

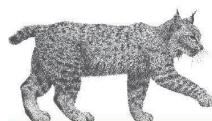
Logo created by Caroline Fegley

Pack Monadnock Raptor Observatory

Final Report | Fall 2024

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Introduction

The 2024 fall raptor migration season at Pack Monadnock held some interesting and unexpected surprises, both for better and worse. A record-low 5,770 raptors migrated past the Observatory, but that did not stop many visitors and volunteers from persisting and putting in long hours to count every bird. As in past years, each day of the season had observers scanning the skies and educating visitors about raptor migration — representing the dual mission of this long-standing project run by the Harris Center for Conservation Education in partnership with NH Parks and the Department of Natural and Cultural Resources.

Pack Monadnock Raptor Observatory's (PMRO) 20th full season was full of memorable bird sightings despite what the raptor total might initially lead many to believe. New lead-counter Caroline Fegley and volunteers were able to add rare and new species to both the raptor and non-raptor observation lists. Many days had excitement such as close birds diving on "Gina," the plastic owl; viewing the red eyes of an adult goshawk; or watching a juvenile golden eagle emerge over North Pack during peak foliage.

Why Pack Monadnock?

In order to efficiently complete migrations of hundreds or thousands of miles to their wintering grounds, raptors follow mountain ridges to find thermals and updrafts. Thermals rising from rock outcroppings or mountain roads allow birds to gain altitude before streaming south and finding the next thermal. During soaring, each bird is conserving the most energy possible, and many of the migratory hawks, eagles, and falcons employ this strategy. On days with favorable wind direction, generally from a northerly or westerly direction, the air is pushed upwards after hitting the side of the ridge, allowing raptors to glide or soar south. As if paddling downstream, the perfect wind from the north can push a single raptor a few hundred miles in a single day. Instead of spending energy hopping from one flyway to another, migrants follow continuous leading lines such as north-south running mountain ridges, river valleys, and coastlines. This combination of geography and weather patterns brings raptors to Pack Monadnock, a more northern and eastern mountain in the Appalachian Mountain range of North America. Pack Monadnock has long been known as an excellent vantage point for observing raptor migration because of its high elevation, location along the north-south running Wapack ridgeline, and prominent views to the north and west. With a seasonally operated auto road, it is easily accessible by both counters and visitors to add data to the long-running database.

Site Description

The Pack Monadnock Raptor Observatory is located near the summit of Pack Monadnock (2,290 feet) within Miller State Park in Peterborough, New Hampshire. Situated in south-central New Hampshire along the scenic and rugged 22-mile-long Wapack Range, the Observatory platform offers spectacular views to the north and west, including Mount Washington, the White Mountains, Crotched Mountain, Mount Kearsarge, Mount Cardigan, North Pack Monadnock, Mount Monadnock, and several summits in Vermont. Able to accommodate large crowds during peak season, the observation platform is accessed via a short, hard-packed trail from the parking lot atop the scenic summit. This parking lot can be reached

from the 1.5-mile paved auto road that connects to the park's entrance at the base of the mountain from NH 101. The observation platform can also be reached from several hiking trails along the mountain for those seeking a less paved route. Bad weather notwithstanding, the auto road is generally open to vehicles through Veterans Day (conditions permitting), while the trails are open to hikers year-round.

History and Mission

Like many of New Hampshire's mountains, Pack Monadnock has a long and storied history of human use, including hawkwatching. The Hawk Migration Association (HMA) has data going back to the mid 1970s, mostly collected in the month of September on days that looked promising for a Broad-winged Hawk flight. In 2005, PMRO was founded by New Hampshire Audubon under the leadership of Iain MacLeod, with initial funding from the Samuel P. Hunt Foundation, the Monadnock Community Foundation, and the Putnam Foundation. This allowed for the hire of a seasonal biologist/interpreter to staff the Hawk Watch full-time through the fall migration season. PMRO has been staffed by an official counter every year since, thanks to continued fundraising and support. In 2018, the Harris Center for Conservation Education came on board to partner with NH Audubon to jointly run PMRO. The Hawk Watch was fully handed over to the Harris Center for Conservation Education in 2022. Pack Monadnock Raptor Observatory has become a fixture of the local community and is widely renowned as one of the premier hawkwatching locations in New England.

Having completed its 20th season, PMRO is one of at least 87 hawk watches located in a region designated by HMA as the 'Eastern Flyway,' which runs the length of the east coast of North America from New Brunswick, Canada, all the way south to Alabama. Hawk watches along this flyway and throughout the Americas report data to the online database, <http://hawkcount.org>, maintained by PMRO's partner organization, HMA. Further, the Observatory, owing to its longevity and standardized methodology, is now part of a select analysis through the Raptor Population Index (RPI), a project of HMA and other partners. The set of raptor migration monitoring sites chosen for the RPI analysis is the 'gold standard' for hawk watches, as each contributes key data that conservation biologists use to make determinations about global populations of raptors and conservation strategies for them. In this way, PMRO plays a key regional role in this periodic analysis, the most recent of which was completed in 2019. For more information, see <http://rpi-project.org/index.php>. Connecting with Observatory visitors is of equal importance to migration data collection. The Harris Center is dedicated to promoting understanding and respect for our natural environment through education of all ages, direct protection and exemplary stewardship of the region's natural resources, conservation research, and programs that encourage active participation in the great outdoors. PMRO's work aligns beautifully with this mission. The splendor of a New England autumn and the accessibility of the mountain draws visitors from across the country and around the world. Local schools bring classes to the Observatory to learn about and witness hawk migration. Every year, PMRO provides thousands of people with the opportunity to learn more about the natural world around them, and some of these visitors become dedicated volunteers at Pack or their own local hawk watch.

Education and Outreach

Along with the science of raptor migration, education/outreach is the other primary goal at the Observatory. A total of 6,272 visitors interacted with counters and informative signage posted around the platform. School groups and other organizations planned trips to witness the magic of migration and be guided by educators about the importance of PMRO. Many students visited the Hawk Watch as a part of their schooling, some already having worked with the Harris Center on a “raptor unit” in the classroom. We welcome many more school groups to visit us in future years! To arrange a visit, contact Miller State Park at (603) 924-3672.

