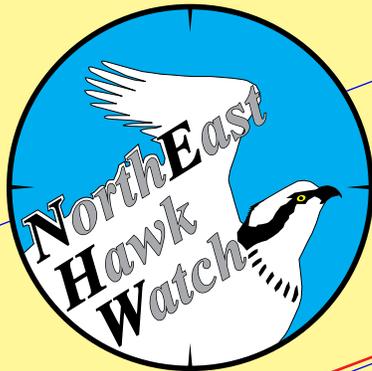


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NorthEast Hawk Watch 2022 Hawk Migration Report

2022 NorthEast Hawk Watch Sites



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NorthEast Hawk Watch

The *NorthEast HawkWatch* promotes the systematic study of migrating hawks in New England, southeastern New York and northeast New Jersey. Membership is open to anyone. Annual dues are \$10 payable to "NEHW" c/o treasurer: Joe Wojtanowski, PO Box 142, Poquonock, CT 06064.

Visit the website of *NorthEast HawkWatch* at www.battaly.com/nehw/ to download a membership application, view seasonal site totals at all sites and daily counts at selected sites, download PDFs of previous reports, and find directions to hawkwatch sites in the northeast.

All counts can be easily reported online through a free service offered by the Hawk Migration Association of North America (HMANA). To sign up, visit www.hawkcount.org and click on "Account Request" link. To receive daily reports from all sites using the hawkcount program, subscribe to BIRDHAWK, which is also free and can be done by visiting the HMANA homepage at www.hmana.org and following the simple instructions there.

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From the President:

We had planned to hold a NorthEast Hawk Watch Conference last April, but Covid concerns made us postpone for a year. So, let's try again. . . mark your calendars for **Saturday, April 6, 2024 at the Holyoke Community College in Holyoke, Massachusetts.**

Program chair Larry Fischer is putting the finishing touches on an exciting lineup of speakers and we look forward to gathering together for a very special day.

We will share details of the program and speakers later in the fall so stay tuned. I wish you all a very productive 2023 fall hawkwatch season. . . and I look forward to seeing you all in Holyoke in April.

Iain MacLeod

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From the Editor:

You counted hawks for another year, sent in your data, and here it is, along with the counts from all our active sites in 2022. This year stands out as the year that clearly shows just how important you are. Back in 2016, your data showed a Kestrel decline in the NorthEast, and we called out the alarm! Now, as the public is catching up in popular articles, your data shows that Kestrels have been stable for the last decade or so. You and your time at the watch provided a forecast for the country, and continues to monitor the population. That's exactly what raptor conservation is all about!

Included in this Report are the graphs and data for all species for both the spring and fall. There are overview analyses, including prevalence charts and graphs of ordinal ranks to show the changing composition of hawks. Bar tables, displaying differences in year-to-year distributions of hawks, show that more hawks flew over our southern regions than in previous years. There are species specific analyses, including a comparison of Red-shoulder counts to breeding data and possible flight pathways. Whether it's differences in species composition or species distribution, it's your collective data that reveals these patterns.

Also included is an article by Judy Cinquina about Stiles Thomas. Stiles was so inspired by hawk migration that he started three hawk watches—Mount Peter, Hook Mountain, and State Line. Judy's memories uniquely bring his enthusiasm before us, to inspire us all.

Drew's column this year focuses on weather information and where to find it. More than any other variable, weather impacts our counts. Drew's information can help you to plan for tomorrow's watch while explaining what happened at yesterday's watch. (I already learned something new.)

This year was our best Broadwing count since 2013. There were 39 days with 1000+ Broadwings at 20 different sites in the NorthEast! We shared that amazing experience, even as we watched from different places, and its memory will fuel our return for more hawks and more kettles in the years to come.

Thank you for being there.

Trudy Battaly

merlin@pipeline.com

NEHW Report, Spring 2022

During Spring 2022, hawk watchers at 20 sites counted 12635 hawks. This is close to our 30-year average of 13480 (-6%), but about 27% lower than the Spring 2021 count of 17231.

The 20 sites in 2022 is a gain of five compared to the 15 sites in Spring 2021. Six sites counting this season did not count in 2021, and one site that counted in 2021, Shatterack Mountain, did not count in 2022. Wachusett and I-84, both fall migration sites, each counted for several days. It is refreshing to see fall regulars exploring spring migration activity. Barre Falls likewise returned to a few days of counting after missing the 2021 season. Three sites join us this season as new sites: Alton Bay in Alton NH, Adams Farm in Athol MA, and Castle Rock in Saugus MA. It is great to see new sites. These extend our coverage, provide data where we had none, and contribute to the wonderful resource provided by all of you who count hawks for us across the NorthEast.

Our spring watch sites spanned 515 miles diagonally across the northeast, from Kerrs Ridge in New Brunswick Canada to Scott's Mountain in western New Jersey. The 20 sites are spread across that region in a broad band, which varies in breadth from 60 to 125 miles across. More sites are located in the southwestern portion than the northeastern portion. With the locations for our 20 sites varying from latitudes of 40.7 to 45.2, the sites are grouped by latitude beginning with Region 45 to the north and ending with Region 40 to the south. There is no Region 44, as we have no spring watch sites between the 44th and 45th parallels.

Region 45

Region 45 has two sites north of latitude 45, Kerrs Ridge NB and Cooper ME. This was the fifth season for **Kerr's Ridge**, so averages are still varying from year to year. It was a good season for several species, including one of the five Northern Goshawks

NorthEast Spring 2022 Seasonal Totals

	Site	Days	Hrs	BV	TV	OS	BE	NH	SS	CH	NG	RS	BW	RT	RL	GE	AK	ML	PG	UR	Othr	TOT	HK/D	MAX	DATES
45	Kerr's Ridge	8	11.5	0	19	5	15	8	8	0	1	2	204	24	0	0	15	4	1	6	0	312	39	130	3/18-4/13
	Cooper	10	49	0	12	5	10	1	2	4	0	0	2	3	0	0	2	2	0	1	0	44	4	8	4/3-4/25
43	Bradbury Mountain	61	451	1	470	287	98	86	671	56	3	123	1662	141	0	0	305	78	6	43	0	4030	66	489	3/15-5/17
	Alton Bay	4	21	2	75	5	6	0	9	5	0	0	169	5	0	0	2	2	0	5	0	285	71	98	4/24-5/2
	Pitcher Mountain	1	2	0	2	0	2	0	0	0	1	0	0	3	0	0	0	0	0	0	0	8	8	8	3/25
42	Plum Island	54	290	0	137	61	17	128	149	39	0	0	0	2	0	0	926	85	7	32	0	1583	29	450	3/11-5/16
	Adams Farm	10	55	2	43	16	3	3	37	15	0	15	218	5	0	0	6	5	1	34	0	403	40	61	4/3-5/5
	Wachusett	4	21	0	7	4	2	1	5	3	0	3	95	8	0	1	4	2	1	22	0	158	40	70	4/18-5/1
	Castle Rock	18	80	0	39	1	1	0	6	0	0	5	2	2	0	0	3	1	1	4	0	65	4	15	3/31-5/15
	Barre Falls	3	9	0	0	0	0	7	6	0	0	1	25	11	0	0	2	0	0	0	0	52	17	38	4/11-4/20
41	Head of the Meadow	44	249	4	633	129	4	21	45	16	0	2	98	92	0	0	113	58	5	22	1MK	1243	28	139	4/2-6/25
	Poquonock	41	150	3	92	19	6	0	6	8	0	2	35	43	0	0	9	1	0	14	0	238	6	26	3/18-5/13
	Johnnycake Mt	9	32	2	49	6	18	1	2	17	0	10	50	39	0	0	3	0	0	16	0	213	24	49	4/11-4/30
	I-84	2	8	1	12	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	14	7	8	2/16-3/1
	Bear Mountain	1	3	0	0	1	0	0	1	0	0	2	2	0	0	0	6	0	0	0	0	12	12	12	4/13
	Hook Mountain	24	120	24	640	62	48	10	48	41	0	126	509	31	0	0	87	21	5	0	0	1652	69	673	3/2-4/27
40	Purple Chickadee	46	218	7	97	38	33	5	114	27	0	17	568	38	0	0	38	8	2	23	0	1015	22	104	2/21-5/26
	Wildcat Ridge	22	80	17	3	2	10	1	15	6	0	5	31	28	0	0	2	2	0	14	0	136	6	36	3/2-5/10
	Alley Creek	63	232	26	406	358	140	4	26	35	0	0	1	18	0	0	27	18	7	5	0	1071	17	107	2/17-5/23
	Scott's Mountain	1	7	0	0	6	0	0	4	2	0	0	76	5	0	0	8	0	0	0	0	101	101	101	4/23
Total		426	2088	89	2736	1005	420	269	1154	274	5	313	3747	499	0	1	1558	287	36	241	1	12635	30		2/16-6/25
Average, 1992-2021		303	1689	57	1439	842	134	285	2132	334	10	228	5268	655	4	3	1614	271	37	164	4	13480.4	45		

BV: Black Vulture, TV: Turkey Vulture, OS: Osprey, BE: Bald Eagle, NH: Northern Harrier, SS: Sharp-shinned Hawk, CH: Cooper's Hawks, NG: Northern Goshawk, RS: Redshouldered Hawk, BW: Broad-winged Hawk, RT: Red-tailed Hawk, RL: Rough-legged Hawk, GE: Golden Eagle, AK: American Kestrel, ML: Merlin, PG: Peregrine Falcon, UR: Unidentified Raptor, MK: Mississippi Kite, HK/DY: Hawks/Day, MAX: Maximum Day Total



counted across the NorthEast. The Bald Eagle (15) count was the highest of the five years, and almost three times the average. The Red-tailed Hawk (24) count was the second highest, and almost twice the average. These, however, were balanced by a record low count for Sharp-shinned Hawk (8). **Cooper** had fewer days and hours than in other years, resulting in a below average year for most species. In spite of this, several species were above or at average, including Osprey (5), Coopers Hawk (4), and Merlin (2).

Region 43

While we have no watch sites between latitudes 44 and 45, there are three sites between latitudes 43 and 44, in Region 43: Bradbury Mountain, Alton Bay, and Pitcher Mountain. Bradbury Mountain is in Maine, about 8 miles from the coastline and about

160 miles southwest of Cooper. Alton Bay and Pitcher Mountain are both in New Hampshire. Alton Bay is about 60 miles southwest of Bradbury, and Pitcher is about 50 miles southwest of Alton Bay.

Bradbury Mountain had average days and hours, compared to the previous 10 years, resulting in average counts for nine species and below average counts for all other species. Their regular coverage over the last decades has provided consistent counts, and has once again resulted in seasonal NorthEast highs for hours (451), Total Hawks (4030), and for five hawk species: Sharp-shinned Hawks (671), Cooper's Hawk (56), Northern Goshawk (3), Broad-winged Hawk (1662), and Red-tailed Hawk (141). While the three Goshawks are half their average, there were only two other Goshawks counted throughout the whole NorthEast this season. **Alton Bay** did its first spring count this season, starting with four days of coverage, resulting in the highest hawks/day (71) for the region. They documented 10 species, the most prevalent of which were Broad-winged Hawk (169), Turkey Vulture (75), and Bald Eagle (6). **Pitcher Mountain** only had 2 hours of coverage, compared to its 32 hour average, so its total of eight hawks was well below normal. But, among those eight hawks was a Goshawk! So, in their two hours, they counted 20% of the Gos for the NorthEast!

Region 42

Region 42 has six sites between the latitudes 42 and 43, all in Massachusetts. From north to south these include: Plum Island, Adams Farm, Wachusett, Castle Rock, Barre Falls, and Head of the Meadow. Though furthest south, Head of the Meadow is also furthest east, on Cape Cod, and 127 miles south of Bradbury Mountain, across the Gulf of Maine.

Plum Island put in a record effort with 290 hours this season. That resulted in a record Bald Eagle (17) count and above average counts for four other species: Turkey Vulture (137), Osprey (61), Cooper's Hawk (39), and American Kestrel (926). The Kestrel count was a high for the NorthEast for this season. Three additional species with average site counts were also NorthEast highs: Northern Harrier (128), Merlin (85), and Peregrine Falcon (7). The Peregrine high is a tie with Alley Creek. Sharp-shinned Hawks (149) were notably below the 10-year average and only one fourth of the high of 644 counted in 2021. **Adams Farm** did its first spring count this season, with ten days of coverage. They documented 13 species, the most prevalent of which were Broad-winged Hawk (218), Turkey Vulture (43), and Sharp-shinned Hawk (37). The Broadwing count was the highest for Region 42, and their Hawks/Day (40) was well above the average (30). **Wachusett** also did its first spring count this season, with 4 days of coverage. It also counted 13 species, the most prevalent of which were Broad-winged Hawk (95), Red-tailed Hawk (8), and Turkey Vulture (7). But, Wachusett stands out on its own as being the only site that counted a Golden Eagle (1) across the whole NorthEast! That's a first spring watch that brought the gold!

Castle Rock is also new, and contributed 18 days to our migration data. They documented 10 species, predominantly Turkey Vultures (39) and Sharp-shinned Hawks (6). While inside a park, this site is mostly surrounded by suburbs, north of Boston, 25 miles

SSW of Plum Island, and off the coast. It provides an interesting comparison to other watch sites. After missing the Spring 2021 season, **Barre Falls** returned to spring counting with three days of coverage this season. They documented six species of hawks, the most prevalent of which were Broad-winged Hawk (25), Sharp-shinned Hawk (6), and Bald Eagle (7). Their Red-shouldered Hawk (1) was the first since 2019. **Head of the Meadow** counted for the third year at their new site on the west coast of Cape Cod, having previously counted at Pilgrim Heights on the east coast. This year's count is near the average for the Pilgrim Heights site. When compared to the previous two years on site, three species were above average: Red-tailed Hawk (92), American Kestrel (113), and Merlin (58). As a coastal site, the second most prevalent species was Osprey (129), behind the most prevalent Turkey Vultures (633). Once again, Head of the Meadow came through with Mississippi Kite (1), the only one counted this season in the NorthEast.

Region 41

Region 41 has six sites between the latitudes 41 and 42, including Poquonock and Johnnycake in Connecticut, I-84, Bear Mountain, and Hook Mountain in New York, and Purple Chickadee in New Jersey.

This was the eighth spring season for **Poquonock** since beginning in 2009. Coverage has varied considerably from year to year. To compare this 2022 season to more recent years, averages were computed after 2009, since coverage in 2009 was more than double any other year. Thus, the effort this 2022 season (150 hours) was above average, and resulted in above average counts for six species: Turkey Vulture (92), Osprey (19), Sharp-shinned Hawk (6), Cooper's Hawk (8), Red-tailed Hawk (43) and American Kestrel (9). **Johnnycake** also had above average hours (32), resulting in above average counts for five species: Turkey Vulture (49), Bald Eagle (18), Cooper's Hawk (17), Red-shouldered Hawk (10), and Red-tailed Hawk (39). The Red-shouldered count was particularly notable, at eight times the average. **I-84** is an irregular fall site with several days of spring coverage, including one day in spring 2021 and 2 days for this spring 2022 season. The eight hours of coverage this season resulted in counts for three species: Black Vulture (1), Turkey Vulture (75), and Red-tailed Hawk (1).

Bear Mountain had one day of coverage this season, and documented five species: Osprey (1), Sharp-shinned Hawk (1), Red-shouldered Hawk (2), Broad-winged Hawk (2), and American Kestrel (6). The Shoulder and Kestrel counts were above average. **Hook Mountain** had above average coverage (120 hours), with above average counts for a remarkable 10 species. Among these, there were site records for three species: Turkey Vulture (640), Bald Eagle (48), and, quite surprisingly, American Kestrel (87). Counts for Turkey Vulture and Red-shouldered Hawk (126) were highs for the NorthEast. Hook also had the highest single day count for the NorthEast, with 673 hawks on 3/7/2022, mostly Turkey Vultures (568) and Red-shouldered Hawks (95). The only species that were below average were Sharp-shinned Hawk (48) and Broad-winged Hawk (509). For their fourth spring season, **Purple Chickadee** also had above average hours (218) and above average counts for

five species: Bald Eagle (33), Northern Harrier (5), Sharp-shinned Hawk (114), American Kestrel (38), and Merlin (8). Two species had below average counts: Red-shouldered Hawk (17) and Broad-winged Hawk (568). All other species were at average.

Region 40

Region 40 has three sites between the latitudes 40 and 41, including Alley Creek in New York, and Wildcat Ridge and Scott's Mountain in New Jersey.

Compared to the last 10 years, **Wildcat Ridge** had average days (22) but below average hours (80), resulting in a mix of above and below average counts. Species that were above average include Black Vulture (17), Turkey Vulture (3), Bald Eagle (10), and Red-shouldered Hawks (5). These were balanced with below average counts for Osprey (2), Sharp-shinned Hawk (15), Cooper's Hawk (6), Broad-winged Hawk (31) and American Kestrel (2). **Alley Creek** counted in its fifth spring season, with record coverage (232 hours). The days (63) of coverage and the time span from Feb 17 to May 23 were the longest in the NorthEast. This resulted in site records for six species and Total Hawks (1071). The six records include Black Vulture (26), Turkey Vulture (406), Osprey (358),

Bald Eagle (140), Red-tailed Hawk (18), and Peregrine Falcon (7). The Black Vulture, Osprey, Bald Eagle, and Peregrine counts were also high for the NorthEast. The Peregrine high is a tie with Plum Island. Notably, the Northern Harrier (4) count was only one third of average even with the extended coverage. **Scott's Mountain** counted 101 hawks on its single day this season, Apr 23. They documented six species, with Broad-winged Hawk (76) being the most prevalent. American Kestrel (8) was above average, providing a little extra zing to the day.

