2022 the board approved the awarding of conservation grants, in small amounts, to organizations doing great work on behalf of wildlife. One grant went to help with the restart of the Kekoldi Hawkwatch, on indigenous peoples' land in Costa Rica, in partnership with the Hawk Migration Association of North America and Hawk Mountain Sanctuary; the grant covered toward room and board of the hawkcounters.




A second grant went to the Youth Birding Camp, operated by the American Birding Association, sponsoring a youth to attend the camp on a full scholarship (Sarah added what's in red—is that valid?). The recipient sent the Observatory a heartfelt thank you note, with his original bird artwork.

A third grant went to Kiptopeke State Park to assist with tree planting on Arbor Day at the park's new Visitor Center. Another grant went to Birdability, an organization dedicated to inclusion, to help support their team in the World Series of Birding in New Jersey. The Observatory also used these funds to support the Virginia Society of Ornithology's effort to create their website for the Breeding Bird Atlas.

***Thank you note submitted to CVWO from Ethan who received scholarship to attend the Youth Birding Camp in 2022***

In 2021, the Observatory helped with bird signage and a bench at Edward Brinkley Preserve in Northampton County and also with benches for an amphitheater outside the new Visitor Center at Kiptopeke State Park. These were forerunners that helped lead to the conservation grant process.

The Observatory will continue to search for worthwhile research, education and conservation projects in need of modest, though important support.

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## Educational Grants (ANY PHOTOS OF THESE STUDENTS or THEIR WORK?)

***2022 Ruth Beck Graduate Student Grant*** went to Liz Elliott for her project: "Heat-induced calling affects embryonic vibrations: Scrambled eggs or genuine feedback?" Liz is a graduate student in biology at the College of William and Mary studying under Dr. John Swaddle.

***2022 Bill Akers Graduate Student Grant*** went to Joey Liberto for his project: "Full Metal Sparrow: Examining the effects of sublethal lead on ecologically-important behaviors in a commensal songbird." Joey is a graduate student in biology at the College of William and Mary studying under Dr. John Swaddle.

***2022 Bob Ake Research Grant*** went to Gabriella DiPetto for her project: "The effect of oyster restoration structures on avian diversity and behavior." Gabriella is a graduate student in the Department of Biological Science at Old Dominion University, Norfolk, Virginia.

# IN MEMORIUM

## Larry Brindza

Prepared by Kathleen Brindza

CVWO lost a valued member of the advisory board on December 4, 2022. Larry Brindza led the monarch program at CVWO for 14 years. Larry has been tagging monarch butterflies since 1996. In October of 2000, he began helping Mark Garland and Dr. Andy Davis tag monarchs at Kiptopeke State Park and later took over as coordinator of the program. In 2002, he began weighing all captured monarchs with an electronic scale. He collected such detailed data that in 2008 he collaborated with Dr. Lincoln Brower, Tonya Van Hook and Dr. Andy Davis in publishing a major article in the Journal of the Lepidopterists' Society. Larry has given many presentations on the biology of monarchs and the monarch migration to visiting groups at Kiptopeke, the Williamsburg Botanical Garden and school groups in the Northern Virginia area. In 2011, he was named "Scientist of the Month" by Monarch Net, the North American network of monarch butterfly monitoring programs.

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## Bettye Fields

Bettye Fields, of Newport News, was a long-time supporter of CVWO, as well as the Hampton Roads Bird Club, Williamsburg Bird Club, and VA Society of Ornithology. She passed away at 97 in December 2021. Bettye is pictured on the right, with her long-time friend Mary Pulley, as they both received service awards for their volunteer efforts, from CVWO at a meeting on November 10, 2007. Bettye volunteered at the Kiptopeke Songbird Station and participated in many Virginia Christmas Bird Counts and Spring Bird Counts. She was a faithful supporter of CVWO's Kiptopeke Challenge team birding competition.

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## Peter Doherty

Missing write up and photo.

# SUPPORT CVWO

Your donation can make a big difference in 2022. Use the form below to join or renew your 2022 CVWO support and make a donation 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 2022 — many thanks! Perhaps you would consider another donation to one of our projects or a scholarship! We look forward to hearing from you!

☐ I want to support CVWO's 2022 research. **Support Level:**

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

☐ I would like to make an additional donation for

- ☐ 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 Scholarship to William and Mary or ODU Graduate Students

**Enclosed is my check for: _____**

**Friends who donate $25 or more or join/renew at the $25 level or higher will receive CVWO's Annual Research Report.**

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May we include your email in our Constant Contact List?

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