Visiting School Groups

- Wilkins Elementary - Amherst, NH
- Mountain Shadows School - Dublin, NH
- South Meadow Middle School - Peterborough, NH
- Peterborough Elementary - Peterborough, NH
- The Well School - Peterborough, NH
- Franklin Pierce University - Rindge, NH
- Keene State College - Keene, NH
- Amherst High School - Amherst, NH
- Dublin High School - Dublin, NH
- Jaffrey Grade School - Jaffrey, NH



Hundreds of students visit the Observatory each year. © Phil Brown

Visiting Organizations

- Seacoast Chapter of NH Audubon
- Monadnock Nature and Bird Club
- Beaver Brook Association

Events

Raptor Release September 22

Raptor Release Day paired with wonderful weather brought 170 visitors to the Observatory. Two Broad-winged Hawks, one juvenile and one adult, and one Red-tailed Hawk were released back into the wild from the Observatory platform. We were very excited to share the privilege of up-close looks at raptors which are typically seen briefly at a distance. The event also opens the conversation to learn about potential human-induced risks to birds as they make their journeys and how we can each help make a difference.



Caroline Fegley holds a rehabilitated Broad-winged Hawk before release. © Mike Gebro

Big Sit! October 12

A total of 26 species were observed for this year's Big Sit during the 12-hour-long effort. Skeins of geese persisted all day with a total of 1,525 Canada Geese. Other waterfowl species of note include American Black Duck, Northern Pintail, and Mallard. The typical corvids and passerines also populated the species list such as Blue Jays, Black-Capped Chickadees, Common Ravens, Yellow-rumped Warblers, and more. A whopping total of 304 visitors came through the Observatory and more could be found after hours for a chance to see comet C/2023 A3 which is predicted not to make another appearance for 80,000 years.

Big Soup! November 3

An absolutely brilliant day to be hawkwatching! For many it was the most memorable day of the season! Counters and visitors sampled six different delicious soup entries. A total of 102 visitors were tallied throughout the count and helped vote for the winning soup titled “Marsh Hawk Massaman Curry” made by former counter Katrina Fenton. Whilst the intense competition was taking place, counters were busy on the platform spotting 70 migrating raptors and 27 bird species. The biggest highlight of the day came around 3:00 p.m. starting with a Northern Harrier seen on the western side of the ridge. Counters were pulled away from the harrier to look at a migrating flock of eight Sandhill Cranes, a very exciting non-raptor find! Before the cranes left the viewshed, Julie Brown shouted “What’s that above us?”, diverting attention to the second-ever recorded Short-eared Owl which circled close above the platform.



Big Soup contestants and their soup names. © Mark Timmerman

Methods

For 20 years, data collection has remained largely standardized and unchanged, the exceptions being the lengthening of the official season, the last of which was ten years ago. This year was the first time a written protocol was produced for future volunteers and counters. Although not previously available in written format, qualified counters have always enforced standardized protocol to ensure consistent quality data collection. Standardization eliminates unnecessary variables that could impart negative and unforeseen influences on subsequent analyses. For the 2024 season, an official counter was present daily at the count site for the entire survey period from September 1 through November 20. Exceptions were made on rainy days and days with less than 2 km visibility (the distance to North Monadnock from the Observatory) when the count would be postponed or canceled until conditions improved.

Official hours were 8 a.m. EST to 4 p.m. EST from September 1 through November 2, then from 9 a.m. EST to 3 p.m. EST from November 3 through November 20. The switch from Daylight Savings Time to Eastern Standard Time marked the change in hours. On days when the weather forecasts were favorable for good flights, the counter made the effort to extend the effort beyond the regular hours. This involved getting to the Hawk Watch early or using the “15-minute rule” to stay late on days when the flight continued past the official count hours. With this rule, if a raptor were seen within a 15-minute block, the counter would stay for another quarter hour until a quarter-hour went by without a migrant.

Hawk Watch volunteer extraordinaire Glen Chretien put Pack on the map in August once again this year, spending an additional 27.5 hours between August 23 and August 31 and recording 104 migrants.

Turkey Vulture	Osprey	Bald Eagle	Northern Harrier	Sharp-shinned Hawk	Cooper's Hawk	American Goshawk	Red-shouldered Hawk
0	9	12	0	4	1	0	0
Broad-winged Hawk	Rough-legged Hawk	Golden Eagle	American Kestrel	Merlin	Peregrine Falcon	Unknown Accipiter	Unknown Raptor
68	0	0	2	6	0	1	1

Table 1. Total raptors counted during August

While some migrating raptors are undoubtedly first detected with the unaided eye, optics are integral to the project. Without them, only a small portion would be spotted and correctly identified. Spotting scopes (20x-60x) are employed as an additional aid beyond the standard 8x-10x binoculars to scan distant horizons and spot/identify raptors that otherwise could be dismissed as specks of dirt on binocular lenses or “eye floaters.” Quality optics were often proven necessary to ensure accurate IDs on distant, challenging species such as accipiters and small falcons, but also for semi-distant or distant rare birds that needed 100% confidence by the lead counter.

The distinction between migrating and non-migrating raptors is determined by various factors, including known migration periods for a given species at this site, knowledge of the local individuals based on early season viewing, and the behavior of the individual bird or kettle being monitored. Only individuals scrutinized and deemed migrating can be added to the official count. This distinction can be tricky, particularly for such species where local, non-migratory individuals are regularly seen throughout parts of the season. Troublesome species include Turkey Vulture, Bald Eagle, Cooper’s Hawk, Red-tailed Hawk, Merlin, and in some years, American Goshawk, Red-shouldered Hawk, and Sharp-shinned Hawk.

Beyond numbers and species, hourly data are (to a varying degree) collected on the height of flight, flight direction, and distance for migrants. Weather data are collected at the top of each hour. These data include cloud cover, wind speed and direction, visibility, and the temperature in degrees Celsius. This information and a daily summary and next-day forecast are submitted to HawkCount (<https://www.hawkcount.org>), the online hawk watch database for the Hawk Migration Association (HMA). Copies of this daily report are submitted to the NH.Birds listserv.

In addition to migrating raptors, daily checklists (including numbers) are typically kept for other species of birds. This information, along with raptor numbers (migrants and non-migrants), is then submitted to eBird (<https://ebird.org>), an online database of bird observations that provides scientists, researchers, and amateur naturalists with real-time data about bird distribution and abundance. All checklists are submitted to the ‘Miller SP–Pack Monadnock’ hotspot (<https://ebird.org/hotspot/L450946>).



Hawkwatchers of Pack’s past are among the “Pack faithful” who can’t stay away. Pictured (l to r) are Caroline Fegley, Julie Brown, Levi Burford, Katrina Fenton, Phil Brown, and Henry Walters. © Mark Timmerman

The 2024 Season

Over the course of 608.92 observation hours, 5,770 total raptor migrants were tallied, a record-low year. The low total is mainly driven by the lack of Broad-winged Hawks in September. On average, PMRO counts over 8,500 Broad-wingeds, but this year due to persistent east winds, counters tallied only 3,042. After reviewing large-scale migration totals, it appears the east winds and a lack of strong cold fronts resulted in the main migration pathway occurring over hawk watch sites to PMRO's west such as Putney Mountain, VT. The trend played out down the entire Appalachian chain this season with record-low tallies of Broad-winged Hawks recorded at many other locations.