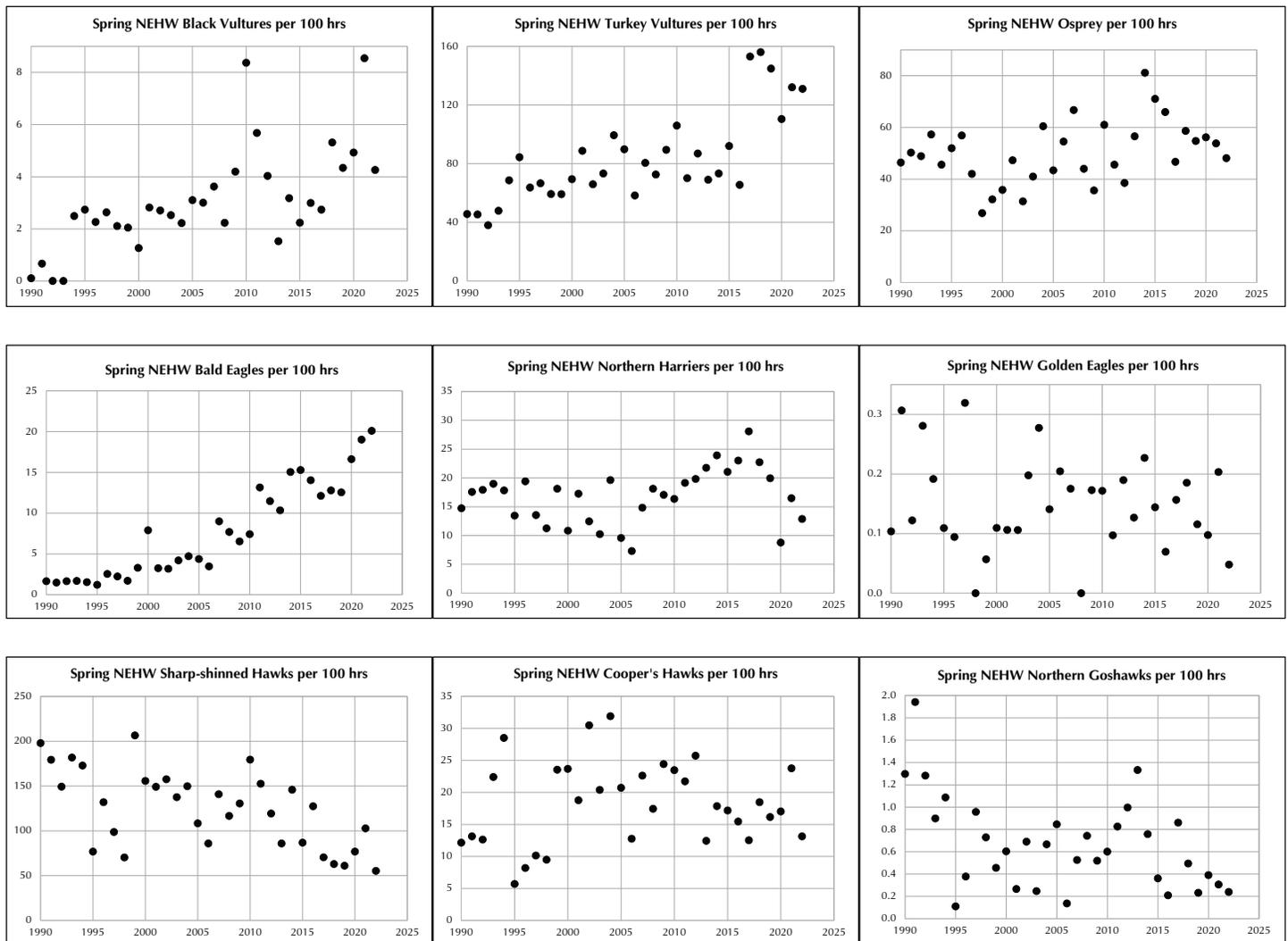
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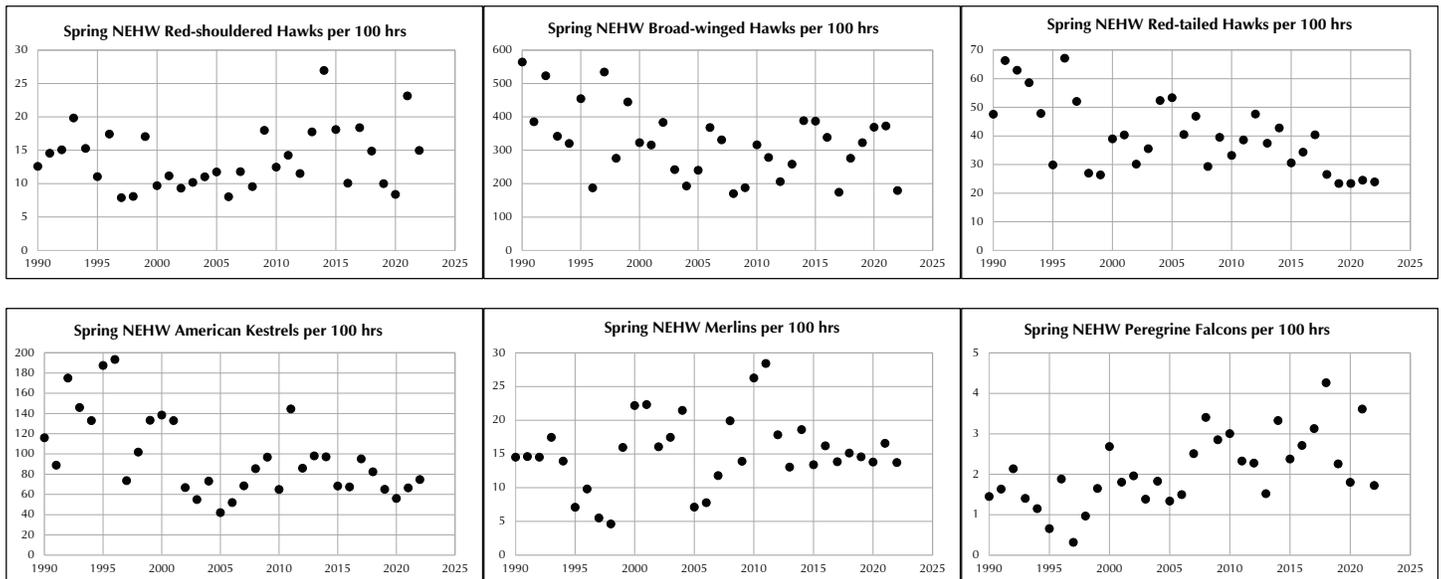
Trends—30 Year History at a Glance

The watchers at our 20 spring sites did a remarkable job this season, providing important data for another year. Do their results support our trends, or do they present changes to those patterns?

Species graphs provide a quick look at the season in comparison to historical trends. Is a species increasing, decreasing, or remaining stable since 1990? The right-most dot on each graph is 2022. Its position tells us how this season compares to other seasons. So, check out your favorite species. Does this season conform to its history, or is it changing course, heading in a new direction?

NEHW Spring Seasons, Trends-at-a-Glance: 1990–2022





The 2022 Count—about average...maybe

The 12635 Total Hawks counted this season is average for both 30 years (13480, -6%) and 10 years (12826, -1%). The 2088 hours, however, are above average for both 30 years (1689, +24%) and 10 years (1647, +27%). This was a season when you put in the extra time needed to get our hawks to average. Thank you, hawk watchers! Your extra effort made a difference.

Analyzing the Data...ties a record low! (phh = per 100 hours)

When comparing this season to other seasons, using hawks per 100 hours (**phh**), we find the Total Hawks (605) this season is far from average. In fact, it is a record low! This low is only slightly less than the 606 Total Hawks phh in 2008 and the 611 in 1998, so it is essentially a tie for record low. Nevertheless, at 24% below the 30-year average and 22% below the 10-year average, this result looks much like the inverse of the above average hours.

Having actual Total Hawks result in a record low for phh Total Hawks seems a stretch and causes some concern for using the phh comparative counts. To ensure that phh is reasonable for analysis, correlations were computed for Total Hawks

NEHW Spring Total Hawks vs:			
	Hours	Sites	Days
r	0.744	0.009	0.781
t	6.197	0.049	3.314
p (1tail)	0.000	0.481	0.006
r²	0.553	0.000	0.611
p (2tails)	0.000	0.962	0.013
n	33	33	9
Years	1990-2022	1990-2022	2014-2022

compared to three measures of effort: hours, number of sites, and days. There are 33 years of data for the hours and number of sites, and 9 years for the number of days (normal by normal probability plot). Both hours ($r=0.744$) and days ($r=0.781$) have strong positive linear correlations with Total Hawks, indicating that these measures of effort are important for comparisons from year to year, and need to be included in analysis.

So, our record low this season is our best representation of the spring 2022 migration. Our dedicated watchers put in the time, providing the data needed to evaluate spring migration patterns.

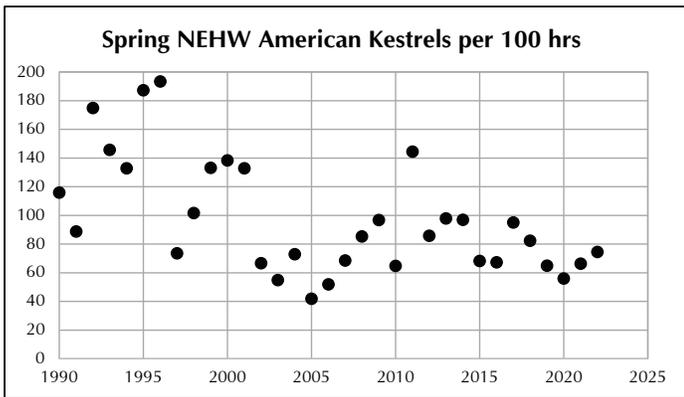
Your time is important in alerting us to record low numbers of hawks. As we look more closely at the species, we can explore the significance of the record low.

Actual counts. This season's actual counts include **record highs** for two species, Turkey Vulture (2736) and Bald Eagle (420). Both of these species have been generally increasing throughout the northeast and commonly seen. Other species with actual counts **above the 10-year average** include Black Vulture (89), Red-shouldered Hawk (313) and American Kestrel (1558). While we have been watching Black Vultures and Red-shoulders gradually increase, having Kestrels above the 10-year average (+23%) is a welcome surprise. Kestrels were also at average (-3%) for our 30-year history. Species that are **at average** include Osprey (1005), Northern Harrier (269), Cooper's Hawk (274), Merlin (287), and Peregrine Falcon (36). Red-tailed Hawk (499) was at the 10-year average, but below the 30-year average. **Below average** species include Sharp-shinned Hawk (1154), Northern Goshawk (5), Broad-winged Hawk (3747), Golden Eagle (1), and Mississippi Kite (1). This was another spring season with no Rough-legged Hawk. Our last year for Rough-leg was 2019 when we counted four.

Standardized counts. When standardized to hawks per 100 hours, counts for four species change relative to average. Red-shouldered Hawk (15.0 phh) goes from above average in actual counts to **average** when standardized, and three species go from average in actual counts to **below average** when standardized—Northern Harrier (12.9 phh), Cooper's Hawk (13.1 phh), and Peregrine Falcon (1.7 phh). These bring the number of below average species from five for actual counts to nine for phh counts. No wonder the season tied record low phh counts for Total Hawks! The species of greatest concern is Sharp-shinned Hawk, with a record low of 55.3 phh this season.

American Kestrel—average and surprisingly stable

It is a relief to see our Kestrels back to average for the long term, and very slightly above average for the short term. A close look at the graph shows that this season had more Kestrels than 13 other



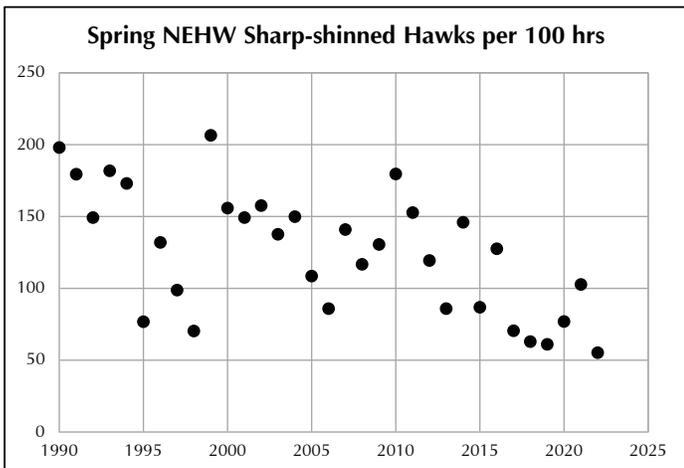
years. Furthermore, with the exception of a high count in 2011 and the record low count in 2005, Kestrels have been relatively stable since 2002, between 50 and 100 phh. That's 20 years of stability. This is especially important, since spring counts represent the adult breeding population. We can breathe a big sigh of relief—our spring Kestrels have stabilized.

Sharp-shinned Hawk—4th record low in 6 years

After two years with increasing counts, our Sharpies have once again hit rock bottom! With successive record low counts from 2017 to 2019, this season's new low of 55.3 phh is particularly worrisome. Sharpie counts for the decade ending in 2016 were randomly dispersed from 80 to 150 phh, seemingly stable. Then came 2017 and the sequence of record lows. Why have they not stabilized like the Kestrels? It is likely the Sharpie decline relates to changes in our northeastern woodland habitats and the passerines that Sharpies rely on for food. In the 2019 NEHW Report an analysis of Sharpie counts and Breeding Bird Survey results notes:

"When comparing the Passerines to our Sharpies, we find a significant positive association ($r = 0.689$, $p=0.0001$), indicating that as the passerines have declined the Sharpies have also. While this is not evidence of cause and effect, it suggests that a decline in Passerines explains about 47% of the Sharpie decline." <http://www.battaly.com/nehw/reports/NEHW2019.pdf> p. 31

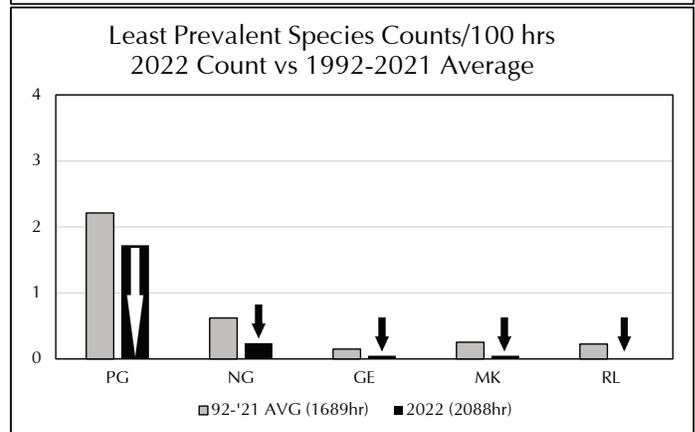
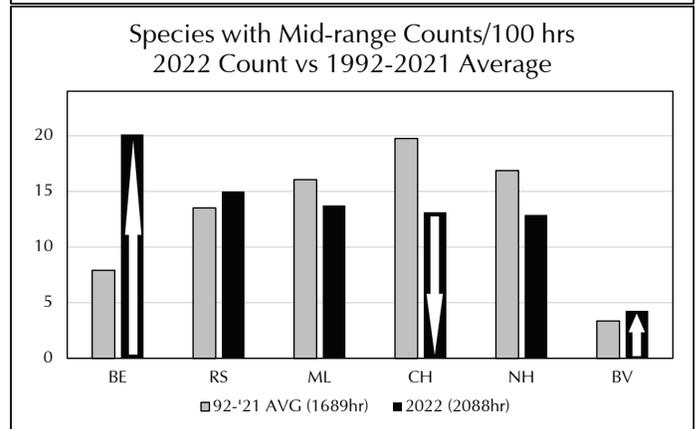
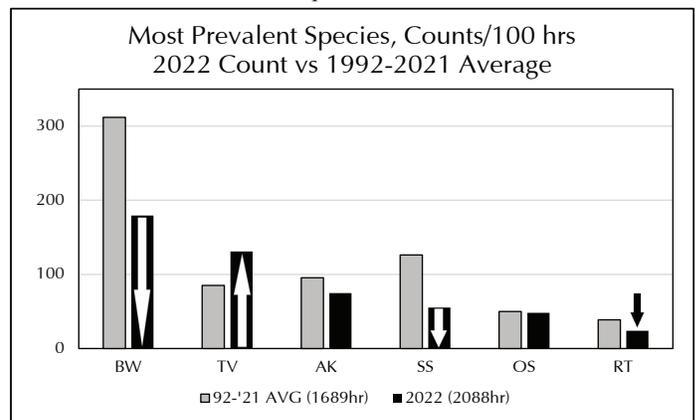
While we may not be able to change this decline, your documentation of its occurrence is important in keeping us aware. Our Sharpies are still in decline. There is still cause for concern.



Species Prevalence—Fewer changes

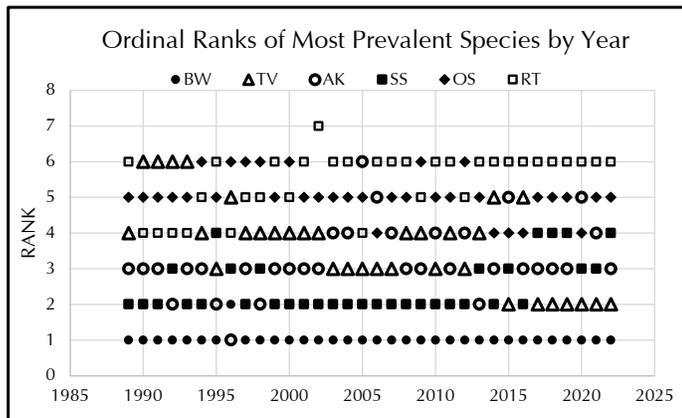
Prevalence charts are included for Most Prevalent, Mid-range, and Least Prevalent species. Above average, at average, and below average species are noted on the charts with up arrows, no arrows, and down arrows, respectively. A species is assumed to be at average when it is within 20% of the 30-year average.

The 2022 shuffle of ranks resulted in fewer changes from 2021 than occurred in last year's counts when we had about 30% more hawks. There were five changes in rank compared to last year's seven, three moving up and two dropping down. Our top ranked changes were American Kestrel (74.6 phh) in 3rd and Sharp-shinned Hawk (55.3 phh) in 4th, switching ranks from 2021. Bald Eagle (20.1 phh) jumped up from 9th to 7th, a big step on its continuing climb up in rank. The third species moving up was Merlin (13.7 phh), now ranked 9th, up from 10th. Finally, the second species dropping rank was Cooper's Hawk (13.1 phh), which dropped from 7th to 10th, a substantial drop.



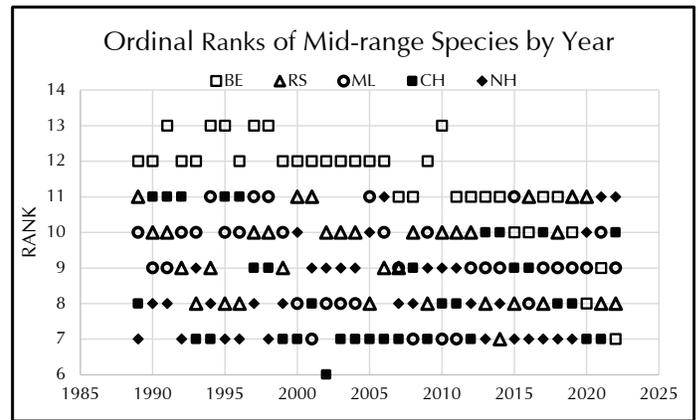
Our most prevalent species include Broad-winged Hawk (179.4 phh), Turkey Vulture (131.0 phh), American Kestrel (74.6 phh), Sharp-shinned Hawks (55.3 phh), Osprey (48.1 phh), and Red-tailed Hawk (23.9 phh). Mid-range species include Bald Eagle (20.1 phh), Red-Shouldered Hawk (15.0 phh), Merlin (13.7 phh), Cooper's Hawk (13.1), Northern Harrier (12.9 phh), and BV (4.3 phh). Least prevalent species include Peregrine Falcon (1.7), Northern Goshawk (0.2 phh), Golden Eagle (<0.0001 phh), MK (<0.0001 phh), and RL (0).

Ordinal Rank Graphs. Prevalence Charts inform us of the species counts for the current year relative to other species and to the average for the species. An Ordinal Rank graph enables us to compare relative abundance of the species over the years. However, reading these graphs is counter intuitive – the species with the most hawks ranks 1st, but 1 is a low number relative to the other 17 ranks. Thus, a graph of ranks seems upside down. Our top rated species are low on the graph. On our Ordinal Ranks of Most Prevalent Species, Broad-winged Hawk (dark circle), our 1st rank species for all years except 1996, are shown as the bottom line of data. Likewise, Red-tailed Hawks (unfilled squares), ranked 6th in most years, is mostly along the top line of data. The graphs for these two species are more or less straight across the years at the same rank; their rank has been relatively stable over the years. While Sharpies (solid square) were relatively stable until 2015, the other Most Prevalent species show such a jumble of ranks that I need my old decoder ring! But, a pattern does emerge. Turkey Vulture (unfilled triangle) moved from 6th in the early 1990s to 4th in the late 1990s, to 3rd before 2005, to 2nd in 2015. Using this year's data, they need another 50 vultures phh to get to 1st rank. That's only one more vulture every two hours! So, watch for vultures to take 1st sometime in the next 10 years.



For the species that changed ranks this season, we see that Kestrels (unfilled circles) ranked 1st in 1996 (Wow!), 2nd a few times over the years, but mostly ranked 3rd or 4th, alternating with Sharpies after they dropped from 2nd in 2015.

The other three species that changed rank were Mid-range. Bald Eagle (unfilled square) ranked 13th and 12th until 2011, then 11th or 10th until 2020, when it switched from 8th to 9th to 7th this season. This recent rapid change suggests that it will soon challenge Redtails for 6th, with only 3 hawks phh more than Bald Eagles this season. Merlin (unfilled circle) fluctuated among 11th, 10th, and



9th until 2012. Since then it has mostly ranked 9th. So, this year's return to 9th is expected. Cooper's Hawk (solid square) fluctuated among ranks 11th to 7th until 2002 when it ranked 6th, then held 7th until 2012 when it returned to random fluctuations from 10th to 7th, landing at 10th this season. Four of these Mid-range species have counts within 2 hawks phh: Red-shoulder, Merlin, Coops, and Harrier. For these species we can expect random changes from year to year. So, this season fits perfectly.

Daily Counts for NEHW Sites, Spring 2022

KERRS RIDGE, Bocabec, NB, CA
Todd Watts

2022	HRS	BV	TV	OS	BE	NH	SS	CHNG	RS	BW	RT	RL	GE	AK	ML	PG	UR	TOTAL	
3/18	0.5	0	2	0	1	0	0	0	0	0	4	0	0	0	0	0	0	7	
3/26	1.5	0	12	0	8	0	0	0	1	0	10	0	0	0	0	0	1	32	
4/9	1	0	0	0	2	0	0	0	1	0	0	0	0	0	1	0	0	4	
4/16	2.5	0	1	3	2	4	5	0	0	83	8	0	0	4	0	1	1	112	
4/17	1.25	0	4	1	0	0	0	0	0	0	1	0	0	0	1	0	0	7	
4/21	1.75	0	0	1	0	0	1	0	1	0	3	0	0	2	0	0	0	8	
5/2	2	0	0	0	2	4	1	0	0	109	1	0	0	8	2	0	3	130	
5/13	1	0	0	0	0	0	1	0	0	0	9	0	0	1	0	0	1	12	
TOTAL	11.5	0	19	5	15	8	8	0	1	2	204	24	0	0	15	4	1	6	312
4YrAv	17	0	16	46	6	20	48	0	1	1	297	14	0	0.3	30	3	2	7	490

COOPER, ME
Karen E. Holmes

2022	HRS	BV	TV	OS	BE	NH	SS	CHNG	RS	BW	RT	RL	GE	AK	ML	PG	UR	TOTAL	
4/3	3.5	0	1	0	0	0	0	1	0	0	0	0	0	0	0	0	0	2	
4/5	6.25	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	
4/6	6.5	0	2	0	1	0	0	0	0	0	0	0	0	1	1	0	0	5	
4/14	2	0	2	2	0	0	0	1	0	0	3	0	0	0	0	0	0	8	
4/17	3	0	1	0	0	0	0	0	0	0	0	0	0	1	1	0	0	3	
4/18	2	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	
4/20	6	0	0	0	4	1	1	0	0	0	0	0	0	0	0	0	0	6	
4/22	6	0	3	0	3	0	1	0	0	0	0	0	0	0	0	0	1	8	
4/24	8	0	1	2	2	0	0	1	0	0	1	0	0	0	0	0	0	7	
4/25	6	0	1	0	0	0	0	1	0	0	1	0	0	0	0	0	0	3	
TOTAL	49.3	0	12	5	10	1	2	4	0	0	2	3	0	2	2	0	1	44	
11YrAv	60.5	0.4	19	3	11	3	5	1	0	0.36	7	1	0	0	3	1	0	3	58

BRADBURY MOUNTAIN, Pownal, ME
Zane Baker, Derek Lovitch, Jeannette Lovitch

2022	HRS	BV	TV	OS	BE	NH	SS	CHNG	RS	BW	RT	RL	GE	AK	ML	PG	UR	TOTAL
3/15	8	0	31	0	23	0	1	4	1	7	0	8	0	0	0	0	1	77
3/16	8	0	10	0	6	3	4	2	0	19	0	27	0	0	0	0	0	71
3/17	8	0	19	0	3	2	3	1	0	16	0	16	0	1	1	1	0	63
3/18	8	0	7	0	5	0	4	2	0	16	0	20	0	1	0	0	2	57
3/20	8	0	47	0	7	4	2	3	0	15	0	6	0	4	3	0	0	91
3/21	8	0	1	0	0	0	2	0	0	1	0	1	0	0	0	0	0	5
3/22	8	0	5	0	1	1	1	0	0	3	0	0	0	1	0	0	0	12
3/23	8	0	8	0	3	2	0	1	0	5	0	5	0	1	0	0	0	25
3/25	8	0	11	0	6	1	7	2	0	7	0	2	0	0	0	1	0	37
3/26	8	0	30	0	4	0	5	2	1	3	0	15	0	1	0	0	0	61
3/27	8	0	9	0	1	2	0	0	0	2	0	0	0	0	0	0	0	14
3/28	8	0	1	0	1	0	1	0	0	0	0	0	0	1	0	0	0	4
3/29	8	0	3	0	0	0	0	0	0	0	0	1	0	0	0	0	0	4
3/30	8	0	3	1	0	0	0	0	0	0	0	0	0	0	0	0	0	4
3/31	8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4/1	4.6	0	45	4	0	7	0	0	0	0	0	0	0	0	0	0	0	56
4/2	8	0	2	2	1	2	1	0	0	2	0	1	0	1	1	0	0	13
4/3	8	0	48	4	0	6	6	1	0	3	0	6	0	4	1	0	0	79
4/4	8	0	1	1	3	2	3	2	0	1	0	1	0	0	0	0	1	15
4/5	8	0	90	13	3	4	13	2	0	6	0	8	0	11	0	0	1	151

Continued on next page . . .

HEAD OF THE MEADOW BEACH, North Truro, MA
Donald Manchester, Maryellen Stone, Bob Stone, Michael Brokenshire

2022	HRS	BV	TV	OS	BE	NH	SS	CHNG	RS	BW	RT	RL	GE	AK	ML	PG	UR	TOTAL
4/26	6	0	12	4	0	1	1	0	0	3	2	0	0	10	0	0	0	33
4/27	6	0	7	0	0	4	0	0	0	0	0	0	0	13	6	0	0	30
4/29	6	0	7	4	0	1	4	1	0	3	0	0	0	0	4	0	0	24
4/30	7	1	21	2	0	2	1	1	0	0	0	0	0	7	2	0	1	38
5/1	6	0	13	5	0	0	2	1	0	0	3	0	0	2	3	0	0	29
5/2	5	0	11	10	0	0	0	1	0	0	3	0	0	0	0	0	1	26
5/3	5	0	9	0	0	0	0	0	0	0	1	0	0	0	0	0	0	10
5/5	6	0	15	2	0	1	1	0	0	0	0	0	0	0	5	1	0	25
5/6	6	0	23	2	0	0	3	0	0	0	5	0	0	0	1	1	1	36
5/10	3	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3
5/14	6	0	31	4	0	1	4	2	0	15	2	0	0	4	3	0	0	66
5/15	6	2	19	2	1	0	0	0	0	1	5	3	0	0	0	0	1	34
5/16	5	0	9	2	1	0	1	0	0	0	0	0	0	2	4	1	0	24
5/17	6	1	40	13	0	0	3	0	0	28	7	0	0	1	2	1	2	98
5/18	7	0	12	6	0	2	0	0	0	1	4	0	0	1	7	0	0	34
5/20	6	0	17	3	0	0	2	0	0	3	4	0	0	0	1	0	0	30
5/21	6.5	0	10	5	0	0	0	0	0	4	3	0	0	0	0	0	1	23
5/22	7	0	20	18	0	1	3	0	0	3	2	0	0	0	4	0	2	53
5/23	5	0	5	4	0	0	0	0	0	0	0	0	0	0	0	0	1	10
5/25	6	0	5	1	0	0	0	0	0	2	2	0	0	0	0	0	0	10
5/26	5	0	11	0	0	0	0	0	0	0	1	0	0	0	0	0	0	12
5/29	5	0	4	0	0	0	0	0	0	0	1	0	0	0	0	0	0	5
5/30	4	0	22	6	1	0	0	0	0	15	1	0	0	0	0	0	0	45
6/4	4	0	9	0	1	0	0	0	0	0	3	0	0	0	0	0	2	15
6/5	5	0	3	1	0	0	0	0	0	1	2	0	0	0	0	0	0	7
6/7	6	0	34	7	0	0	0	0	0	1	4	0	0	0	0	1	1	48
6/10	6	0	32	6	0	0	0	0	0	4	4	0	0	0	0	0	0	46
6/11	5	0	12	0	0	0	0	0	0	2	1	0	0	0	0	0	0	15
6/20	5	0	5	2	0	0	0	0	0	0	0	0	0	0	0	0	0	7
6/25	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL	249	4	633	129	4	21	45	16	0	2	98	92	0	113	58	5	22	1243
2YrAv	224	4	802	167	23	27	133	67	0	8	169	67	0	94	46	9	32	1647

*1 Mississippi Kite, 5/18

POQUONOCK, Poquonock, CT

Joseph Wojtanowski

2022	HRS	BV	TV	OS	BE	NH	SS	CHNG	RS	BW	RT	RL	GE	AK	ML	PG	UR	TOTAL
3/18	1.75	0	1	0	0	0	0	0	0	0	2	0	0	0	0	0	0	3
3/20	4.25	0	6	0	1	0	0	2	0	0	4	0	0	0	0	0	1	14
3/21	5.75	0	0	0	0	0	0	1	0	0	0	4	0	0	0	0	0	5
3/22	4.75	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3/23	4	0	5	0	1	0	0	0	0	0	2	0	0	0	0	0	0	8
3/25	5.25	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
3/26	4.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3/27	6.25	0	6	0	0	0	0	1	0	0	0	1	0	0	0	0	0	8
3/28	1.75	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3/29	3	0	7	0	0	0	0	1	0	0	0	0	0	0	0	0	1	9
3/31	1.5	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
4/1	3.7	0	16	1	0	0	0	0	0	0	0	0	0	1	0	0	0	18
4/2	6.2	0	7	0	0	0	0	0	0	0	2	0	0	1	0	0	0	10
4/3	2.92	0	6	0	0	0	0	0	0	0	1	0	0	0	0	0	0	7
4/4	6.22	0	10	1	0	0	0	2	0	0	13	0	0	0	0	0	0	26
4/5	4.58	0	0	1	1	0	0	1	0	0	2	0	0	0	0	0	0	5
4/7	1.8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4/10	5.62	0	2	2	1	0	0	0	0	1	2	1	0	0	0	0	0	9
4/11	2.9	0	1	1	0	0	1	0	0	0	0	0	0	1	0	0	0	4
4/12	3.53	0	1	1	0	0	1	0	0	0	3	0	0	1	0	0	2	9
4/13	1.53	0	0	0	0	0	1	0	0	0	3	0	0	0	0	0	0	4
4/14	6.08	0	1	2	2	0	0	0	0	5	5	0	0	3	0	0	3	21
4/15	4.6	0	1	0	0	0	1	0	0	0	2	0	0	0	0	0	0	4
4/16	3.68	1	4	2	0	0	0	0	0	6	0	0	0	0	0	0	0	13
4/17	5.88	0	3	2	0	0	0	0	0	0	2	0	0	0	0	0	1	8
4/18	6	2	4	3	0	0	1	0	0	0	0	0	0	0	0	0	0	10
4/19	2.8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1
4/20	5.42	0	1	0	0	0	0	0	0	2	0	0	0	0	0	0	1	4
4/21	2.45	0	1	0	0	0	1	0	0	0	0	0	0	0	1	0	0	3
4/22	7.02	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1	2
4/23	1.08	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1	2
4/24	3.15	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	2
4/27	2.52	0	0	0	0	0	0	0	0	10	0	0	0	0	0	0	0	10
4/28	2.82	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5/1	2.33	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1
5/5	4.58	0	2	0	0	0	0	0	0	2	2	0	0	1	0	0	1	8
5/6	1.25	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1
5/8	3.13	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	2
5/10	1.55	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	2
5/11	1.08	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
5/13	0.52	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1
TOTAL	150	3	92	19	6	0	6	8	0	2	35	43	0	9	1	0	14	238
7YrAv	108	7	58	20	9	3	20	8	0	8	125	35	0	9	2	1	6	315.1

JOHNNYCAKE MOUNTAIN, Burlington, CT

Kenneth Merrifield, Dana Campbell

2022	HRS	BV	TV	OS	BE	NH	SS	CHNG	RS	BW	RT	RL	GE	AK	ML	PG	UR	TOTAL
4/11	2.5	0	6	2	0	0	0	3	0	2	2	4	0	1	0	0	0	20
4/13	3	1	5	1	2	0	1	3	0	2	1	5	0	0	0	0	3	24
4/15	3	0	4	0	1	0	0	3	0	1	5	0	0	0	0	0	5	19
4/16	3	0	7	0	2	0	1	1	0	2	2	5	0	1	0	0	0	21
4/20	4	0	2	0	0	0	0	1	0	1	0	0	0	0	0	0	2	6
4/21	5	1	7	1	4	0	0	1	0	2	10	3	0	0	0	0	1	30
4/23	4.5	0	3	1	4	1	0	2	0	11	6	0	0	1	0	0	2	31
4/25	3	0	4	0	3	0	0	1	0	0	3	0	0	0	0	0	2	13
4/30	3.5	0	11	1	2	0	0	2	0	1	23	8	0	0	0	0	1	49
TOTAL	31.5	2	49	6	18	1	2	17	0	10	50	39	0	3	0	0	16	213
8YrAv	22	5	8	12	11	1	11	10	0	1	221	15	1	0	0	0	1	309

I-84 OVERLOOK, Greenville, NY

Ajit Antony, Liza Antony

2022	HRS	BV	TV	OS	BE	NH	SS	CHNG	RS	BW	RT	RL	GE	AK	ML	PG	UR	TOTAL
2/16	4.5	0</																

WILDCAT RIDGE, Hibernia, NJ
Frank Budney, Tim Vogel, Mike Leone

2022	HRS	BV	TV	OS	BE	NH	SS	CHNG	RS	BW	RT	RL	GE	AK	ML	PG	UR	TOTAL
3/2	3	0	0	0	0	0	0	0	2	0	1	0	0	0	0	0	0	3
3/4	3	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1
3/6	2.5	0	0	0	1	0	1	3	0	1	0	7	0	0	0	0	1	14
3/7	2	0	3	0	1	0	0	0	1	0	2	0	1	0	0	0	0	8
3/8	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3/11	3	1	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	3
3/15	4	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1
3/20	2.25	0	0	0	0	1	2	2	0	0	0	1	0	0	0	0	0	6
3/21	6.5	1	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1	3
3/29	2.5	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1
3/30	4	5	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	6
4/4	4	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	1	3
4/12	2.5	0	0	0	1	0	0	0	0	0	3	1	0	0	0	0	0	5
4/13	5.5	3	0	2	2	0	5	1	0	0	14	5	0	0	2	0	2	36
4/15	3	3	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1	5
4/18	4	0	0	0	0	0	0	0	1	3	2	0	0	0	0	0	1	7
4/21	5	2	0	0	0	0	3	0	0	5	0	0	0	0	0	0	0	10
4/25	4.5	1	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1	3
4/29	3.5	0	0	0	2	0	2	0	0	0	1	0	0	0	0	0	1	6
4/30	4.5	0	0	0	1	0	1	0	0	3	0	0	0	0	0	0	3	8
5/5	4.5	0	0	0	1	0	0	0	0	1	0	0	0	0	0	0	1	3
5/10	4	1	0	0	1	0	0	0	0	1	0	0	0	0	0	0	1	4
TOTAL	79.8	17	3	2	10	1	15	6	0	5	31	28	0	2	2	0	14	136
20YrAv	177	9	12	34	8	5	79	21	0	9	360	55	0	20	1	1	11	626

ALLEY CREEK, Queens, NY
Steve Walter

2022	HRS	BV	TV	OS	BE	NH	SS	CHNG	RS	BW	RT	RL	GE	AK	ML	PG	UR	TOTAL
2/17	1.5	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
2/18	2	4	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	7
2/19	2	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
2/21	3	0	4	0	1	0	0	0	0	0	0	0	0	0	0	0	0	5
2/23	4	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
2/26	3	0	3	0	2	0	0	0	0	0	0	0	0	0	0	0	0	5
2/27	2.5	2	2	0	1	0	0	0	0	0	0	0	0	0	0	0	0	5
2/28	2.5	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
3/2	4	0	4	1	2	0	2	0	0	0	1	0	0	1	0	0	0	11
3/3	3	0	4	0	3	0	0	0	0	0	0	0	0	0	0	0	0	7
3/4	2.5	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
3/5	2.5	0	5	0	3	0	0	2	0	0	1	0	0	0	0	0	0	11
3/6	2	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	2
3/7	3.5	0	5	0	1	0	1	0	0	0	0	0	0	0	0	0	0	7
3/8	3	0	0	0	3	0	0	0	0	0	2	0	0	1	0	0	0	6
3/10	3	0	3	0	0	0	0	2	0	0	0	0	0	1	0	0	0	6
3/11	3.5	0	6	0	1	0	1	0	0	0	2	0	0	0	0	0	0	10
3/13	2.5	0	1	0	2	0	0	0	0	0	0	0	0	0	0	0	0	3
3/14	4.5	0	4	0	6	0	1	0	0	0	0	0	0	0	0	0	0	11
3/15	3.5	1	4	3	3	0	1	3	0	0	2	0	0	0	0	0	0	17
3/16	4	0	2	3	3	0	0	0	0	0	0	0	0	1	0	0	0	9
3/18	3.5	0	2	1	0	0	0	2	0	0	0	0	0	0	0	0	0	5