Of the 16 "expected" raptor species, 15 were accounted for this year. Black Vultures, which have only begun making appearances over the past few years, were not spotted in 2024. Two rare raptor species were spotted during the first weekend of November. These were the second-ever record for Short-eared Owl and the first-ever record for Snowy Owl, a fine addition to the database.

No species record highs were set this season, but the second-highest Golden Eagle total occurred with 15, and the Rough-legged Hawk record tied with two. Northern Harriers barely missed a new season record with 124 in 2024 (the record of 125 set in 2015).

Months	Days with 0 hours covered	Days shortened by weather	Days with standard coverage	Days with overtime coverage	Total hours
September	2	3	11	14	217.92
October	2	2	15	12	235.08
November	0	0	14	6	128.42
Totals	4	5	40	32	581.42

Table 2. *Daily effort by month*

September

Total September Migrants: 4,395

September 11 was the biggest day for Broad-winged Hawks (BWAH) with 516 flying through. Typically, PMRO would expect multiple days of 1000+ BWAH, but only a few days reached over 400 this year. The low totals were not due to lack of effort. Counters and visitors scanned the blinding blue skies relentlessly. Though the return-on-scan did not find many BWAH kettles, they did see many other raptors, such as 52 Osprey on September 15, the second-highest count in PMRO history.

October

Total October Migrants: 946

Typically, October hawk watching is expected to experience regular interruptions due to fog and rain. This year, however, only two days were uncountable, and two more had shortened hours. The 235 hours counted during October yielded many exciting raptor and non-raptor species. On October 6, PMRO's first-ever Long-tailed Jaeger (still pending acceptance by the NH Rare Birds Committee) was spotted over the eastern valley, seemingly headed for the coast. The month also brought one light-morph Rough-legged Hawk on October 20 and a dark-morph three days later. By the end of the month, four goose species had been recorded for the season: Snow Goose, Canada Goose, Cackling Goose, and Brant. Due to the nice weather and persistent counters, this October totaled the most hours observed since 2010.

November

Total November Migrants: 325

The unexpected climate continued through November, with unseasonably high temperatures and a lack of precipitation. Many opportunistic raptors such as Bald Eagles and Red-tailed Hawks likely chose not to migrate due to prolonged food availability. No morning produced ice or snow to stop counters from driving up the auto-road, making it very convenient to total the most hours out of any previous November.

As Caroline optimistically and arbitrarily predicted at the beginning of the season, it was an excellent year for Golden Eagles to be counted. Nine out of the 15 Golden Eagles migrated in November, many moving through slow enough for a considerable amount of gawking.

As mentioned previously, the first weekend in November was for many, the most memorable for the season. November 2 produced the first record of a Snowy Owl during the count, and November 3 had the second record of a Short-eared Owl. These were coupled with many other interesting raptor and non-raptor sightings.



A Short-eared Owl circles above the Observatory on November 3. © Cameron Johnson

Species Accounts

Turkey Vulture (*Cathartes aura*)

Season Total: 158

High Count: 29 (October 20)

20-year Mean: 197

20-year Median: 143

Number counted between November 16 and 20: 1

RPI (2006-2023): +11.53% per year

Turkey Vulture totals can have some swings, and this year swung downward with the lowest total since 2018. With some exceptions, the majority of Turkey Vulture migration occurred in October with light north or west winds. Our neighboring site to the west, Putney Mountain, VT recorded above-average numbers of Turkey Vultures this season. Similar to some of our other species, perhaps other flyways simply held more favorable flight conditions for vultures than PMRO this season.

Osprey (*Pandion haliaetus*)

Season Total: 195

High Count: 52 (September 15)

20-year Mean: 215

20-year Median: 207

Number counted between November 16 and 20: 1

RPI (2006-2023): -4.89% per year

Unlike the 2022 and 2023 seasons which set record lows for Osprey's seasonal totals, this fall had many days of good Osprey flight. On September 15 when everyone was painstakingly scanning the skies for Broad-winged Hawks, Ospreys were being called out one after the other. The total for the day was 52, the second-highest day in PMRO history. Although Osprey numbers were higher than the last few years, the season's total still fell short of the 20-year mean and median.



Osprey soaring in clear blue skies. © Tom Momeyer

Bald Eagle (*Haliaeetus leucocephalus*)

Season Total: 173

High Count: 10 (September 22, November 9)

20-year Mean: 125

20-year Median: 126

Number counted between November 16 and 20: 4

RPI (2006-2023): +9.77% per year

Last year, it was suspected that the number of Bald Eagles began to plateau. Of course, more time will tell whether that suspicion is accurate, but 2024 was the third consecutive year without a record season total after a decade-long increase. An important factor to consider when analyzing Bald Eagle totals is the presence of non-migratory individuals. PMRO counters are conservative when recording Bald Eagle numbers to avoid overcounting birds not truly migrating south. Unlike decades past, it is normal to see at least one Bald Eagle every day from the Observatory, some migrating and some not. To rule out local

birds, flight direction, behavior, and timing (seeing a bird go in one direction, then a short while later seeing a bird in the same plumage fly from that direction) are all scrutinized. Unique plumage or molt details can help rule out individual birds who can be seen flying south in a seemingly migratory way before returning northbound later.

Northern Harrier (*Circus hudsonius*)

Season Total: 124

High Count: 13 (September 15)

20-year Mean: 87

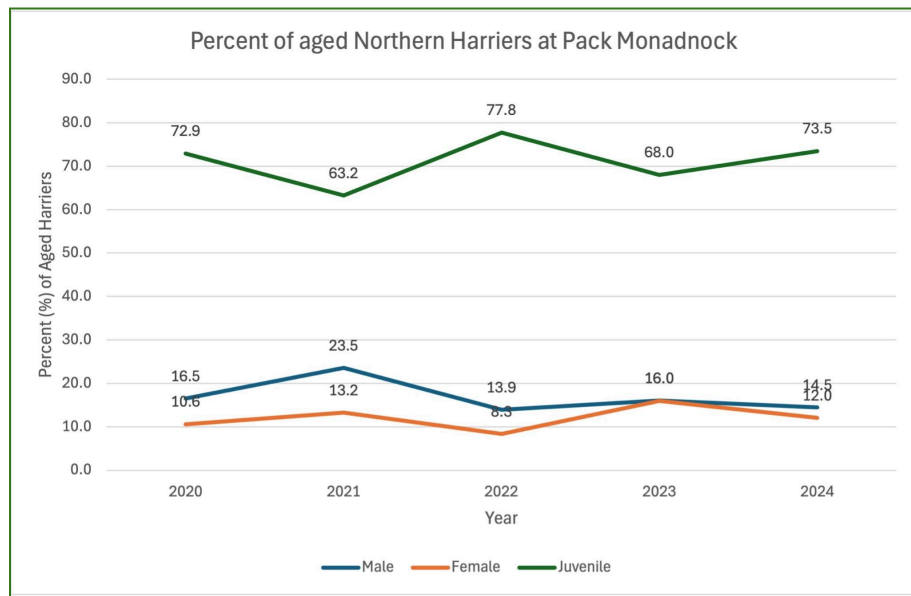
20-year Median: 87

Number counted between November 16 and 20: 0

RPI (2006-2023): -1.72% per year

In 2024, PMRO recorded an above-average Northern Harrier total, and the second highest in its history, just one shy of the previous record of 125 set in 2015. Around the region, most of the hawkwatches posted moderately higher numbers for Northern Harriers. Together, the data suggest that this ground-nesting raptor fared well during the recent breeding season.

Pack’s effort to age and sex harriers continued for the fifth year in a row. This year our observations amounted to 67% of the birds aged, down slightly from the four-year average of 82%. This percentage fares well when compared to other sites in the Northeast United States that also age harriers. As in past years, juveniles (at 73.5%) still accounted for a high percentage of all aged birds.



Sharp-shinned Hawk (*Accipiter striatus*)

Season Total: 1058

High Count: 65 (September 19)

20-year Mean: 1,137

20-year Median: 1,192

Number counted between November 16 and 20: 2

RPI (2006-2023): -1.98% per year

While September totals were low for other species, Sharp-shinned Hawks managed to keep counters occupied with solid numbers in September and October, beginning to push through around the same time as the expected Broad-wing peak. By the end of the season, the total was slightly below average. As with other raptors often seen flying below or at treetop level, there is a complication in detection probability due to the Observatory's overgrown spruce trees. At the beginning of PMRO's time, the viewshed was much more expansive, as was stated by long-time counters repeatedly throughout the 20th season. This leaves everyone to wonder how many Sharp-shinned Hawks and other small raptors are missed due to lack of visibility. However, the species' decline in the Eastern flyway seems undisputable.

Cooper's Hawk (*Accipiter cooperii*)

Season Total: 162

High Count: 10 (September 19)

20-year Mean: 148

20-year Median: 153

Number counted between November 16 and 20: 2

RPI (2006-2023): -1.94% per year

This year the Cooper's Hawk total came up just shy of last year's count of 168 migrants. Numbers stayed relatively steady throughout the season, with around a dozen or more being seen each week. Cooper's Hawks were reliable and average, unlike many other species totals taking large swings in either direction.



Sharp-shinned Hawk (right) diving on a Cooper's Hawk (left). © Tom Momeyer

American Goshawk (*Accipiter gentilis*)

Season Total: 22

High Count: 3 (October 22)

20-year Mean: 29

20-year Median: 22

Number counted between November 16 and 20: 1

RPI (2006-2023): **-10.7%** per year

Starting the season strong, the first American Goshawk was recorded on September 14, surprisingly early compared to other northeastern sites. The large accipiter caused a lot of excitement within the PMRO community this season, with a five-day streak of at least one Goshawk being recorded each day, some doing particularly close flybys. Although 2024 was nowhere near record-breaking for American Goshawks, there is a huge difference in the total of 22 compared to last year's record low of six. With a particularly warm season, it would be much less surprising to have another low year for Goshawks, so perhaps the total indicates a more successful breeding season than last.

Red-shouldered Hawk (*Buteo lineatus*)

Season Total: 177

High Count: 56 (October 28)

20-year Mean: 141

20-year Median: 127

Number counted between November 16 and 20: 5

RPI (2006-2023): +5.88% per year

The past several years for Red-shouldered Hawks have shown a steady increase. While not concerningly low, 2024's total is the lowest since 2018. This is likely due to persistent warm temperatures. Like many other late-season migrants, individuals will choose not to migrate as far if food is available. To draw any real conclusions about Red-shouldered Hawk totals, further investigation would need to be done with overwintering populations.



Adult Red-shouldered Hawk migrating on November 14. © Tom Momeyer

Broad-winged Hawk (*Buteo platypterus*)

Season Total: 3042

High Count: 516 (September 11)

20-year Mean: 8,302

20-year Median: 8,030

Number counted between November 16 and 20: 0

RPI (2006-2023): +1.94% per year

Persistent east winds during peak Broad-winged migration caused frustration with counters who had taken time off work to catch a 1000+ raptor day. Because of their long journeys south, Broad-winged Hawks must conserve as much energy as possible during the first leg of their migration, choosing not to fly on less-than-ideal winds at Pack Monadnock. Instead, the raptors used sites to the west such as Putney Mountain, Vermont, which recorded a season total triple their average. Because a swell of Broad-wings

were counted at other sites, Pack's record low total doesn't indicate a crash of the species' population. Just as raptor totals vary daily, our Broad-winged numbers may vary from year to year.



A kettle of Broad-winged Hawks. © Chuck Carlson

Red-tailed Hawk (*Buteo jamaicensis*)

Season Total: 209

High Count: 37 (November 9)

20-year Mean: 316

20-year Median: 297

Number counted between November 16 and 20: 6

RPI (2006-2023): -4.54% per year

As with other opportunistic species such as Red-shouldered Hawks and Bald Eagles, the Red-tailed Hawk will not migrate without cold temperatures causing a decrease in food availability. The combination of nesting, migration, and overwintering studies has shown an overall decrease in Red-tail migration, with many individuals making shorter journeys or not migrating at all. Similar to 2023, this season lacked the late-season push of Red-tails which would have been expected in previous years. Although Red-tail migration is decreasing across most Hawk Watch sites, PMRO reliably had at least one local Red-tail flying around daily. On many occasions, counters joke about how long a single individual could be seen kiting in the same spot.



A curious Red-tailed Hawk watches counters at the Observatory on October 18. © Tom Momeyer

Rough-legged Hawk (*Buteo lagopus*)

Season Total: 2

High Count: 1 (October 20, 23)

20-year Mean: N/A

20-year Median: N/A

Number counted between November 16 and 20: 0

RPI (2006-2023): N/A

Counters were very excited to tie the season record for Rough-legged Hawks. With an average of less than one individual per season, seeing two migrate past the Observatory within a few days of each other was a special treat. Similar numbers were recorded by neighboring sites, with one seen at Putney Mountain, Vermont, and two seen downridge at Wachusett Mountain, Massachusetts.