ALLEY CREEK, Queens, NY
Steve Walter

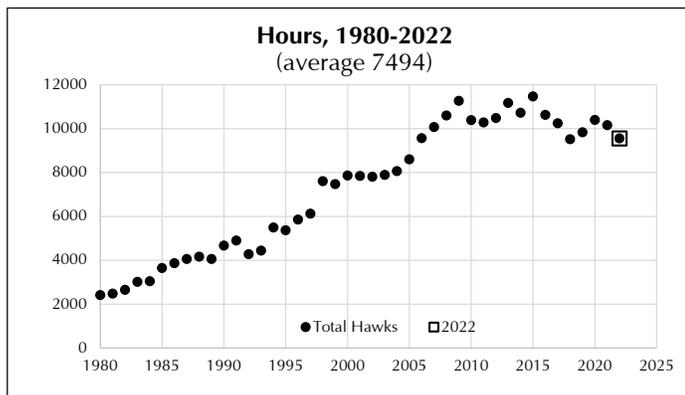
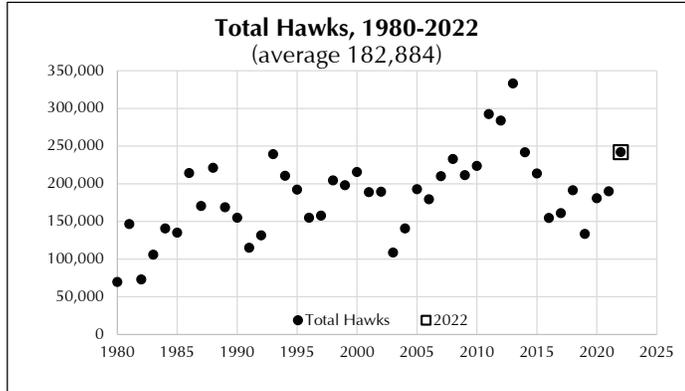
2022	HRS	BV	TV	OS	BE	NH	SS	CHNG	RS	BW	RT	RL	GE	AK	ML	PG	UR	TOTAL	
3/19	3	0	0	2	1	0	0	0	0	0	0	0	0	0	0	1	0	4	
3/20	3.5	0	5	5	5	0	0	0	0	0	0	0	0	0	0	0	0	15	
3/21	4.5	1	38	4	5	0	0	0	0	0	0	0	0	0	0	0	0	48	
3/22	5.5	0	49	5	9	0	1	3	0	0	1	0	0	0	0	0	0	68	
3/23	3	0	1	3	0	0	1	1	0	0	0	0	0	0	0	0	0	6	
3/25	4.5	0	0	3	4	0	1	1	0	0	2	0	0	0	0	3	0	14	
3/26	6	0	30	20	10	0	4	0	0	0	0	0	0	0	1	1	0	66	
3/27	4.5	0	30	4	3	0	0	1	0	0	0	0	0	0	1	0	0	39	
3/28	3.5	0	2	6	3	0	0	0	0	0	0	0	0	0	0	0	0	11	
3/29	2.5	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	
3/30	5.5	1	6	13	4	0	1	2	0	0	1	0	0	0	0	0	0	28	
3/31	4.5	0	2	13	0	0	1	0	0	0	0	0	0	0	1	0	0	17	
4/1	5	0	1	18	3	0	0	1	0	0	0	0	0	1	0	0	0	24	
4/2	5.5	0	20	7	4	0	0	1	0	0	0	2	0	1	0	0	0	35	
4/3	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	
4/4	7	2	45	44	10	1	1	1	0	0	1	0	0	1	0	1	0	107	
4/5	4	0	1	10	2	0	2	1	0	0	0	0	0	0	0	0	0	16	
4/8	6	2	8	15	4	0	1	2	0	0	0	0	0	0	2	0	1	35	
4/9	5.5	2	7	30	4	0	0	1	0	0	0	0	0	2	0	0	0	46	
4/10	4	2	1	6	1	0	0	1	0	0	0	0	0	0	0	0	0	11	
4/11	5	0	5	20	0	0	3	0	0	0	0	0	0	0	0	0	0	28	
4/12	4.5	1	13	7	1	0	1	2	0	0	0	0	0	4	0	0	1	30	
4/13	4.5	2	0	15	3	0	0	2	0	0	0	0	0	0	1	0	0	23	
4/14	6.5	2	39	40	7	1	1	3	0	0	0	1	0	9	1	0	0	104	
4/15	5	0	4	6	4	0	0	0	0	0	0	0	0	0	1	0	0	15	
4/16	4.5	0	3	5	1	0	1	0	0	0	0	0	0	0	2	0	0	12	
4/19	3	0	0	2	0	0	0	0	0	0	0	1	0	0	0	0	0	3	
4/20	4.5	0	3	4	0	0	0	1	0	0	0	1	0	0	0	0	0	9	
4/21	4.5	4	0	7	3	1	0	0	0	0	0	0	0	0	1	0	0	16	
4/22	4	0	7	2	1	0	0	0	0	0	0	0	0	0	0	0	0	10	
4/23	4.5	0	0	10	2	0	0	0	0	0	0	0	0	1	0	0	0	13	
4/27	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	
4/28	2.5	0	0	1	1	0	0	0	0	0	0	0	0	1	0	0	0	3	
4/29	3.5	0	3	1	3	0	0	0	0	0	0	0	0	0	0	0	0	7	
4/30	6.5	0	15	8	1	0	1	0	0	0	0	0	0	2	1	0	0	28	
5/3	3	0	0	8	0	0	0	2	0	0	0	0	0	3	1	1	0	15	
5/5	5	0	12	6	2	0	0	0	0	0	0	0	0	0	0	0	2	22	
5/9	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	
5/10	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	
5/18	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1	
5/23	1	0	4	0	0	0	0	0	0	0	1	0	0	0	0	0	0	5	
TOTAL	232	26	406	358	140	4	26	35	0	0	1	18	0	0	27	18	7	5	1071
4YrAv	151	8	257	149	44	13	32	23	0	2	3	7	0	0	26	14	5	1	584

SCOTT'S MOUNTAIN, MCR Harmony TWP. NJ
Paul Murray, Henry F. Kielblock, Mark Burton, Ron Constable

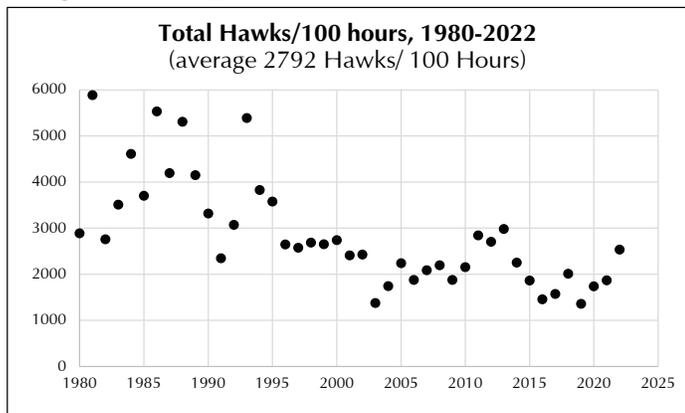
2022	HRS	BV	TV	OS	BE	NH	SS	CHNG	RS	BW	RT	RL	GE	AK	ML	PG	UR	TOTAL	
4/23	7.25	0	0	6	0	0	4	2	0	0	76	5	0	0	8	0	0	0	101
TOTAL	<																		

Fall 2022—Back to the turn of the millennium! Three cheers to our counters!

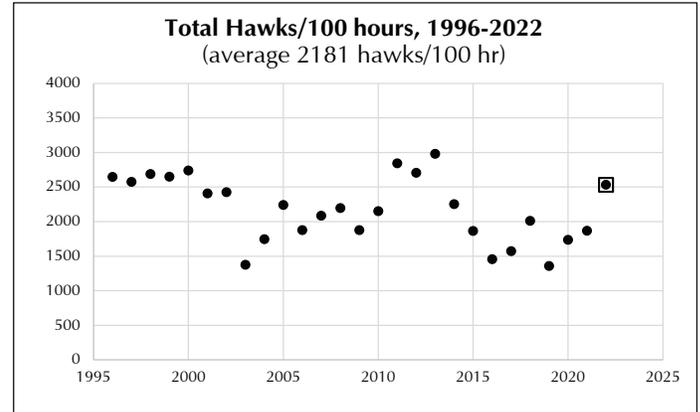
Hawk watchers at 40 sites counted a remarkable 242,304 hawks across the NorthEast during our Fall 2022 season. This was our best fall count since 2013, and our 4th highest count since 1980! Three other years had more hawks: 2013 with 333394, 2011 with 292686, and 2012 with 283918. Those years also had more hours of coverage than 2022, making this a year of accomplishment for our hawk watchers! Thank you for your eyes to the skies and your hours of dedication!



From the two graphs, Total Hawks and Hours, we can see that as your hours of watching increased over the years, so did the hawks. Accounting for hours of effort, we next view the Total Hawks/100 Hours (PHH) and see a declining trend. So, while we were collectively counting more hawks in recent years, we were actually seeing fewer hawks per hour than watchers in the 1980s and '90s.



Notice that the Total Hawks PHH graph shows different patterns before and after 1996. There is more variation in the Hawks PHH from 1980 to 1995 ($s=1075.4$) than there is in the Hawks PHH from 1996 to 2022 ($s=472.0$). We see this in the amount of scatter in the points. I suspect this difference marks the beginning of West Nile Virus in our raptor populations. See the Kestrel video at www.battaly.com/fire/trends which shows the sudden decline in Kestrels in 1995.



This difference in variation requires us to look at these date ranges separately. When we do that, we find that Total Hawks PHH is still declining, but at a lower rate, and that our 2535 Hawks PHH this season is near the highest counts. 2011, 2012, and 2013 remain the highest counts, but are joined by five counts in the late 1990s. So, 2022 marks the return of the NorthEast to Total Hawks PHH above 2500. Very nice! Three cheers to our counters! We're back to the hawk numbers at the turn of the millennium!

Hawk Watch Sites

Having our Total Hawks PHH return to the counts of the 1990s is good news, especially since we have five fewer sites this year compared to last year. There were 40 hawk watch sites reporting this season compared to 45 in 2021. There were six sites that did not count in 2022: Sandwich Central in New Hampshire, Killington Mt. in Vermont, Southwick WMA in Massachusetts, Poquonock and Middle School in Connecticut, and I-84 in New York. One site, Helderberg, counted but the data was not available on time for analysis. We miss the 458 hours of data contributed by these sites in 2021, and look forward to their return in the coming years.

We welcome two new watch sites, Alton Bay in New Hampshire and East St. Adams in Massachusetts. These sites are both very well located to fill in areas not otherwise sampled for hawks. Alton Bay Hawk Watch is "located at the top of Pine Mountain, a bald hill with wide views to the north, west, and south, with an elevation of 1,400 feet." (hawkcount.org). It is closer to the coast than other sites in New Hampshire and will help us fill the western portion of the coastal void lost when Harpswell Peninsula closed. East St. Adams is a backyard watch in Adams MA "conducted from the backyard facing slightly northeast, looking down the valley with the Mt. Greylock massif to the west and the Hoosac Range to the east." (hawkcount.org). This site becomes the sole site sampling the northwest corner of Massachusetts. It is closest to Helderberg

in NY, 45 miles to the west, and Putney Mountain in VT, 36 miles to the northeast.

The sites are organized based on degrees latitude, with Regions 40 to 45, plus a southern coastal region, CO. Each region includes all sites with latitudes within that one-degree block. For these discussions, site records refer to new high counts compared to all the data we have for the site, but averages refer to the last 10 years at each site. Above average counts refer to those that were at least 20% higher than average, while below average refers to those that were at least 20% lower than average. Counts within the range of +/- 20% are considered average.

Region 45

3% of hawks, 3% of XBV*, 20 hawks/hour, 121 hawks/day, 26 XBV/day, 4% of hours. [*Note: XBV=Hawks without Broadwings and both vultures]

Region 45 includes Greenlaw Mountain in New Brunswick and Cooper in Maine. This region counted 3% of the hawks in the NorthEast in 4% of the hours, averaging 121 hawks/day, 20 hawks/hour, and 26 XBV/day.

Greenlaw Mountain had an above average year for most species and for Total Hawks (7660), with site records for two species, Bald Eagle (258) and Peregrine Falcon (34). Their two Rough-legged Hawks tied Clarry Hill for the NorthEast high, and their Black Vulture (1) was their second historically. Other species above average include Northern Goshawk (21) which just missed the NorthEast high, Turkey Vulture (450), Northern Harrier (101), Coopers Hawk (15), Red-shouldered Hawk (7), and Broad-winged Hawk (5585). Notably, Sharp-shinned Hawk (579) and American Kestrel (153) were at average. **Cooper** continued to increase coverage, resulting in above average counts for all species counted. It had record high counts for Osprey (7), Bald Eagle (23), Sharp-shinned Hawk (13), Merlin (8), and Total Hawks (126). The most prevalent species were Turkey Vulture (43) and Broad-winged Hawk (22).

Region 44

8% of hawks, 7% of XBV*, 34 hawks/hour, 183 hawks/day, 41 XBV/day, 6% of hours.

Region 44 includes Cadillac Mountain and Clarry Hill in Maine; and Mount Philo in Vermont. This region counted 8% of the hawks in the NorthEast in 6% of the hours, averaging 183 hawks/day and 34 hawks/hour, both of which were highest among the regions. The 41 XBV/day has remained about the same since 2019.

Cadillac Mountain had average coverage, yet achieved above average counts for four species: Bald Eagle (133), Sharp-shinned Hawk (988), Broad-winged Hawk (1013), and Red-tailed Hawk (48). The species at average were Turkey Vulture (100), Osprey (141), Northern Harrier (80), Red-shouldered Hawk (1), and Merlin (55). All other species were below average. **Mt. Philo** counted for its 5th year, and celebrated with their first Golden Eagle and a record high American Kestrel (60) count. Osprey (30) and Sharp-shinned Hawk (43) were also above average, and Bald Eagle (76) was at average. Other species were below average.

Clarry Hill, in its 12th season, continued their tradition since 2015 of counting the NorthEast high for Bald Eagle (407). It also tallied 2 Rough-legged Hawks for a second NorthEast high, tying Greenlaw Mountain; and their Red-shouldered Hawks (83) were a site record. Although Coopers Hawk (39) and all three falcons were below average, all other species were at average.

Region 43

4% of hawks, 5% of XBV*, 12 hawks/hour, 82 hawks/day, 26 XBV/day, 8% of hours

Region 43 includes Interlakes School, Alton Bay, and Concord School in New Hampshire, and Mt. Ascutney State Park and Putney Mountain in Vermont. This region counted 4% of the hawks of the NorthEast in 8% of the hours, averaging 82 hawks/day, which was only one fourth that in 2021. The region also counted 5% of XBV, averaging 26 XBV/day, and 12 hawks/hour, also one fourth that in 2021.

Not as spectacular as their 2021 season, **Interlakes School** had a good 2022 season. They compensated for the absence of Swainson's Hawk with above average counts for six species: Bald Eagle (10), Northern Harrier (1), Sharp-shinned Hawk (33), Cooper's Hawk (3), American Kestrel (8), and Merlin (2). Their Turkey Vultures (18) were at average, but their Broad-winged Hawks (256) were below average, resulting in below average Total Hawks (335). With two days of coverage, they counted 28 hawks/hour. Although this is our first report for **Alton Bay**, there were counts at the site since 2020. Over these three years, days and hours have increased and counts for several species have increased as well. For this season they counted 13 species in 101 hours. Ten species had new high counts this season: Black Vulture (2), Turkey Vulture (71), Bald Eagle (25), Northern Harrier (5), Sharp-shinned Hawk (149), Red-shouldered Hawk (3), Red-tailed Hawk (39), American Kestrel (19), Merlin (12), and Peregrine Falcon (3). **Mt. Ascutney** also counted for its 3rd year. With 66 hours this season, they counted nine species, the most prevalent of which were Broad-winged Hawk (133), Cooper's Hawk (26), and Bald Eagle (13). They added four species this season: Osprey (4), Northern Harrier (5), American Kestrel (5), and Merlin (9). **Concord School** had an above average year, with site records for Broad-winged Hawk (252), American Kestrel (3), Merlin (2), and Total Hawks (333). The Merlin were their first in 12 years of counting, and the Broadwing and Total Hawk counts were triple their average. Other species with above average counts include Osprey (2), Bald Eagle (2), and Red-tailed Hawk (10). With average coverage **Putney Mountain** had a season of mixed counts. They counted 13 Northern Goshawks, 10 Golden Eagles, and had a site record of 10 Black Vultures. They also had above average counts for Bald Eagle (173), Red-shouldered Hawk (52), and Peregrine Falcon (41). Of the remaining species, six were at average: Turkey Vulture (385), Northern Harrier (71), Sharp-shinned Hawk (1352), Cooper's Hawk (103), American Kestrel (157), and Merlin (53). All other species and Total Hawks were below average.

Region 42

23% of hawks, 11% of XBV*, 29 hawks/hour, 167 hawks/day, 21 XBV/day, 20% of hours.

Region 42 includes Pack Monadnock in New Hampshire, Booth Hill in Connecticut, and eight sites in Massachusetts— Mount Watatic, East St. Adams, Wachusett Mountain, Pinnacle Rock, Barre Falls, Mount Holyoke, Shatterack Mountain, and Blueberry Hill. This region counted 23% of the hawks of the NorthEast in 20% of the hours, averaging 167 hawks/day and 29 hawks/hour. These averages are well below those in 2021. Region 42 also counted 11% of XBV and averaged 21 XBV/day, similar to last year.

Pack Monadnock had average effort (553 hr) and Total Hawks (12370), achieved by a mix of above and below average species. Their Northern Goshawks (22) were the NorthEast high for the 6th time in the last eight years. Their Red-shouldered Hawks (301) were a site record, at double their average, and they also tallied Black Vulture (1) for a second year. Other species that were above average included Turkey Vulture (493), Bald Eagle (210), Golden Eagle (11), and Merlin (130). There were two below average species, Osprey (137) and Sharp-shinned Hawk (886). All other species were at average. **Mount Watatic** had an above average year for most species, including Northern Goshawk (1) and Golden Eagle (1), and counted Black Vulture (2) for a third season. They doubled their average counts for Bald Eagle (110), Broad-winged Hawk (8745) and Total Hawks (9332). Other species that were above average included Turkey Vulture (44), Northern Harrier (12), Sharp-shinned Hawk (232), and Cooper's Hawk (46). Two species were below average: Red-tailed Hawk (4) and Merlin (8). All other species were at average. For their second year of Fall counting at **East St. Adams**, effort increased from 45 to 86 hours, with good results. This season brought their first Golden Eagle! They documented 12 species with the following two-year averages: Osprey (7), Bald Eagle (29), Northern Harrier (0.5), Sharp-shinned Hawk (46), Cooper's Hawk (5), Red-shouldered Hawk (0.5), Broad-winged Hawk (2416), Red-tailed Hawk (6), American Kestrel (7), Merlin (4), and Peregrine Falcon (1.5), along with Total Hawks (2548).