Golden Eagle (*Aquila chrysaetos*)

Season Total: 15

High Count: 2 (November 2, 3, 10)

20-year Mean: 8
20-year Median: 8
Number counted between November 16 and 20: 1
RPI (2006-2023): N/A

Walking into her first season as the lead counter at PMRO, Caroline was especially keen on breaking the Golden Eagle record. While the total fell short of 2018's record of 22 migrants, 2024 was the second-highest season with a total of 15. Stunning migrants soared past the Observatory, causing a mix of tears and cheers from counters who braved the harsh wind and long days for a glimpse at a Golden Eagle. 2024 was the fourth consecutive year to record 10 or more Golden Eagles, many of which were hatch-year birds. It will be interesting to see if the upward trend continues in future seasons.



Adult Golden Eagle. © Jef Blake, Macaulay Library

American Kestrel (*Falco sparverius*)

Season Total: 180
High Count: 22 (September 16, 17)
20-year Mean: 164
20-year Median: 168
Number counted between November 16 and 20: 0
RPI (2006-2023): **-0.81%** per year

American Kestrels had a solid migration this September, with 156 of the total 180 migrants this month. In contrast to last year's second-lowest total of 92, likely due to a lack of easterly winds, 2024's persistent wind from the east was a likely reason for the sharp increase. Other factors contributing to the kestrels' success include nest box projects. The Harris Center's nest box project is part of a nationwide effort to counteract the many threats contributing to the long-term decline of the American Kestrel population.

Merlin (*Falco columbarius*)

Season Total: 138

High Count: 13 (September 17)

20-year Mean: 92

20-year Median: 93

Number counted between November 16 and 20: 0

RPI (2006-2023): +1.92% per year

Since 2020, over 100 Merlins have been recorded each year at PMRO. This year, counters recorded the second-highest total, shy of 2010's total of 147. September and October's counts added to 64 and 63 respectively before a sudden drop-off with only five counted in November. Merlins have proven to be a fan-favorite of many Observatory visitors and counters. Now featured on the official PMRO logo, this species can often be seen aggressively diving on the decoy owl in front of the platform, causing a lot of excitement from everyone present.



Merlin pursuing a ragged Turkey Vulture. © Chuck Carlson

Peregrine Falcon (*Falco peregrinus*)

Season Total: 39

High Count: 6 (October 12)

20-year Mean: 42

20-year Median: 44

Number counted between November 16 and 20: 0

RPI (2006-2023): +2.36% per year

As predicted in 2023's season report, new RPI data shows a smaller increase in Peregrine Falcon numbers. Regionally, totals have remained steady since 2015. Twenty-four of the 39 total Peregrines were recorded in October, mostly on days with west-northwest and northwest winds.

Snowy Owl (*Bubo scandiacus*)

Season Total: 1

High Count: 1 (November 2)

20-year Mean: N/A

20-year Median: N/A

Number counted between November 16 and 20: 0

RPI (2006-2023): N/A

On November 2nd, counters Caroline Fegley and Glen Chretien stayed late and caught sight of PMRO's first Snowy Owl. This arctic-nesting bird migrates irregularly, with more individuals migrating south some years over others. Unlike other owls, Snowies are diurnal, meaning they are active during the day, hence the ability to find one migrating past PMRO at approximately 5:30 p.m.



Snowy Owl in flight. © Jean W. Côté, Macaulay Library

Short-eared Owl (*Asio flammeus*)

Season Total: 1

High Count: 1 (November 3)

20-year Mean: N/A

20-year Median: N/A

Number counted between November 16 and 20: 0

RPI (2006-2023): N/A

This season, the second record of a Short-eared Owl occurred on November 3, one day after the Snowy Owl flew by. This owl is often found hunting over fields in daylight and is one of the most widespread owl species worldwide.

Non-Raptor Species

One-hundred-three full species of birds were recorded this season (see Appendix, Table 2). Though the highlights seem almost too many to name, the sighting of a presumed Long-tailed Jaeger on October 6 was undoubtedly the most unusual one. However, sometimes the species that provide the best looks rise to the top. Caroline's "bird-of-the-year" was officially deemed the White-winged Crossbill that perched on a spruce tree behind the platform. Other non-raptors of note include a Black-billed Cuckoo on October 1st, a flock of eight Sandhill Cranes on November 3, and the first record of Cackling Goose and Northern Pintail.

Some regular migrants of note (and their totals) follow:

- Canada Geese (4,973)
- Common Loon (23)
- Ruby-throated Hummingbirds (51)
- Tree Swallow (2)
- Barn Swallow (2)
- Chimney Swift (33)
- American Crows (282); much lower than average; high daily count (61)

Undoubtedly, the most beloved non-raptor this season was "Henry," the Eastern Cottontail. He could often be found munching on birdseed or waiting for our daily 5 p.m. hiker Chip to feed him.



"Henry" the rabbit poses in front of the Observatory. © Cameron Johnson

Acknowledgements

Thank you to all the individuals and organizations involved with this project's two decades of success, especially the continuing partnership of the Harris Center for Conservation Education, Miller State Park, and the NH Division of Natural and Cultural Resources. Thanks to our project supporters, those steadfast donors who have contributed season to season, and those who made their first gift this year, and to all those who contributed their funds, time, and leveraged support in other ways.

Additionally, many thanks to site coordinator Phil Brown for serving as the driving force for the Observatory's continued success. Thank you to Julie Brown for sharing the duties of official counter with Phil on Tuesdays. Thank you to Norma Reppucci, Park Manager at Miller State Park, for her heartfelt support of Pack Monadnock Raptor Observatory. Things wouldn't have run as smoothly at the Observatory without the procedures the State Park and its supportive staff were following.

Another very special thanks to site founder, Iain MacLeod, for continuing as the official counter on Mondays, as well as Tom Delaney and Nate Marchessault, who filled in as such at times. They had some good days up there, and we are grateful that we still have experienced past counters willing to come up for a few days every year and help with the data collection.