With continuing above average effort, **Wachusett** had above average counts for all but two species. They counted one of the five Rough-legged Hawks in the NorthEast, and five Golden Eagles, a site record. There were four additional site records: Turkey Vulture (1078), Bald Eagle (303), Cooper's Hawk (207), and Red-shouldered Hawk (125). The Northern Harrier (52) and Red-tailed Hawk (193) counts were double the average. The only two species that were not above average were American Kestrel (149) and Peregrine Falcon (26), which were both at average. All other species were above, but less than doubled, average. **Pinnacle Rock** had a record effort and were rewarded with above average counts across all species, and their first Golden Eagle in 7 years! They had site records for Total Hawks (697) and for four species: Bald Eagle (27), Cooper's Hawk (77), Broad-winged Hawk (139), and Red-tailed Hawk (61). Species that were double their average included Turkey Vulture (27), Sharp-shinned Hawk (222), and

American Kestrel (25). All other species were above, but less than doubled, average. **Barre Falls** had record low coverage, resulting in record low counts for a number of species. Nevertheless, they added a Northern Goshawk (1) to our NorthEast count and had more Broad-winged Hawks (1916) than counted in the last four years.

Mount Holyoke counted for a third consecutive year, after a period of 11 years with no counts. For the three years, they documented 12 species and averaged 10 hours. The most prevalent species and their 3-year average include Broad-winged Hawk (799), Sharp-shinned Hawk (11), Turkey Vulture (10), Red-tailed Hawk (8), and Bald Eagle (7). It is encouraging to see an historic site returning to our count. **Shatterack Mountain** had average effort and an average Total Hawks (3584) that resulted from three above average species balancing five below average species. The above average species included Turkey Vulture (294), Osprey (56), and Red-shouldered Hawk (32). The below average species were Bald Eagle (17), Sharp-shinned Hawk (242), Red-tailed Hawk (23), American Kestrel (30), and Peregrine Falcon (5). All other species, including Broad-winged Hawk (2813), were at average. **Blueberry Hill** had above average effort with above average Total Hawks (4335), resulting from above average Broad-winged Hawks (3238). Six other species were above average: Turkey Vulture (532), Bald Eagle (30), Northern Harrier (34), Red-shouldered Hawk (41), Merlin (27) and Peregrine Falcon (7). Four species were below average: Osprey (45), Cooper's Hawk (27), Red-tailed Hawk (23), and American Kestrel (73). Sharp-shinned Hawk (240) was at average. **Booth Hill** had a record effort this season which resulted in four site records. They documented the first Black Vulture (1) since beginning in 1993, and record counts for three other species: Turkey Vulture (75), Red-shouldered Hawk (6), and Red-tailed Hawk (8). Bald Eagle (13) was also above average, while both Osprey (3) and Sharp-shinned Hawk (9) were below average. Total Hawks (364) were below average, influenced by below average Broad-winged Hawk (238).

Region 41

36% of hawks, 37% of XBV*, 29 hawks/hour, 181 hawks/day, 48 XBV/day, 31% of hours.

Region 41 has 11 sites, five in Connecticut, five in New York, and one in New Jersey. The Connecticut sites include Johnnycake, Chestnut Hill, Botsford Hill, Maltby Lakes, and Quaker Ridge. The New York sites include Mohonk, Bear Mountain, Mount Peter, Chestnut Ridge, and Hook Mountain. The single New Jersey site is Purple Chickadee. This region counted 36% of the hawks in 31% of the hours. This is a higher percentage than last year, and represents the highest of the regions. The per day and per hour averages are also substantially higher than last year.

Johnnycake had slightly above average effort that resulted in mixed results, with 2 site records, two above average species, four below average species, and below average Total Hawks (1427). The site records were both buteos, Red-shouldered Hawk (17) and Red-tailed Hawk (30), and the above average counts were both vultures, Black Vulture (14) and Turkey Vulture (103). Below average counts were spread across the groups: Osprey (29), Northern Harrier (2),

Sharp-shinned Hawk (8), and Broad-winged Hawk (1139). Bald Eagle (32), Cooper's Hawk (12), and American Kestrel (34) were at average. **Mohonk** had half the effort of the previous season and only one third of the average effort for the last 10 years, resulting in below average counts for all 11 species counted this season. Data from a few of the past 27 years with the same effort show that this season is about average for the effort. The most prevalent species were Broad-winged Hawk (514), Sharp-shinned Hawk (135), Turkey Vulture (81) and Red-tailed Hawk (20). **Chestnut Hill** had average effort resulting in average Total Hawks (3269), mostly a consequence of average Broad-winged Hawks (3168). Of the 61 hawks/hour flying by, once every two hours it was a Cooper's Hawk overhead, resulting in a new site record of 26. While Bald Eagle (23) and Sharp-shinned Hawk (32) were at average, all other species were below average. With slightly below average effort, **Botsford Hill** achieved above average counts for three species: Bald Eagle (23), Northern Harrier (8), and Cooper's Hawk (13). They also counted a Peregrine Falcon (1), seen in only nine of their 29 years of coverage. While American Kestrel (10) was at average, several other species were below average, including Osprey (15), Sharp-shinned Hawk (44), and Broad-winged Hawk (1844).

Although **Bear Mountain** had below average coverage, they had a good season. Their Total Hawks (1673) were average and they had above average counts for five species: Black Vulture (19), Turkey Vulture (30), Cooper's Hawk (46), Red-shouldered Hawk (32), and American Kestrel (50). Broad-winged Hawks (1152) and Red-tailed Hawks (68) were at average. All others species were below average, including Bald Eagle (59). This was **Maltby Lake's** 2nd year. They only counted for one day, but hit the jackpot with 3965 Broad-winged Hawks and 20 Sharp-shinned Hawks, counting an outstanding 1144 hawks/hour for the season. At more than 100 hours less than the last few years, **Mount Peter** had below average counts for almost all species. Nevertheless, the eagles stand out as special. There were two Golden Eagles, and the 103 Bald Eagle count was at average. To account for the reduced coverage, we recognize the species that are no further below average than the hours (-23%). These include Turkey Vulture (393), Cooper's Hawk (76), and Merlin (11). All other species were further below average, including the most prevalent Broad-winged Hawk (3306) and Sharp-shinned Hawk (647). **Chestnut Ridge** had a remarkable season, with three of the NEHW highs, three site records, and above average counts for most species. The NEHW highs were Turkey Vulture (5051), Sharp-shinned Hawk (3917), and Golden Eagle (14)! Turkey Vulture is also a site record, along with Red-shouldered Hawk (1113) at triple their average, and Merlin (140). Except for Red-tailed Hawk (131), which was below average, all other species were at or above average, along with above average Total Hawks (19460).

Hook Mountain had a good season, with a NEHW high for Black Vulture (135), two site records, good Golden Eagles (8), and their best Northern Goshawks (8) since 2016. The species with site records were Turkey Vulture (1332), at twice their average, and Red-shouldered Hawk (1067), at a stunning five times the average. Except for below average Osprey (177), Sharp-shinned Hawk (1215), and American Kestrel (171), all other species were

at or above average. **Quaker Ridge** had an exceptional season, with NEHW highs for two species and site records for four species. The NEHW highs include Red-shouldered Hawk (1871) and Broad-winged Hawk (25112), both of which were three times their averages. The Shoulder count was also a site record, along with three other species: Turkey Vulture (2247), Bald Eagle (359), and Cooper's Hawk (914). Four additional species were above average, including Northern Harrier (156), Sharp-shinned Hawk (3408), Golden Eagle (11), and American Kestrel (629). Collectively, these above average counts resulted in NEHW high counts for Total Hawks (35404) and Total Hawk w/o Broadwings and Vultures (8012). **Purple Chickadee** counted for a sixth season, increasing coverage to almost twice the average. This resulted in site records for an extraordinary eight species, including Black Vulture (80), Osprey (58), Bald Eagle (80), Northern Harrier (43), Sharp-shinned Hawk (499), Cooper's Hawk (232), Red-shouldered Hawk (223), and Peregrine Falcon (19). Except for Merlin (10), which was below average, all other species were at or above average.

Region 40

20% of hawks, 17% of XBV*, 26 hawks/hour, 156 hawks/day, 35 XBV/day, 20% of hours.

Region 40 has one site in New York, Lenoir Wildlife Sanctuary, and five sites in New Jersey—State Line, Wildcat Ridge, Montclair, Scott's Mountain, and Washington Valley. This region counted 20% of the hawks and 17% of XBV in 20% of the hours, similar to last season. The average of 156 hawks/day is almost double that in 2021, but the 35 XBV/day is unchanged.

State Line had an amazing season, beginning with a NEHW high for Red-tailed Hawk (694). The Redtail count was a site record, along with four other site records, including Turkey Vulture (3508), Red-shouldered Hawk (559) at twice the average, Broad-winged Hawk (9886) at four times average, and Total Hawks (18334). Six other species were above average, including Black Vulture (113), Bald Eagle (351), Cooper's Hawk (450), Golden Eagle (3), American Kestrel (571), and Peregrine Falcon (80). All other species were at average. **Lenoir** had below average coverage and still pulled through above average counts for Broad-winged Hawk (1726) and Peregrine Falcon (13). Two other species, Northern Harrier (8) and Cooper's Hawk (35), were at average. Although all other species were below average, the season resulting in a fun 27 hawks per hour. **Wildcat Ridge** had record low coverage this season and still recorded above average counts for four species: Black Vulture (32), Turkey Vulture (60), Red-shouldered Hawk (18), and Golden Eagle (2). All other species were below average, with record low counts for several species. Nevertheless, their time on site was hopping, with 36 hawks per hour.

Montclair also had record low coverage this season, resulting in below average counts for almost all species. Yet, they documented three species that flew past in enough numbers to reach average. The Red-tailed Hawk (293) count was about 50% above average, and both the Golden Eagle (1) and the Turkey Vultures (1595) were at average. Though below average, Broad-winged Hawk (1702) was higher than the previous three years. **Scotts Mountain**

had average coverage this season, punctuated with some regular treats—4 Northern Goshawks and 14 Golden Eagles—a NEHW high! Red-shouldered Hawk (348) was the one species that was above average. Four species were at average: Bald Eagle (209), Cooper's Hawk (198), American Kestrel (157), and Peregrine Falcon (50). All other species were below average, resulting in below average Total Hawks (7627). **Washington Valley** had below average coverage that resulted in above average Total Hawks (12777). This was a consequence of a record Broad-winged Hawk (11569) count that was five times their average. Four species had average counts: Northern Harrier (34), Red-tailed Hawk (82), Golden Eagle (3), and American Kestrel (231). All other species were below average, even as they enjoyed an average of 97 hawks per hour.

Region CO

7% of hawks, 21% of XBV, 16 hawks/hour, 94 hawks/day, 70 XBV/ day, 11% hours

Region CO includes three coastal sites, Lighthouse Point in Connecticut, and Fire Island and Fort Tilden in New York. These three sites counted 7% of the hawks of the NorthEast, averaging 94 hawks/day, and 16 hawks/hour. They also counted 21% of XBV, averaging 70 XBV/day, which is the highest of the regions. While the percentages noted were similar to 2021, the hawks per day and hawks per hour were substantially higher.

Lighthouse Point had average coverage with anything-but-average results. On Oct 27 they recorded the only NEHW species of the season, one of our 3 Swainson's Hawks. They also had the NEHW highs for Northern Harrier (314), Cooper's Hawk (1842), and American Kestrel (762). Three additional species had above average counts: Turkey Vulture (544), Broad-winged Hawk (3721), and Red-tailed Hawk (430). Although their counts for Northern Goshawk (2) and Golden Eagle (3) were below average, there were five other species at average and three other species below average. **Fire Island** continues to be the Merlin capitol of the NorthEast, having the NEHW high Merlin (1042) count once again. They also had the NEHW high for Peregrine Falcon (150), the species that inspired the site's origin in 1982. Their season was punctuated with 14 Bald Eagles, a new site record. Their Osprey (607) and Red-tailed Hawk (5) were both above average, and Northern Harrier (147) and American Kestrel (559) were at average. Sharp-shinned Hawk (103) and Cooper's Hawk (35) were both below average. **Fort Tilden**, now in its 5th season, is still bringing surprises. This season, it tallied the NEHW high for Osprey (1200) and 8 site records. Osprey was also a site record, along with Turkey Vulture (20), Bald Eagle (43), Northern Harrier (173), Cooper's Hawk (135), Red-shouldered Hawk (19), Red-tailed Hawk (33) and Peregrine Falcon (44). All other species were at average.

NorthEast Fall 2022 Seasonal Totals

Reg	Site	St./Pr.	Days	HRS	BV	TV	OS	BE	NH	SS	CH	NG	RS	BW	RT	RL	GE	AK	ML	PG	UR	Other	Total	XBV	
45	Greenlaw Mountain	NB	44	289	1	450	150	258	101	579	15	21	7	5585	194	2	0	153	34	34	76	0	7660	1624	
	Cooper	ME	20	102	0	43	7	23	0	13	5	0	0	22	0	0	0	5	8	0	0	0	126	61	
44	Cadillac Mountain	ME	59	254	0	100	141	133	80	988	9	3	1	1013	48	0	0	343	55	14	75	0	3003	1890	
	Mt. Philo SP Clary Hill	VT ME	12 32	56 240	0 0	60 848	30 254	76 407	7 113	43 657	5 39	0 3	1 83	1416 11235	6 305	0 2	1	60	2	3	8	0	1718	242	
43	Interlakes School	NH	2	12	0	18	2	10	1	33	3	0	0	256	1	0	0	8	2	0	1	0	335	61	
	Allon Bay	NH	17	101	2	71	4	25	5	149	5	0	3	375	39	0	0	19	12	3	14	0	726	278	
	Mt. Ascutney	VT	16	66	0	0	4	13	5	8	26	0	0	133	0	0	0	5	9	5	16	0	224	91	
	Concord School	NH	5	24	0	21	2	2	0	1	0	0	0	252	10	0	0	3	2	0	40	0	333	60	
	Putney Mountain	VT	73	564	10	385	95	173	71	1352	103	13	52	4801	276	0	10	157	53	41	0	0	7592	2396	
42	Pack Monadnock	NH	77	553	1	493	137	210	84	886	149	22	301	9369	300	0	11	175	130	44	58	0	12370	2507	
	Mount Watatic	MA	16	96	2	44	54	110	12	232	46	1	4	8745	4	0	1	44	8	3	22	0	9332	541	
	East St. Adams	MA	17	86	0	0	8	24	0	50	9	0	0	431	6	0	1	6	6	2	12	0	555	124	
	Wachusett Mt.	MA	76	423	4	1078	200	303	52	486	207	0	125	17974	193	1	5	149	54	26	262	0	21119	2063	
	Pinnacle Rock	MA	41	256	0	27	29	27	11	222	77	0	5	139	61	0	1	25	9	6	58	0	697	531	
	Barre Falls	MA	9	42	0	11	8	21	0	45	7	1	3	1916	11	0	0	8	2	0	1	0	2034	107	
	Mount Holyoke	MA	2	11	2	6	1	17	5	11	3	0	0	56	8	0	0	6	8	4	7	0	134	70	
	Shatterack Mountain	MA	34	161	0	294	56	17	15	242	38	0	32	2813	23	0	0	30	11	5	8	0	3584	477	
	Blueberry Hill Booth Hill	MA CT	48 7	233 34	0 1	532 75	45 3	30 13	34 1	240 9	27 2	0	41 6	3238 238	23 8	0	0	73 7	27 0	7 0	18 0	1	0	4355 364	565 50
41	Johnnycake	CT	13	55	14	103	29	32	2	8	12	0	17	1139	30	0	0	34	0	0	7	0	1427	171	
	Mohonk	NY	10	52	0	81	11	33	4	135	10	0	3	514	20	0	0	13	5	0	8	0	837	242	
	Chestnut Hill	CT	13	54	0	0	7	23	1	32	26	0	3	3168	0	0	0	3	1	0	5	0	3269	101	
	Botsford Hill	CT	11	49	0	0	15	23	8	44	13	0	1	1844	0	0	0	10	2	1	9	0	1970	126	
	Bear Mountain	NY	35	144	19	30	29	59	6	163	46	0	32	1152	68	0	0	50	6	2	11	0	1673	472	
	Maltby Lakes	CT	1	4	0	0	3	6	0	20	5	0	0	3965	2	0	0	3	1	0	0	0	4005	40	
	Mount Peter	NY	63	353	26	393	60	103	16	647	76	0	70	3306	183	0	2	64	11	8	7	0	4972	1247	
	Chestnut Ridge	NY	92	701	59	5051	269	260	149	3917	747	0	1113	6883	131	0	14	464	140	36	227	0	19460	7467	
	Hook Mountain	NY	81	472	135	1332	177	203	82	1215	247	8	1067	5268	224	0	8	171	56	34	43	0	10270	3535	
Quaker Ridge Purple Chickadee	CT NJ	93 67	736 374	33 80	2247 288	375 58	359 80	156 43	3408 499	914 232	0	1871	25112	148	0	11	629	94	28	19	1SW*	35405	8013		
40	State Line	NJ	75	474	113	3508	473	351	92	1466	450	0	559	9886	694	0	3	571	62	80	26	0	18334	4827	
	Lenoir	NY	18	85	30	174	72	57	8	106	35	0	7	1726	11	0	0	40	1	13	2	0	2282	352	
	Wildcat Ridge	NJ	33	146	32	60	26	20	5	179	56	0	18	2255	43	0	2	14	2	3	22	0	2737	390	
	Montclair	NJ	63	436	28	1595	39	97	25	317	167	0	14	1702	293	0	1	41	5	3	25	0	4352	1027	
	Scott's Mountain	NJ	90	604	0	0	132	209	54	1330	198	4	348	4578	428	0	14	157	49	50	76	0	7627	3049	
	Washington Valley	NJ	29	132	0	26	45	111	34	459	46	0	109	11569	82	0	3	231	54	8	0	0	12777	1182	
CO	Lighthouse Point	CT	88	531	13	544	760	228	314	2168	1842	2	216	3721	430	0	3	762	261	106	188	1SW*	11559	7281	
	Fire Island	NY	65	361	0	0	607	14	147	103	35	0	0	0	5	0	0	559	1042	124	3	0	2639	2639	
	Fort Tilden	NY	30	198	0	20	1200	43	173	337	135	0	19	7	33	0	0	731	259	44	2	0	3003	2976	
Totals				1577	9560	605	20008	5617	4203	1916	22799	6067	78	6354	159332	4432	5	98	6046	2514	771	1457	1*	242304	62359

*1 Swainson's Hawk; BV Black Vulture, TV Turkey Vulture, OS Osprey, BE Bald Eagle, NH Northern Harrier, SS Sharp-shinned Hawk, CH Cooper's Hawk, NG Northern 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, PG Peregrine Falcon, UR Unidentified Raptor, XBV Total without Broad-winged Hawks or Vultures

NorthEast Fall 2022 Hawks/100 Hours by Region

Reg	Sites	Days	HRS	BV	TV	OS	BE	NH	SS	CH	NG	RS	BW	RT	RL	GE	AK	ML	PG	Total	XBV
45	2	64	391	0	126	40	72	26	152	5	5.4	2	1436	50	0.5	0.0	40	11	9	1994	431
44	3	103	550	0	183	77	112	36	307	10	1.1	15	2485	65	0.4	0.5	95	14	6	3430	761
43	5	113	767	2	65	14	29	11	201	18	1.7	7	759	43	0.0	1.3	25	10	6	1202	377
42	10	327	1894	1	135	29	41	11	128	30	1.3	27	2371	34	0.1	1.0	28	13	5	2878	365
41	11	479	2992	12	318	35	39	16	337	78	0.3	147	1801	30	0.0	1.3	52	11	4	2895	764
40	6	308	1877	11	286	42	45	12	206	51	0.2	56	1690	83	0.0	1.2	56	9	8	2563	577
CO	3	183	1091	1	52	235	26	58	239	185	0.2	22	342	43	0.0	0.3	188	143	25	1577	1183
2022	40	1577	9560	6	209	59	44	20	238	63	1	66	1667	46	0.1	1	63	26	8	2535	652
2021	45	1676	10167	9	233	62	45	20	203	48	0.5	34	1056	38	0.1	1.5	74	24	8	1870	572
2020	43	1821	10405	10	172	52	43	19	201	45	0.8	40	963	64	0.2	1.1	75	27	8	1738	594
10YrAve	42		10460	6	131	59	34	18	236	45	1.2	31	1241	56	0.1	1.1	63	26	8	1982	603

Hawks

A look at each of our watch sites bring us an impression of how our raptors did across the NorthEast. For me, thinking about each site brings a collage-like image of overhead raptors and watchers' experiences. True, the numbers can't relay actual experiences. But, when you have been to a watch site and experienced the Broadwings circling overhead or the Merlins zooming past, the numbers reveal where those experience were and where they weren't.