Last but certainly not least, a huge strength contributing to PMRO's continuing success comes from the resounding number of dedicated volunteers and observers who come out and help spot and identify the birds. We would like to extend a heartfelt thank you to those below for your diligence and good company through both the best times and the most challenging:

Tom Baillio, Julie Brown, Phil Brown, Laurel & Alden Brown, Levi Burford, Marie Burgess, Michael Burgess, Meade Cadot, Dan Calder, Chuck Carlson, Alan Chretien, Glen Chretien, Lori-Ann Chretien, Gerry Coffey, Dot Currier, Janet Delaney, Tom Delaney, Caroline Fegley, Dave Fensore, Katrina Fenton, Robin Feustel, Miki Foley, Nikko Gagnon, Dan Gardoqui, Mike Gebo, Dan Grossman, Melanie Haber, Nora Hanke, Cameron Johnson, Nick Landers, Chris Liazos, Steve Manifold, Howard Mansfield, Nate Marchessault, Amy Maurer, Jim McCoy, Tom Momeyer, Sy Montgomery, Andre Moraes, Nancy Moreau, Kevin Murphy, Judd Nathan, Quinn Nial, Cynthia Nichols, Kevin O'Neill, Nan O'Neill, Jim Pinfold, John Ranta, Annamarie Saenger, Hillary Siener, Susie Spikol, Mark Suomala, Mark Timmerman, Michael Viet, Francie Von Mertens, Henry Walters, Tom Warren, Marcia Wilson, Mark Wilson, Chad Witko, Jon Woolf, Van Zimmer, Brian Zylich, with many more...

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Comet C/2023 A3 (Tsuchinshan/ATLAS) gets ready to dip behind Mount Monadnock on October 11. © Levi Burford

Appendix

Table I. All Seasonal Data from Pack Monadnock Raptor Observatory

Year	Hrs	B V	TV	OS	BE	NH	SS	CH	AG	RS	BW	RT	RL	GE	AK	ML	PG	UA	UB	UF	UE	UR	S W	S E	Total
2005	330	0	29	219	52	24	520	47	11	23	3978	122	0	5	78	40	11	4	7	5	4	42	0	0	5221
2006	408	0	99	257	55	77	1253	213	68	46	7595	407	0	11	201	48	29	7	4	2	1	62	0	0	10435
2007	430	0	121	291	53	121	1288	186	49	112	7776	263	0	5	143	90	44	9	2	3	0	68	0	0	10624
2008	436	0	47	256	50	87	1189	162	28	67	6835	254	0	3	183	59	17	5	8	2	2	20	0	0	9274
2009	421	0	80	182	51	88	1196	133	25	129	4322	421	0	6	135	56	30	8	14	8	2	77	0	0	6963
2010	628	0	145	298	85	115	1248	168	66	109	7606	410	0	10	221	147	53	17	10	5	3	70	0	0	10786
2011	368	0	127	271	54	58	1124	145	21	43	11831	202	0	9	170	68	40	14	6	4	0	69	0	0	14256
2012	601	0	164	314	105	91	1388	181	63	209	8848	522	1	7	194	108	54	7	4	2	2	59	1	0	12324
2013	575	0	142	193	101	100	1254	146	25	118	8221	378	1	11	166	89	48	10	2	1	3	20	0	1	11030
2014	497	0	99	213	120	85	1094	126	22	123	11043	348	1	7	112	80	39	5	6	6	2	34	0	0	13565
2015	587	0	137	201	132	124	1443	115	48	141	16593	546	1	13	118	120	54	3	5	5	2	42	1	0	19844
2016	527	0	322	242	136	92	1126	163	48	117	10530	294	1	5	167	96	49	6	4	3	2	63	0	0	13466
2017	515	0	324	219	163	82	1179	142	16	181	8744	341	2	7	166	106	64	6	6	4	1	51	0	0	11804
2018	455	0	98	189	176	64	668	124	11	126	6756	246	2	22	172	58	31	16	18	10	1	63	0	0	8851
2019	558	0	268	171	180	54	1027	105	9	181	7840	220	0	4	185	64	64	15	14	4	0	95	0	0	10500
2020	558	0	172	162	185	108	1325	180	12	223	8815	293	0	5	257	143	30	11	25	2	2	82	0	0	12032
2021	548	2	641	182	227	85	1291	157	13	223	6055	329	1	11	165	100	57	7	5	2	4	48	0	0	9605
2022	553	1	493	137	210	84	886	149	22	301	9369	300	0	11	92	108	44	2	12	1	0	43	0	0	12370
2023	568	3	286	122	196	90	1198	167	6	188	10256	212	1	10	175	130	61	8	12	4	4	34	0	0	13058
2024	608	0	158	195	173	124	1058	162	22	177	3042	209	2	15	180	138	39	10	17	3	0	44	0	1	5768

Total	10181	6	3952	4314	2504	1753	22755	2971	585	2838	166054	6320	13	177	3280	1848	858	170	181	76	35	1086	2	2	221776
Avg.	509	0	198	216	126	88	1138	149	29	142	8303	316	0.7	9	164	92	43	9	9	4	2	54	0	0	11089