Our Total Hawks this season were our 4th highest in actual numbers and, in per 100 hours (PHH), they were a return to counts at the turn of the millennium. Was the experience of our watchers across the regions similar to experiences of the early 2000s? Let's see if the numbers can tell us.

Distribution of Hawks Across the Northeast

We begin with the Regional Hawks/100 hours (PHH). The table shows hawks PHH for each species in each region. The regions with the highest values are indicated in bold.

From this we can see that Goshawk, Roughleg, and Bald Eagle were most prevalent in our northern regions. With statistically similar PHH Broadwings were more prevalent in the northern and middle regions than in southern regions. Golden Eagles were pretty well spread across the middle and southern regions. Vultures, Sharpies, Shoulders, and Redtails were most prevalent in the southern regions. Along the coast, we find the expected Osprey, Harrier, Coops, and all three falcons. While these coastal species are similar to other years, there does seem to be some variation from year to year among the other species, and a subsequent regional variation in Total Hawks. Comparing to 2021 (NEHW 2021 Report), the species that shifted regionally from last season were Turkey Vultures that shifted south from Region 44 to Region 41, Sharpies that shifted south from Region 43 to Region 41, Broadwings that spread out from Region 43 to both Regions 44 and 42, and Redtails that shifted south from Region 43 to Region 40. Notably, except for Broadwings, the shifting distributions mostly moved in a southerly direction.

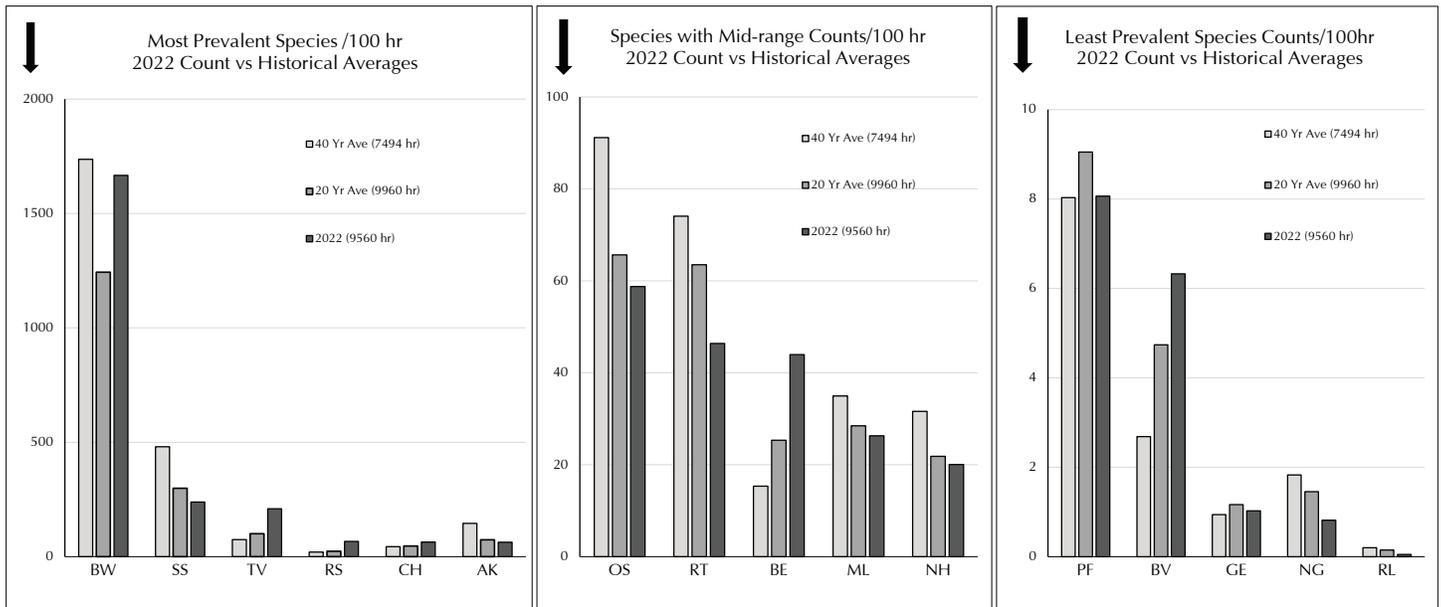
To explore how the distribution of Total Hawks across the regions has changed, we combine data from our recent NEHW Reports into one table, with bars to represent magnitude. This provides a visual depiction of the distribution across the regions, first with the data printed for numerical comparisons, and then without.

The bar table without the print helps us see the patterns more easily. Starting with 2017, we see that the hawks were more numerous in the middle regions, with some in the south, and a few up north. Compared to 2017, 2018 had even fewer up north, and more down south. 2019 brought the hawks back to the north as they spread across the whole NorthEast, with fewer in the south. 2020 was similar to 2019, but with even more up north. By 2021 the northerly component of hawks peaked and the southern component shrank a little. Then our current 2022 season brought relief to the southern regions, as the hawks spread south once again, strangely leaving few in Region 43.

Total Hawks per 100 Hours						
Reg	2017	2018	2019	2020	2021	2022
45	864	630	1396	2039	2541	1994
44	1074	1131	2515	2871	4339	3430
43	2040	2501	1286	1537	4098	1202
42	2499	2124	1534	2396	1725	2878
41	1640	2169	1449	1616	1470	2895
40	1202	2331	991	1434	1463	2563
CO	1088	1667	950	1183	1392	1577

Total Hawks per 100 Hours						
Reg	2017	2018	2019	2020	2021	2022
45						
44						
43						
42						
41						
40						
CO						

So, did 2022 really return to millennium numbers? About 60% of our sites were counting hawks in 2000, and more of those sites are further south than north. It appears that 2022 was a return to the millennium, for the southern regions. For Drew and I, counting at Hook (in Region 41), we definitely experienced busier flights this season than in 2021, and it certainly did seem more like the turn of the millennium than the previous few years. At Fire Island (in Region CO), our experiences were approaching a return to the millennium, but with a different species composition—double the Osprey, about 2/3rd the Kestrels, but fewer Sharpies. Generally, the table fits our experiences. Does it fit yours? Find your region and compare it to your experiences. Then let me know if it works for you. merlin@pipeline.com



Species Prevalence—Here come the Shoulders!

For an overview of our species and their relative abundance, our Species Prevalence charts are arranged from most prevalent to least prevalent species. To accommodate the different magnitude of the counts, three different charts are used, each with different vertical scales. Prevalence refers to our current 2021 data, shown on the charts as the darkest bars. These are the bars that decrease in sequence from left to right. The 40-year average (lightest bar) and the 20-year average (gray bar) are included and provide an historical trend for each species.

Broadwings remain our most prevalent species, at 66% of all hawks counted and almost four times any other species. Good news! Sharp-shinned Hawks returned to 2nd place! Sharpies ranked 2nd for all years since 1980, except 2021 when it was out-ranked by Turkey Vultures. With only 30 hawks PHH separating them this season, we are likely to see more flip-flops for 2nd and 3rd in the years ahead.

Surprise! Our 4th ranked species this season is Red-shouldered Hawk! No, that was not a typing error. A long shot for 4th, our Shoulders just raced past five other species, including Kestrels and Osprey, leaving its previous 9th rank way behind. Then, Cooper’s Hawk also passed Kestrel and Osprey to get to 5th! Wow! Both of these jumps up in rank are historical. Our species composition is changing. Thanks to your dedication to counting, you are documenting these changes. The remaining species ranks have little change except for those with similar counts that results in yearly do-si-dos: Redtail leap-frogged Bald Eagle, and Peregrine leap-frogged Black Vulture.

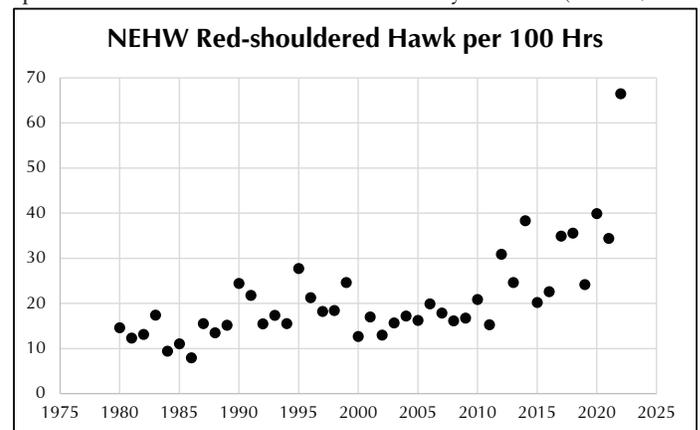
Using the three bars for each species, the Prevalence Chart reveals long-term trends. Declining species show higher 40-year bars dropping in succession to lower 20-year bars, then to the lowest 2022 bar. Declining species include Sharp-shinned Hawk, American Kestrel, Osprey, Red-tailed Hawk, Merlin, Northern Harrier, Northern Goshawk, and Rough-legged Hawk. Increasing species show the reverse, low 40-year bars increasing in succession

to higher 20-year bars, and then to the highest 2022 bar. Increasing species include Turkey Vulture, Red-shouldered Hawk, Cooper’s Hawk, Bald Eagle, and Black Vulture. For other species the trend is not as well defined. For example, the 2021 Broadwing bar is closer to the 40-year average than the 20-year average. This shows that there was a decline, but the 2021 count departs from that trend. Keeping in mind the high variability of Broadwings, this could reflect a changing trend or simply be random. The Peregrine and Golden Eagle both show an increase from the 40-year to the 20-year bars, but a 2022 drop from the 20-year average. This suggests a changing trend, but merits a closer look. Check out the Centerfold for more detailed year-to-year information.

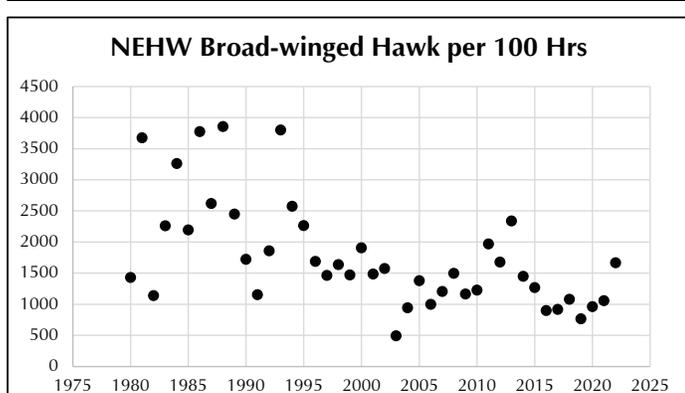
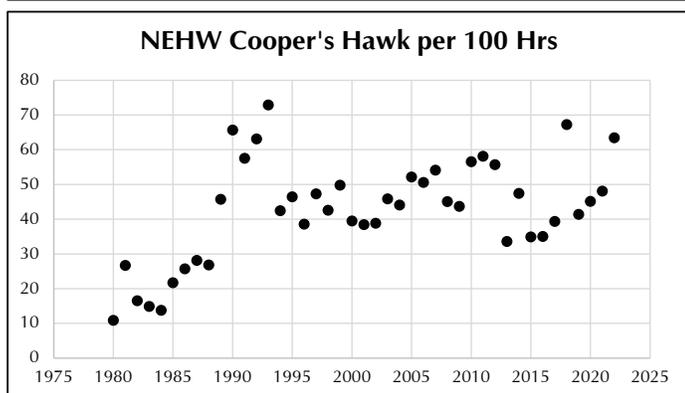
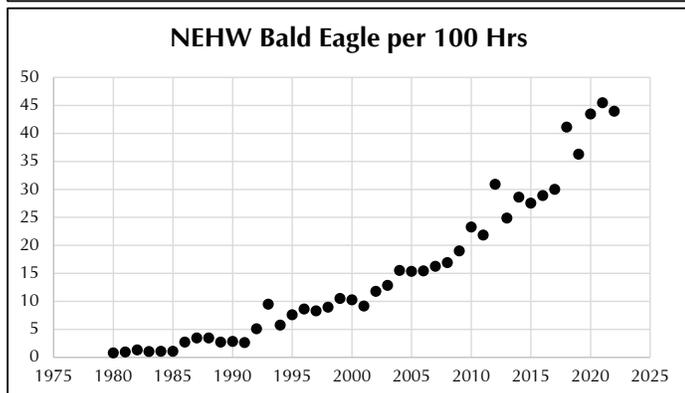
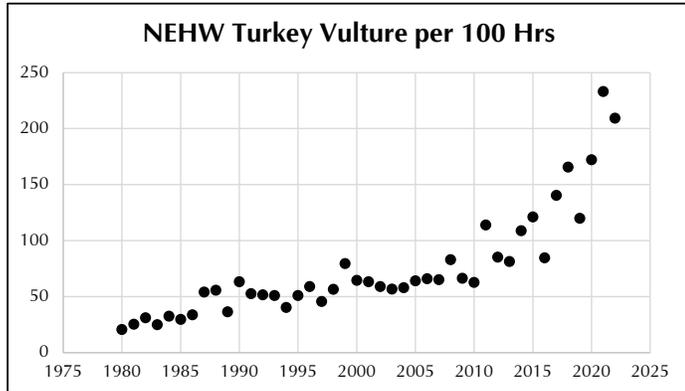
Species—Flying High: 1 record high, 4 highs, 1 specialty

Knowing which species raced ahead by five ranks, you have probably already guessed that the record high for the 2022 season goes to Red-shouldered Hawks (6354, 66 PHH). This year’s count was 2000 more Shoulders than our last record in 2020, and double the 10-year average. With this extraordinary count so far above all other years, we wonder if future counts will be near the same level.

In addition to the Shoulder record, we have four above average species this season. These include Turkey Vulture (20008, 209



PHH), Bald Eagle (4203, 44 PHH), Cooper's Hawk (6067, 64 PHH), and Broad-winged Hawk (159332, 1667PHH). The Turkey Vulture and Bald Eagle counts are no surprise, with both steadily climbing over the last four decades. However, the Cooper's Hawk count is a surprise, a jump up to the high counts of the '90s. There are only three other counts higher than this, and one very near it. The graph suggests a return to their increasing trend prior to 2013. That will be fun to monitor.



The Broadwing graph looks very much like the Total Hawks graph, discussed earlier. This makes sense, since Broadwings comprise 60% of the Total Hawks. As with Total Hawks, when we look at Broadwings since 1996, the rate of decline is lower, and this season is a return to the counts in the late 1990s and early 2000s. So, Broadwings are the reason for our return to the turn of the millennium! This is good news. However, with our low counts in the previous six years, we need to keep a close watch.

Species—Flying Steady: 9 species

This season we had 9 species with counts at the 10-year average. It is always good news when we have species with stable counts over a 10-year period. Three of these species, Black Vulture (605, 6.3 PHH), Golden Eagle (98, 1.0 PHH), and Peregrine Falcon (771, 8.1 PHH), had previously increasing trends, but had 2022 counts that were at the 10-year average. Two other species, Osprey (5617, 58.8 PHH) and Merlin (2514, 26.3 PHH), had counts this season that are at average for both 10 years and 20 years. That is very good news, after both of these species declined in the 1990s. Two species that are at the 10-year average but had substantially higher counts in the previous decade include Northern Harrier (1916, 20.0 PHH) and Red-tailed Hawk (4432, 46.4 PHH). Redtails are further below the 20-year average, as indicated in the Prevalence Charts above.

Finally, and with great encouragement, we have two species at the 10-year average that have been of serious concern in prior years, Sharp-shinned Hawk (22799, 238.5 PHH) and American Kestrel (6046, 63.2 PHH). What a relief! But, check the Watch List section for more information. Our Sharpies may be starting to stabilize, but the average of the last 10 years is 30% lower than the previous 10 years. Kestrels on the other hand, are at the 20-year average! Whoopee!

Species—Flying Low: 2 species

There were only two species below average this season, Northern Goshawk (78, 0.8 PHH) and Rough-legged Hawk (5, 0.05 PHH). The Goshawk count is our 3rd lowest, an improvement from 2021 (0.5 PPH). The Roughleg count is our 2nd lowest, 2nd only to 2019 when we did not count any at all.

Specialties—1 species

Our specialties this season were three Swainson's Hawks, two at Quaker Ridge and one at Lighthouse Point. Quaker Ridge had the first on Sep 29, a juvenile dark morph, and the third on Oct 30. The second Swainson's flew over Lighthouse Point on Oct 27. There were no kites or owls reported this season.

Shoulders—the Big Question

On a Tuesday in November, I found the Big Shoulder question in my email box. John Phillips had covered Hook that day, a day when Quaker Ridge (QR) counted 140 Shoulders, Chestnut Ridge (CR) counted 77, and John had 11 at Hook Mountain (HM). John asked: why the difference? Since I had been wondering about this from counts in the previous two years, this was the time to investigate.

The first part of this big question is, do Shoulders really migrate through QR and CR in higher numbers than elsewhere? Our

Red-shouldered Hawk, NEHW Fall Counts

*Site	2015	2016	2017	2018	2019	2020	2021	2022
Pack Monadnock NH	141	117	181	126	181	223	223	301
Mount Peter NY	85	104	122	213	203	149	119	70
Chestnut Ridge NY	319	78	494	272	439	802	555	1113
Hook Mountain NY	130	165	94	439	54	390	337	1067
Quaker Ridge CT	406	566	1006	648	370	602	635	1871
Purple Chickadee NJ				12	35	67	114	223
State Line NJ	144	353	286	388	186	355	337	559
Montclair NJ	239	174	418	347	103	287	337	14
Scott's Mountain NJ				152	257	394	210	348
Washington Val NJ	186	347	154	249	163	210	117	109
Lighthouse Pt CT	62	155	298	243	159	209	130	216

Red-shouldered Hawk, NEHW Fall Counts

*Site	2015	2016	2017	2018	2019	2020	2021	2022
Pack Monadnock NH								
Mount Peter NY								
Chestnut Ridge NY								
Hook Mountain NY								
Quaker Ridge CT								
Purple Chickadee NJ								
State Line NJ								
Montclair NJ								
Scott's Mountain NJ								
Washington Val NJ								
Lighthouse Pt CT								

*Sites with a minimum annual count of 150 RS

NEHW data shows 11 watch sites with at least one annual count of 150 Shoulders since 2015. The top table shows the numerical counts, and the bottom table shows the counts as bar charts. The bar charts clearly show QR had consistently high counts across the years, with CR a strong second and HM a contender in recent years. Since 2020 the three sites appear to be dominant, and account for more than 60% of the Shoulders across the NorthEast in 2022. So, yes, what John observed on one Tuesday in November is indeed true. Shoulders do migrate through QR and CR in higher numbers than elsewhere, except that Hook has joined as a third in recent years.

Why is this region so popular with Shoulders? Either there is something about the topography that naturally funnels the hawks from all over the NorthEast through this region, or the breeding population for this species is localized in Connecticut and, starting from generally the same area, naturally migrates across these sites.

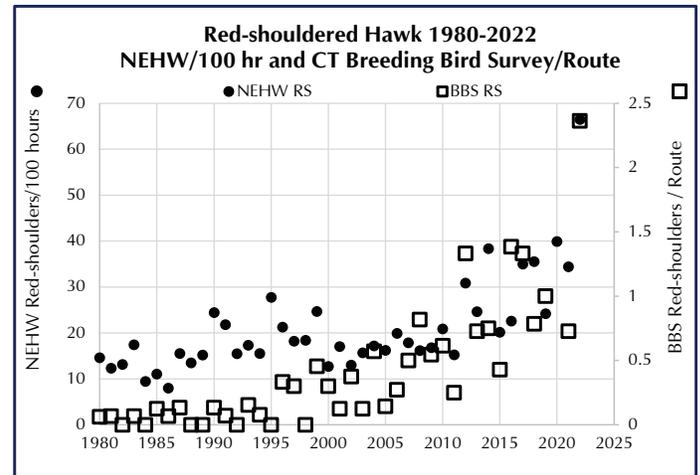
To determine how widespread our Shoulders are throughout the NorthEast, data for each of the five states wholly within the NorthEast was obtained from the Breeding Bird Survey (BBS), our best source of information for breeding birds. Their data, updated to 2022, provides annual totals and the number of routes. <https://www.pwrc.usgs.gov/BBS/RawData/>

BBS: Red-shouldered Hawks/Rte

	1971-83	1984-96	1997-09	2010-22
ME	0.030	0.014	0.008	0.041
NH	0.091	0.048	0.049	0.080
VT	0.094	0.040	0.020	0.073
MA	0.066	0.046	0.173	0.308
CT	0.060	0.084	0.348	0.975

The annual Red-shoulders/Route was averaged over 13 years to provide data in four groups as noted on the table. In all cases averages were less than 1 Shoulder per route. Yet, a clear pattern emerges, with Shoulders increasing dramatically in CT since 1971, much less so in MA, and somewhat in the more northerly states. This gradation from south to north over time supports a global warming hypothesis for the increasing population. It also supports the “localized in Connecticut” suggested by our NEHW data. In the last 13 years, 2010-2022, based on the BBS data, 66% of the Shoulders breeding in the New England were nesting in Connecticut!

A comparison of NEHW data to the BBS data shows a strong correlation to CT BBS ($r=0.800, p=0.000$), with the CT breeders explaining 64% of the variation in the NEHW data. A graph of the NEHW data along with the BBS data shows just how similar the data has been, especially for the 2022 season when both the BBS breeders and the NEHW migrants had a large increase. The graph shows an overlap for the 2022 data, so be careful to read the scales. The NEHW scale is at left and the BBS scale is at right.



Where in CT are these breeders? The increase in MA suggests that the CT breeders are not isolated in southern CT. If they are spread across the state, does topography play a role in concentrating their flight path over the southwestern part of the state? With no telemetry data available, we can check maps for geophysical and topographical features across the state of CT. Beginning with a map

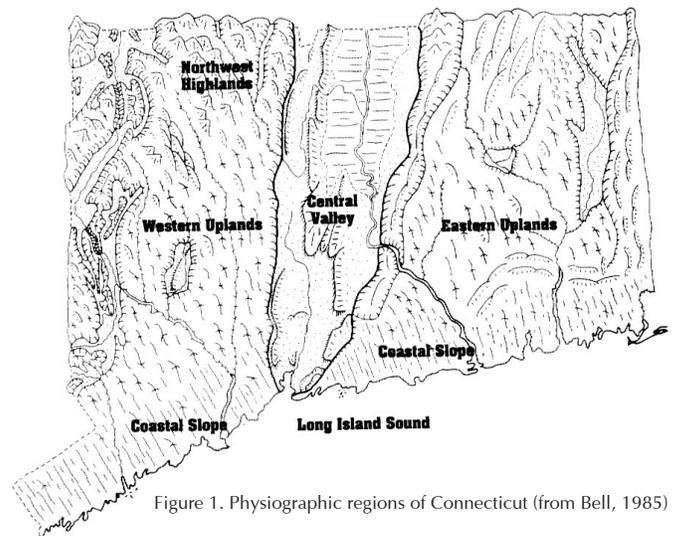
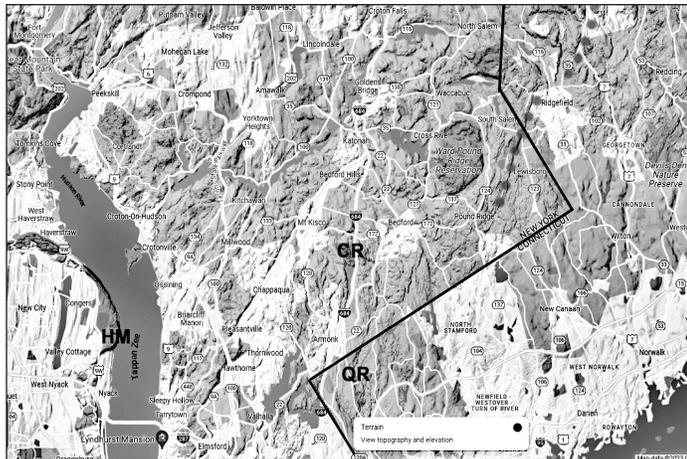


Figure 1. Physiographic regions of Connecticut (from Bell, 1985)

of the physiographic regions of CT published by the Connecticut Department of Environmental Protection (Bell, 1985), we see a large Central Valley around the Connecticut River. This is bounded both east and west by upland areas. The highest ridges are along the western border, contiguous with the Northwest Highlands.

In 1992, Bosakowski et al studied breeders in New Jersey and found that Red-shouldered Hawks “nested in areas near larger wetlands, closer to streams, and had lower slope locations than unused sites.” This suggests that our Shoulders are more likely to spread out through the central and upland portions of CT. If they migrate parallel to the coastline, they would hit the ridges and perhaps take advantage of the updrafts to divert southward.



How can this impact QR, CR, and HM? To answer this question a topo map of Westchester County in NY helps to present a hypothesis. (See: <http://www.battaly.com/nehw/reports/MAP-QR-CR-HM-line.jpg> for color version.) With the locations of QR, CR, and HM added to the map, we get a perspective of the sites relative to the southern end of the ridgeline in western CT. The dotted line through Ridgefield CT to Pound Ridge NY has been added to show a ridge line that might determine if a Shoulder flies over QR or CR or HM. It is easy to imagine that hawks flying south of that ridge line will likely fly over QR. It is also easy to imagine that some hawks would fly through the break at Ridgefield, around the southern portion of Pound Ridge and fly right over CR. Those at HM could have flown near or over CR, or could be hawks flying through the Ridgefield break and around the northern portion of Pound Ridge.

With no actual evidence, this is little more than a hypothetical answer to John’s original question. We need someone to start a hawk watch in the Ridgefield area to get an answer for us! Furthermore, as the population of Red-shouldered Hawks continues to increase, they will be starting from latitudes that are further north. That generates a new big question: in 10 to 20 years, when the RS have advanced further into the northeast, will they still concentrate along the same flyway when migrating?

Whatever our future Shoulders do, your NEHW data is an important way to track them. Your data syncs beautifully with the BBS data. You are documenting the spread of Red-shouldered Hawks into the NorthEast as it is happening. How wonderful to

have the evidence that hawk count data does indeed reflect our raptor populations!

Sources:

Bell, *The Face of Connecticut: People, Geology, and the Land*, 1985, Connecticut Department of Environmental Protection

Bosakowski, T., Smith, D.G., Speiser, R. *Status, Nesting Density, and Macrohabitat Selection of Red-shouldered Hawks in Northern New Jersey*, *Wilson Bull.*, 104(3), 1992, pp. 434-446

Ziolkowski, D.J., Lutmerding, M., English, W.B., Aponte, V.I., and Hudson, M.-A.R., 2023, *North American Breeding Bird Survey Dataset 1966 - 2022*: U.S. Geological Survey

Westchester topo map in color. <http://www.battaly.com/nehw/reports/MAP-QR-CR-HM-line.jpg>

Watch List—Sharpies Still Low!

The NEHW Watch List is a reminder of the species that are most at risk. A species is added to the List when it has a record low year. Since there were no record lows this season, there are no new species to add.

Species are arranged from lowest to highest according to the Watch List value, WL. A check mark indicates a Record Low and has a value of 1, and the numbers indicate the rank for that season above the record low. WL is simply the sum for that species. The species with the lowest WL values are most at risk of decline. Their counts have been among the lowest for the species since 1980.

NEHW Watch List: Declining Species

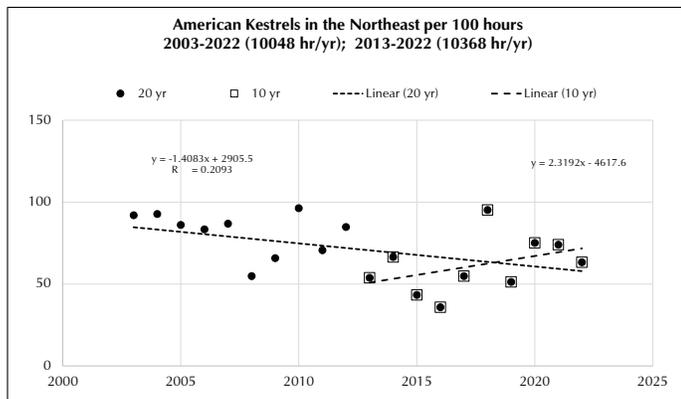
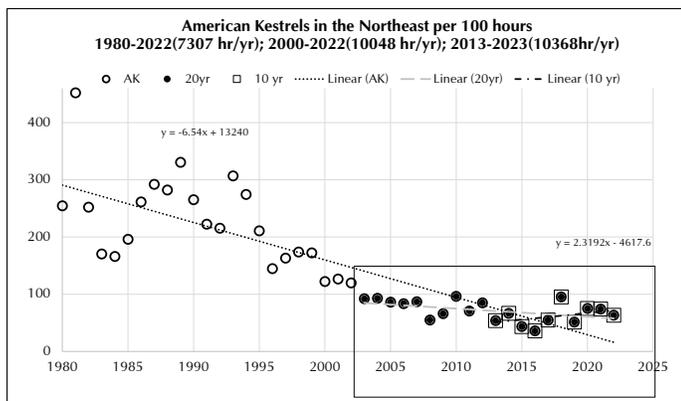
	2015	2016	2017	2018	2019	2020	2021	2022	WL	Status
Sharp-shinned Hawk	b	b	b	6	b	4	5	7	26	M
Northern Goshawk	4	20	b	4	b	3	2	5	40	R
Northern Harrier	4	b	b	14	b	8	11	11	51	M
American Kestrel	b	b	5	15	3	10	10	7	52	M
Red-tailed Hawk	b	2	2	9	b	14	b	4	34	xCS
Osprey	3	b	3	9	2	5	9	7	39	xFS

Check mark indicates a Record Low year. The numbers indicate the rank above record low when record low = 1. WL = sum of all years: The lowest possible count = number of years. Species with lower WL are at greater risk of continued declines in migration counts. Status: M=migrant, R=resident, x=population not threatened, CS=climate shift, FS=flyway shift

Sharp-shinned Hawk remains the most at-risk species, with a WL of 26, four record low counts in the last eight years, and low rankings in the remaining four years. There is definitely still cause for concern. Our second most at-risk species remains Northern Goshawk, with a WL of 40, two record lows, and one record tie. This species is declining in the NorthEast, as it is throughout its range. See p. 28 and 29 of the 2020 NEHW Report for a discussion of the status of Goshawks as residents. Goshawk remains at greater risk than the next most at-risk species, Northern Harrier. Harriers have a WL of 51 and three record lows. This season’s repeat rank of 11 suggests less concern, and that is very encouraging for this highly variable species. Our next in line is the American Kestrel, with a WL of 52. (See comments below). Red-tailed Hawk and Osprey are separated from the other species because neither population is believed to be in danger. They continue with low WL numbers, 34 and 39 respectively, but their low numbers likely reflect changing patterns in migration, as discussed in other Reports.

American Kestrel—remove from the Watch List?

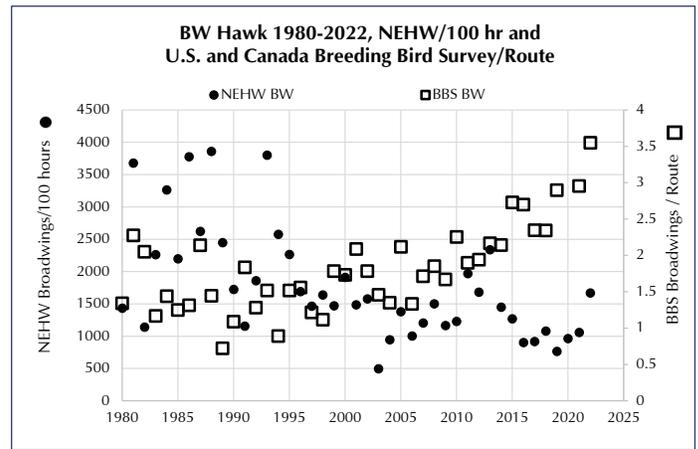
After 2 years in a row of record lows in 2015 and 2016, Kestrels have improved. They have been at the 10-year average for the last three seasons, and this season they are at the 20-year average as well. Our Kestrels appear to be stabilizing - check out their trends graphs. While the trend for the last 20 years is a slight decrease ($r = -0.458$, $p = 0.04$), that has reversed to a slight increase in the last 10 years ($r = 0.41$, not significant). At this point we could remove it from the Watch List, except that this year was only better than 6 other years, whereas the previous two years had counts better than 9 other years. If this is random, we can expect fluctuations in the next couple of years. So, we'll keep it on the list and watch for continued random changes. One thing is sure however, the "jewel-winged falcons" of the NorthEast are definitely not in the danger they appeared to be in 2016. (See: American Kestrel -sound a very loud alarm! NEHW Report, 2016, p. 25)



Our 2022 Broadwings—best count since 2013!

We counted 159,332 Broadwings (1667/100 hrs) this season. That's 52,000 more than in 2021! With the exception of the high counts of 2011 to 2013, we need to return to 1993 to get as good an actual count (168914) and to 2000 for as good a PHH count (1907 PHH). Congratulations to all for being there for this count!

With the update in the Breeding Bird Survey, does that show an increase as well? That looks surprisingly good, with an increase in breeding Broadwings in the 5 New England states—Connecticut, Massachusetts, Vermont, New Hampshire, and Maine—and 3 Canadian provinces—Quebec, New Brunswick, and Nova Scotia. For the years 2019 to 2022, both our NEHW Broadwing data and the BBS data have shown a similar increasing pattern. We learned

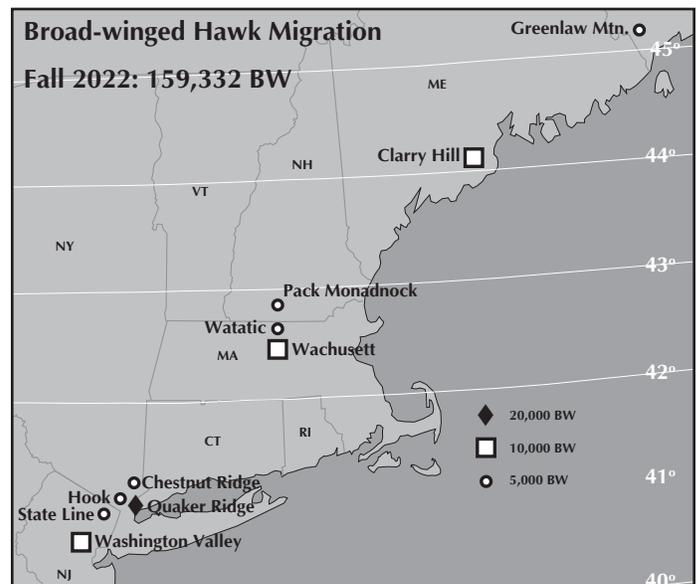


last year that trends for these have been opposite, and we can see that from the graph of both. With the NEHW counts trending down since 1980 as the BBS counts were trending up, there is a weak negative correlation between our normalized migration data (using natural log) and the breeding data ($r = -0.338$, $p = 0.065$).

How can we count fewer Broadwings when there are more breeders in the NorthEast? It appears that, for Broadwings, our sampling method is more influenced by factors other than breeding. We have all experienced that good weather September day when we expected the Broadwings to arrive in numbers, and ended the day inspired, but with a fraction of what we expected. In 2022, those expectations were satisfied on 37 days at 20 sites. The 2022 Broadwing season fulfilled the hope and expectation of watchers, with half of our sites having a big day, and most other sites having days with hundreds.

Which Sites had the Big Flights?

There were 10 sites with more than 5000 Broadwings: 6 had fewer than 10,000, 3 had fewer than 20,000, and one had more than 20,000. The 6 sites with more than 5000 Broadwings were Greenlaw Mountain (5585), Pack Monadnock (9369), Mount Watatic (8745), Chestnut Ridge (6883), Hook Mountain (5268), and State Line (9886). The three sites with more than 10,000 were Clarry Hill (11235), Wachusett (17974), and Washington



Valley (11569). The site with an extraordinary count of 25112 was Quaker Ridge!

We easily see from the map of Broadwing sites that the major flight was through the southern portion of each region, much further south than in 2021 when the most Broadwings were seen at sites further west – Putney Mountain, Mount Peter, and Scott’s Mountain. So, 2022 brought the hawks back to the more eastern sites, to the great pleasure of many hawk watchers!