BV = Black Vulture

TV = Turkey Vulture

OS = Osprey

BE = Bald Eagle

NH = Northern Harrier

SS = Sharp-shinned Hawk

CH = Cooper's Hawk

AG = American Goshawk

RS = Red-shouldered Hawk

BW = Broad-winged Hawk

RT = Red-tailed Hawk

RL = Rough-legged Hawk

GE = Golden Eagle

AK = American Kestrel

ML = Merlin

PF = Peregrine Falcon

UA = Unidentified Accipiter

UB = Unidentified Buteo

UF = Unidentified Falcon

UE = Unidentified Eagle

UR = Unidentified Raptor

SW = Swainson's Hawk

SE = Short-eared Owl

Table 2. All Avian Observations from Pack Monadnock Raptor Observatory

	Common Name – <i>Scientific Name</i>	First Seen	Last Seen	High Count	High Count Date	Total Obs.
1	Brant - <i>Branta bernicla</i>	2024-10-25	2024-10-25	22	2024-10-25	22
2	Cackling Goose - <i>Branta hutchinsii</i>	2024-10-27	2024-10-27	1	2024-10-27	1
3	Canada Goose - <i>Branta canadensis</i>	2024-09-02	2024-11-13	1535	2024-10-12	5031
4	Mallard - <i>Anas platyrhynchos</i>	2024-10-12	2024-10-12	1	2024-10-12	1
5	American Black Duck - <i>Anas rubripes</i>	2024-10-12	2024-10-12	11	2024-10-12	11
6	Northern Pintail - <i>Anas acuta</i>	2024-10-12	2024-10-12	1	2024-10-12	1
7	White-winged Scoter - <i>Melanitta deglandi</i>	2024-11-02	2024-11-02	31	2024-11-02	31
8	Common Merganser - <i>Mergus merganser</i>	2024-10-05	2024-11-16	5	2024-11-10	10
9	waterfowl sp. - <i>Anatidae sp.</i>	2024-10-15	2024-10-15	10	2024-10-15	10
10	Mourning Dove - <i>Zenaida macroura</i>	2024-08-11	2024-09-29	2	2024-09-12	30
11	Black-billed Cuckoo - <i>Coccyzus erythrophthalmus</i>	2024-10-01	2024-10-01	1	2024-10-01	1
12	Chimney Swift - <i>Chaetura pelagica</i>	2024-08-11	2024-09-15	9	2024-09-01	31
13	Ruby-throated Hummingbird - <i>Archilochus colubris</i>	2024-08-11	2024-09-15	8	2024-09-01	51
14	Sandhill Crane - <i>Antigone canadensis</i>	2024-10-05	2024-11-03	8	2024-11-03	9
15	shorebird sp. - <i>Charadriiformes sp. (shorebird sp.)</i>	2024-10-12	2024-10-12	1	2024-10-12	1
16	Long-tailed Jaeger - <i>Stercorarius longicaudus</i>	2024-10-06	2024-10-06	1	2024-10-06	1
17	Ring-billed Gull - <i>Larus delawarensis</i>	2024-11-09	2024-11-09	4	2024-11-09	4
18	American Herring Gull - <i>Larus smithsonianus</i>	2024-09-10	2024-11-20	33	2024-11-17	56
19	Great Black-backed Gull - <i>Larus marinus</i>	2024-11-01	2024-11-01	1	2024-11-01	1
20	gull sp. - <i>Larinae sp.</i>	2024-10-01	2024-10-01	1	2024-10-01	1
21	Common Loon - <i>Gavia immer</i>	2024-09-15	2024-11-09	8	2024-09-15	23
22	Double-crested Cormorant - <i>Nannopterum auritum</i>	2024-08-24	2024-11-03	6	2024-09-16	19
23	Turkey Vulture - <i>Cathartes aura</i>	2024-08-11	2024-11-20	33	2024-10-20	369
24	Osprey - <i>Pandion haliaetus</i>	2024-08-24	2024-11-17	52	2024-09-15	199

25	Golden Eagle - <i>Aquila chrysaetos</i>	2024-09-28	2024-11-20	2	2024-11-10	15
26	Sharp-shinned Hawk - <i>Accipiter striatus</i>	2024-08-11	2024-11-20	88	2024-09-15	1081
27	Cooper's Hawk - <i>Astur cooperii</i>	2024-08-11	2024-11-20	10	2024-09-19	169
28	Sharp-shinned/Cooper's Hawk - <i>Accipiter striatus/Astur cooperii</i>	2024-10-16	2024-10-16	1	2024-10-16	1
29	American Goshawk - <i>Astur atricapillus</i>	2024-09-14	2024-11-17	3	2024-10-22	23
30	Accipitrine hawk sp. (former <i>Accipiter</i> sp.) - <i>Aerospiza/Tachyspiza/Accipiter/Astur</i> sp.	2024-08-30	2024-11-17	2	2024-10-24	11
31	Northern Harrier - <i>Circus hudsonius</i>	2024-09-02	2024-11-09	13	2024-09-15	124
32	Bald Eagle - <i>Haliaeetus leucocephalus</i>	2024-08-11	2024-11-20	12	2024-09-16	238
33	Broad-winged Hawk - <i>Buteo platypterus</i>	2024-08-11	2024-10-06	516	2024-09-11	3056
34	Red-shouldered Hawk - <i>Buteo lineatus</i>	2024-09-02	2024-11-20	56	2024-10-28	205
35	Red-tailed Hawk - <i>Buteo jamaicensis</i>	2024-08-11	2024-11-20	40	2024-11-09	321
36	Rough-legged Hawk - <i>Buteo lagopus</i>	2024-10-20	2024-10-23	1	2024-10-23	2
37	<i>Buteo</i> sp. - <i>Buteo</i> sp.	2024-09-16	2024-11-20	3	2024-11-03	15
38	eagle sp. - <i>Accipitridae</i> sp. (eagle sp.)	2024-10-15	2024-10-15	3	2024-10-15	3
39	Snowy Owl - <i>Bubo scandiacus</i>	2024-11-02	2024-11-02	1	2024-11-02	1
40	Barred Owl - <i>Strix varia</i>	2024-10-09	2024-10-09	1	2024-10-09	1
41	Short-eared Owl - <i>Asio flammeus</i>	2024-11-03	2024-11-03	1	2024-11-03	1
42	Yellow-bellied Sapsucker - <i>Sphyrapicus varius</i>	2024-09-11	2024-10-01	1	2024-10-01	5
43	Downy Woodpecker - <i>Dryobates pubescens</i>	2024-08-25	2024-11-15	2	2024-10-22	21
44	Hairy Woodpecker - <i>Dryobates villosus</i>	2024-09-10	2024-11-04	1	2024-11-04	9
45	Pileated Woodpecker - <i>Dryocopus pileatus</i>	2024-08-23	2024-11-11	1	2024-11-11	5
46	Northern Flicker - <i>Colaptes auratus</i>	2024-08-16	2024-10-06	1	2024-10-06	10
47	American Kestrel - <i>Falco sparverius</i>	2024-08-23	2024-10-22	22	2024-09-17	183
48	Merlin - <i>Falco columbarius</i>	2024-08-23	2024-11-12	13	2024-09-17	146
49	Peregrine Falcon - <i>Falco peregrinus</i>	2024-08-16	2024-10-26	6	2024-10-12	42
50	falcon sp. - <i>Falco</i> sp.	2024-09-05	2024-09-13	2	2024-09-13	3

51	diurnal raptor sp. - Accipitriformes/Falconiformes sp.	2024-09-03	2024-11-08	3	2024-10-12	40
52	Eastern Wood-Pewee - Contopus virens	2024-09-12	2024-09-12	1	2024-09-12	1
53	Eastern Phoebe - Sayornis phoebe	2024-08-16	2024-09-29	1	2024-09-29	8
54	Blue-headed Vireo - Vireo solitarius	2024-09-16	2024-09-29	2	2024-09-16	4
55	Warbling Vireo - Vireo gilvus	2024-09-01	2024-09-01	1	2024-09-01	1
56	Red-eyed Vireo - Vireo olivaceus	2024-08-31	2024-09-27	1	2024-09-27	4
57	Blue Jay - Cyanocitta cristata	2024-08-11	2024-11-20	35	2024-10-08	346
58	American Crow - Corvus brachyrhynchos	2024-09-16	2024-11-16	61	2024-10-28	282
59	Common Raven - Corvus corax	2024-08-11	2024-11-20	30	2024-09-19	732
60	Black-capped Chickadee - Poecile atricapillus	2024-08-11	2024-11-20	10	2024-11-17	309
61	Tufted Titmouse - Baeolophus bicolor	2024-09-30	2024-10-25	2	2024-09-30	5
62	Horned Lark - Eremophila alpestris	2024-11-20	2024-11-20	3	2024-11-20	3
63	Tree Swallow - Tachycineta bicolor	2024-08-23	2024-09-09	1	2024-09-09	2
64	Northern Rough-winged Swallow - Stelgidopteryx serripennis	2024-08-11	2024-08-11	1	2024-08-11	1
65	Barn Swallow - Hirundo rustica	2024-08-23	2024-08-30	1	2024-08-30	2
66	Ruby-crowned Kinglet - Corthylio calendula	2024-09-13	2024-10-21	8	2024-09-29	32
67	Golden-crowned Kinglet - Regulus satrapa	2024-08-11	2024-11-19	18	2024-10-01	84
68	White-breasted Nuthatch - Sitta carolinensis	2024-09-03	2024-10-27	2	2024-09-04	10
69	Red-breasted Nuthatch - Sitta canadensis	2024-08-11	2024-11-20	3	2024-10-20	82
70	Brown Creeper - Certhia americana	2024-08-24	2024-10-29	2	2024-09-17	12
71	Blue-gray Gnatcatcher - Polioptila caerulea	2024-09-16	2024-09-16	1	2024-09-16	1
72	Northern House Wren - Troglodytes aedon	2024-08-31	2024-08-31	1	2024-08-31	1
73	Winter Wren - Troglodytes hiemalis	2024-08-24	2024-10-12	1	2024-10-12	8
74	Eastern Bluebird - Sialia sialis	2024-10-08	2024-11-02	5	2024-11-02	15
75	Swainson's Thrush - Catharus ustulatus	2024-10-06	2024-10-06	1	2024-10-06	1
76	Hermit Thrush - Catharus guttatus	2024-09-30	2024-11-10	2	2024-10-14	5
77	American Robin - Turdus migratorius	2024-09-03	2024-11-11	15	2024-11-02	34

78	Bohemian Waxwing - <i>Bombycilla garrulus</i>	2024-11-20	2024-11-20	5	2024-11-20	5
79	Cedar Waxwing - <i>Bombycilla cedrorum</i>	2024-08-11	2024-10-31	36	2024-09-22	152
80	American Pipit - <i>Anthus rubescens</i>	2024-09-10	2024-11-04	1	2024-11-04	4
81	Evening Grosbeak - <i>Coccothraustes vespertinus</i>	2024-11-20	2024-11-20	1	2024-11-20	1
82	House Finch - <i>Haemorhous mexicanus</i>	2024-10-16	2024-10-16	3	2024-10-16	3
83	Purple Finch - <i>Haemorhous purpureus</i>	2024-09-10	2024-11-13	160	2024-11-02	291
84	Red Crossbill - <i>Loxia curvirostra</i>	2024-08-11	2024-11-17	7	2024-10-27	14
85	White-winged Crossbill - <i>Loxia leucoptera</i>	2024-10-26	2024-10-26	2	2024-10-26	2
86	Pine Siskin - <i>Spinus pinus</i>	2024-09-29	2024-11-14	9	2024-11-03	58
87	American Goldfinch - <i>Spinus tristis</i>	2024-08-23	2024-11-14	7	2024-10-18	84
88	finch sp. - <i>Fringillidae</i> sp.	2024-11-07	2024-11-08	12	2024-11-07	21
89	Snow Bunting - <i>Plectrophenax nivalis</i>	2024-10-28	2024-11-07	1	2024-11-07	2
90	Chipping Sparrow - <i>Spizella passerina</i>	2024-08-11	2024-08-30	2	2024-08-30	4
91	Fox Sparrow - <i>Passerella iliaca</i>	2024-10-23	2024-11-19	1	2024-11-19	3
92	Dark-eyed Junco - <i>Junco hyemalis</i>	2024-08-11	2024-11-20	30	2024-10-14	377
93	White-throated Sparrow - <i>Zonotrichia albicollis</i>	2024-09-08	2024-11-12	10	2024-10-14	55
94	Savannah Sparrow - <i>Passerculus sandwichensis</i>	2024-10-01	2024-10-01	1	2024-10-01	1
95	Song Sparrow - <i>Melospiza melodia</i>	2024-09-15	2024-11-04	3	2024-11-04	4
96	Eastern Towhee - <i>Pipilo erythrophthalmus</i>	2024-09-04	2024-09-29	2	2024-09-29	3
97	Ovenbird - <i>Seiurus aurocapilla</i>	2024-09-04	2024-09-04	1	2024-09-04	1
98	Black-and-white Warbler - <i>Mniotilta varia</i>	2024-09-10	2024-09-10	1	2024-09-10	1
99	Tennessee Warbler - <i>Leiothlypis peregrina</i>	2024-09-09	2024-09-10	3	2024-09-10	4
100	American Redstart - <i>Setophaga ruticilla</i>	2024-08-30	2024-09-15	1	2024-09-15	3
101	Cape May Warbler - <i>Setophaga tigrina</i>	2024-09-02	2024-09-22	3	2024-09-10	5
102	Northern Parula - <i>Setophaga americana</i>	2024-09-10	2024-10-01	1	2024-10-01	4
103	Magnolia Warbler - <i>Setophaga magnolia</i>	2024-09-12	2024-09-15	1	2024-09-15	2
104	Blackburnian Warbler - <i>Setophaga fusca</i>	2024-09-13	2024-09-13	1	2024-09-13	1
105	Blackpoll Warbler - <i>Setophaga striata</i>	2024-09-09	2024-10-08	6	2024-10-01	13

106	Black-throated Blue Warbler - <i>Setophaga caerulescens</i>	2024-09-09	2024-09-19	2	2024-09-11	7
107	Palm Warbler - <i>Setophaga palmarum</i>	2024-09-16	2024-10-12	1	2024-10-12	4
108	Palm Warbler (Yellow) - <i>Setophaga palmarum hypochrysea</i>	2024-09-24	2024-10-01	2	2024-10-01	4
109	Pine Warbler - <i>Setophaga pinus</i>	2024-09-11	2024-09-30	2	2024-09-30	5
110	Yellow-rumped Warbler - <i>Setophaga coronata</i>	2024-08-30	2024-10-26	40	2024-10-01	198
111	Yellow-rumped Warbler (Myrtle) - <i>Setophaga coronata coronata</i>	2024-09-02	2024-10-22	8	2024-10-22	27
112	Black-throated Green Warbler - <i>Setophaga virens</i>	2024-08-30	2024-09-19	2	2024-09-10	9
113	new world warbler sp. - <i>Parulidae</i> sp.	2024-09-02	2024-10-16	2	2024-09-02	3
114	Rose-breasted Grosbeak - <i>Pheucticus ludovicianus</i>	2024-09-10	2024-09-10	1	2024-09-10	1
115	passerine sp. - <i>Passeriformes</i> sp.	2024-10-22	2024-10-22	20	2024-10-22	20



Black-throated Green Warbler. © Chuck Carlson