Site Counts of more than 20,000 Broadwings

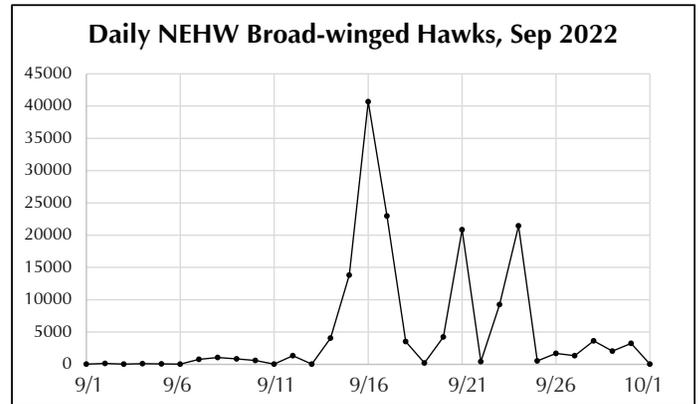
The 25112 Broadwings at Quaker Ridge is the best site count since 2013, when Wachusett had 35070, and since 2000, when Chimney Rock had 21558. While counts of more than 20000 occurred 17 times at 6 sites in the 20 years prior to 2000, there have only been three in the 22 years since 2000. That makes the Quaker Ridge count extraordinary. This count gives us hope for more big counts in the years to come. With the BBS increase in breeders, dare we hope for a repeat of those record counts of over 40000 Broadwings at Montclair in 1986 and 1988?

Just how do we get high Broadwing counts? The definitive factor is yet to be found. But, the 2018 NEHW Report has an analysis of average high temperatures for Hartford CT compared to Broadwing counts. Using the regression formula from that analysis and the 2022 average September high temperature of 74.8F, the analysis

predicts 1622 Broadwings PHH, which compares very well with our 1667 PHH this season, suggesting that average September high temperatures are still our best predictor of Broadwing flights – the lower the temperature, the better the flight.

Daily Counts

The Fall 2022 Broadwing season began on 9/7 at our northwestern boundary with 678 birds at Mt. Philo. It continued in the northwest with 3 digit counts at Putney Mountain each day from 9/8 to 9/10 and again on 9/12. This preceded the full flight, which arrived on 9/14, with our first hint of what was to come. There were 1258 Broadwings at Quaker Ridge that day, and no other site with more than 405.



The next day, 9/15, brought 13820 Broadwings and 4 sites with more than 1000 Broadwings, all in the southern half of the NorthEast. Then came 9/16, our peak day, with 40686 Broadwings! Nine sites had more than 1000 that day, with the year record of 14823 at Quaker Ridge. Six of the 9 sites were in the southern portion and only 3 in the northern section.

On 9/17 there were 22965 Broadwings with 7 sites having more than 1000. This time most of the hawks moved through the middle and northern portions of our region. This was Clarry Hill’s 2nd of 3 big days, Wachusett’s 2nd of 4 big days, and Pack Monadnock’s 1st of 2 big days. 9/18 to 9/20 were generally quiet.

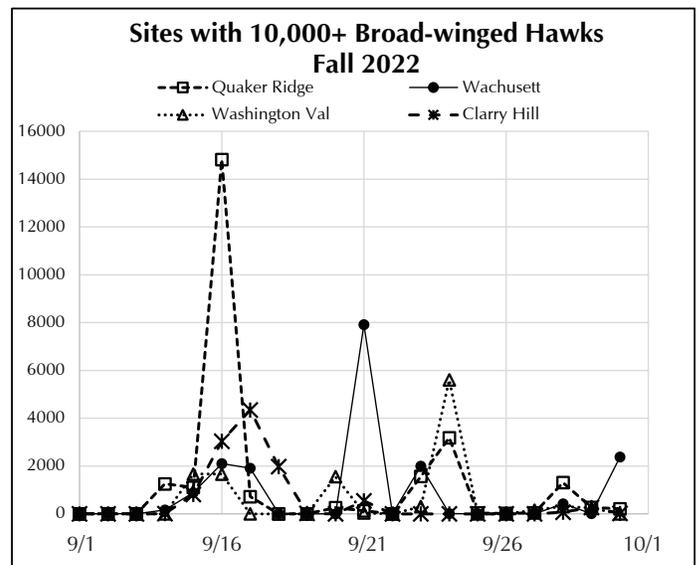
HISTORIC ANNUAL COUNTS >20,000 BW

SITE	YEAR	BW
Booth Hill CT	1993	25176
Chestnut Ridge NY	1986	23069
Chimney Rock NJ*	1996	24656
Chimney Rock NJ	2000	21558
Montclair NJ	1981	22342
Montclair NJ	1985	20137
Montclair NJ	1986	43416*
Montclair NJ	1988	42711
Montclair NJ	1990	25571
Montclair NJ	1993	30778
Montclair NJ	1994	20893
Wachusett MA	1983	26910
Wachusett MA	1984	27076
Wachusett MA	1987	21704
Wachusett MA	2013	35070
Quaker Ridge CT	1986	39743
Quaker Ridge CT	1988	34125
Quaker Ridge CT	1993	29118
Quaker Ridge CT	1995	36630
Quaker Ridge CT	2022	25112

*All time High Count with 15745 on 9/14/1986

*Chimney Rock: replaced by Washington Valley in 2017.

20 counts > 20000 BW since 1980, with 3 since 2000 (compare to 120 counts > 10000 BW)



9/21 brought Wachusett's high count of 7918 and a big day of 6686 for Watatic. There were still Broadwings up north. But 9/22 was quiet and 9/23 had only 3 big day counts, including 1395 at Lighthouse Point. The last big push came on 9/24 with 7 big counts, all in the southern section, including 5605 at Washington Valley, their best of 4 big days. 9/25 to 9/29 were generally quiet, and the Broadwing season ended with a final push of 2385 at Wachusett.

The daily Comparative Count chart is formatted for easy comparisons. The high count for each day has a dashed outline, and all counts larger than 1000 are in bold. Looking at the pattern of

bold numbers across the chart shows where the highest counts were and when they occurred. Compare this to the 2021 page 26 in the 2021 NEHW Report at <http://www.battaly.com/nehw/reports/NEHW2021.pdf> The 2021 big days were clearly concentrated in northern regions, whereas this 2022 season is concentrated in the middle and southern regions.

We know that each fall season is different from every other, even with the similarities and excitement. I can't wait to see what happens in 2023!

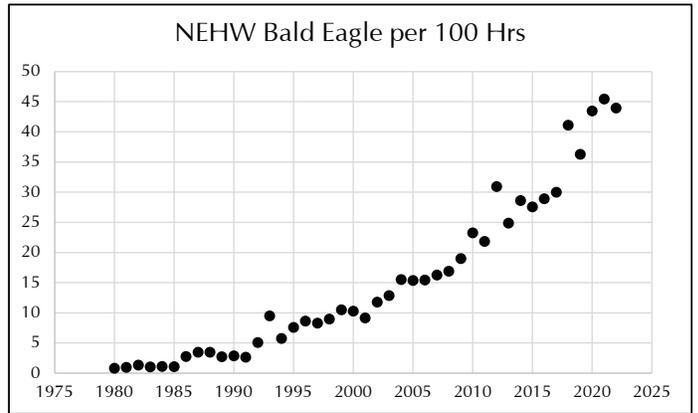
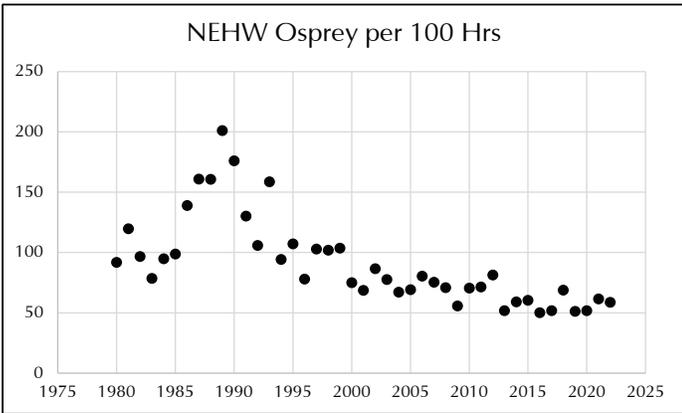
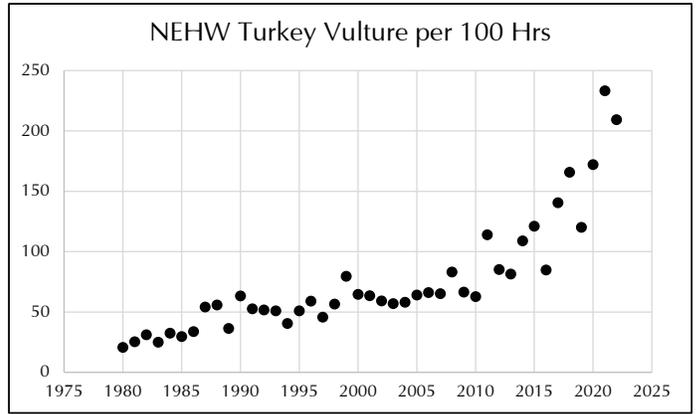
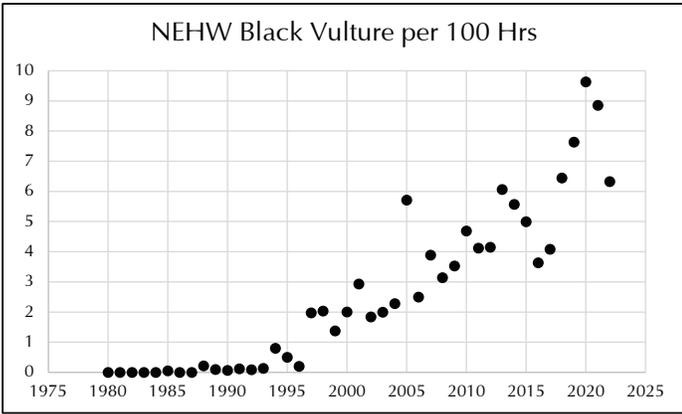
Broad-winged Hawk Comparative Counts during Flight Period, Fall 2022

	Site	9/7	9/8	9/9	9/10	9/12	9/14	9/15	9/16	9/17	9/18	9/20	9/21	9/23	9/24	9/25	9/26	9/27	9/28	9/29	9/30
45	Greenlaw Mountain	4	6	4	11		102	726	3325		578				101		34	260	127	26	
44	Cadillac Mt.	8	3	6	3	0	0	1	20	465	1		4	183	2	13	0	8	226	48	
	Mt. Philo	678	18	18	6	394	5	181	90	15											
	Clarry Hill	11		6	42		9	816	3037	4351	1979		548					73	269	27	
43	Interlakes Sch.						142	114													
	Alton Bay				7	90	7		72		11		144					37	7		
	Mt. Ascutney SP		1	5		2	0	18	102								0	0	2		
	Concord School					8			1				230	9			4				
	Putney Mountain	5	770	657	276	403	193	723	295	144	383	0	337	103	78	0	10	205	51	8	1
42	Pack Monadnock	3	38	14	36	219	119	750	377	4987	70	0	1701	520	23	12	257	78	37	10	7
	Mount Watatic				19	55	65	208	366	874	10	0	6686	418	22	9					
	East St. Adams		2	0	116		29	32	27	133	68		13	3	0	0				2	
	Wachusett	8	23	11	11	16	165	895	2100	1910	11	0	7918	2000	15	0	29	1	422	17	2385
	Pinnacle Rock		0		0		12	4	3	0	0		0	60	56	4	0			0	
	Barre Falls												1665		0		24	0	5		222
	Shatterack	13	0	6	0	4	292	281	126	1476	270	68	88	50		0	26		100	6	7
	Blueberry Hill			14	1	9	247	401	176	1409	57	333	196	261	17		6	17	61	2	3
	Booth Hill	36	6	10	3		77	43	63												
41	Johnnycake		1		3		172	14	472	85	4	86	11	123			20		143		
	Mohonk Preserve		1				40	23		298		119	33								
	Chestnut Hill		7	0	4	1	180	1559	155	1037	0	18	14	157	36						
	Botsford Hill			6	11		102	77	498	753	0	148	48	187	14						
	Bear Mountain		23	4	1		4		539	348	1	2	217			5	1	0		0	2
	Maltby Lake														3965						
	Mount Peter		6	0	8	106	113	83	414	421	55	411	291	137	31	0	668	258	63	3	3
	Chestnut Ridge	1	51	20	17	11	406	807	1569	822	4	144	253	728	813	167	185	35	392	222	161
	Hook Mountain	0	16	16	6	4	3	384	3756	795	0	8	8	60	163	21		7	5	0	
	Quaker Ridge	4	7	11	2	5	1258	1108	14823	720	3	261	130	1568	3183	42	20	45	1309	270	215
Purple Chickadee	3	23	17	1	3	23	176	615	123	4	37	61	335	3		3	52	11	2	16	
40	State Line	3	2	1	2	1	40	1912	3215	447	10	32	176	282	3290	178	42	13	83	46	82
	Lenoir				1			70	160	49	1		1		1414	13					
	Wildcat Ridge				1	6			2020	205	3		0	4	6			4		1	
	Montclair	1			0		17	39	247	36		9	3	156	1102	24	0	9	39	15	1
	Scott's Mt	1	30	16	10	10	223	406	358	1058	15	990	32	180	43	19	404	403	204	12	11
	Washington Valley		0	5				1669	1665			1556	42	309	5605			158	312	243	
CO	Lighthouse Point	1	0	0	0	0	0	249	0	0	0	0	0	1395	1469	0	1	0	3	522	16
	Total	780	1034	848	603	1341	4050	13820	40686	22965	3538	4222	20850	9233	21457	507	1696	1323	3624	2020	3233

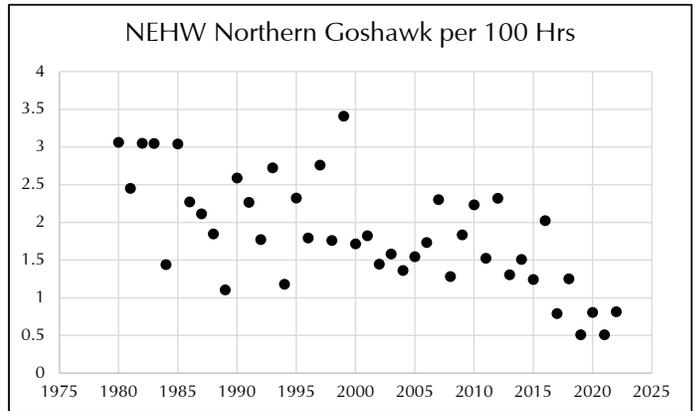
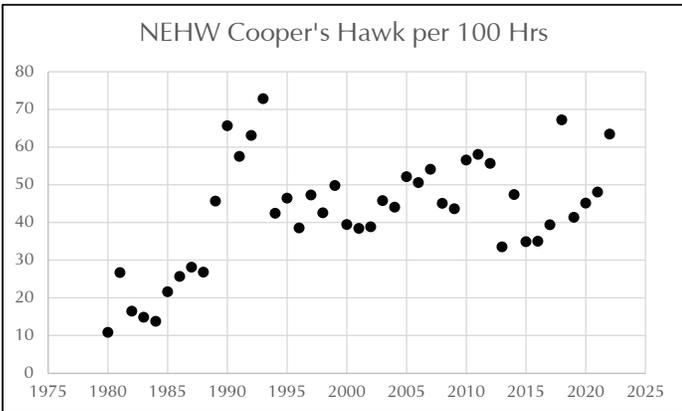
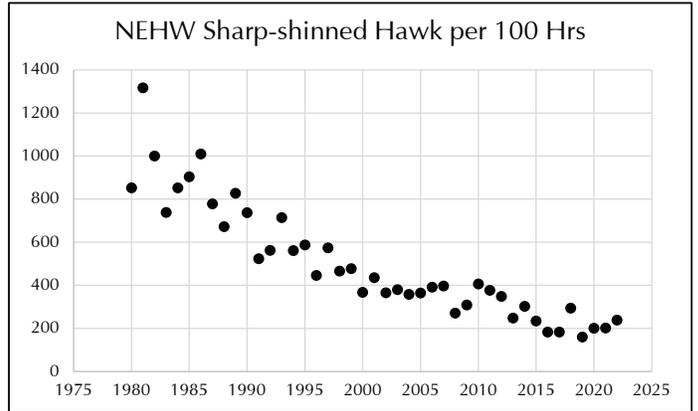
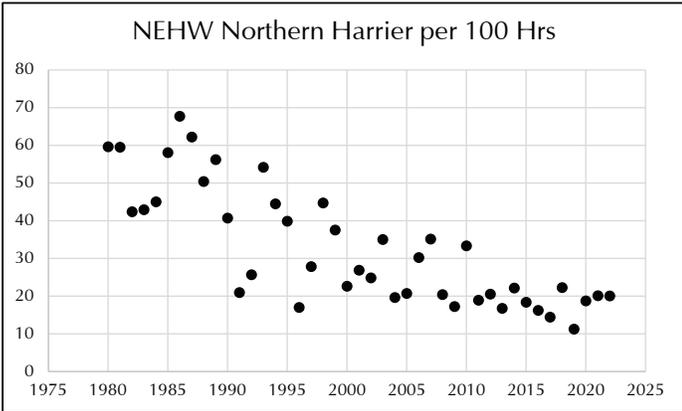
Formats: Solid outline/shaded is the highest count on that day. Bold numbers are daily counts greater than 1000.

NorthEast Hawk Watch Fall Migration Trends, 1980–2022

Vultures, Osprey, Bald Eagle

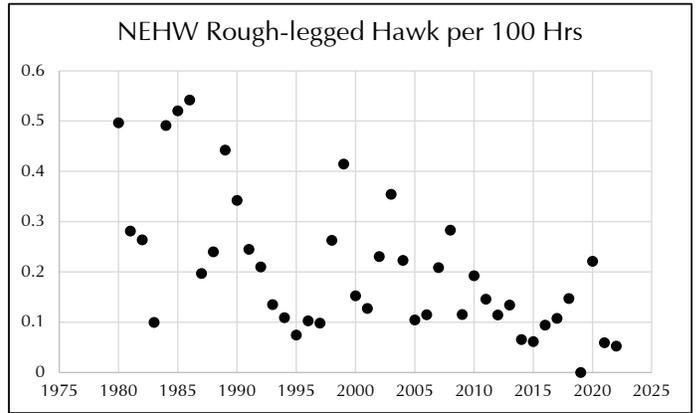
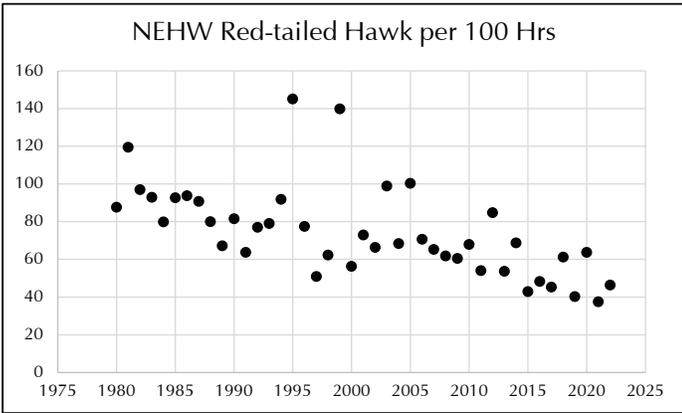
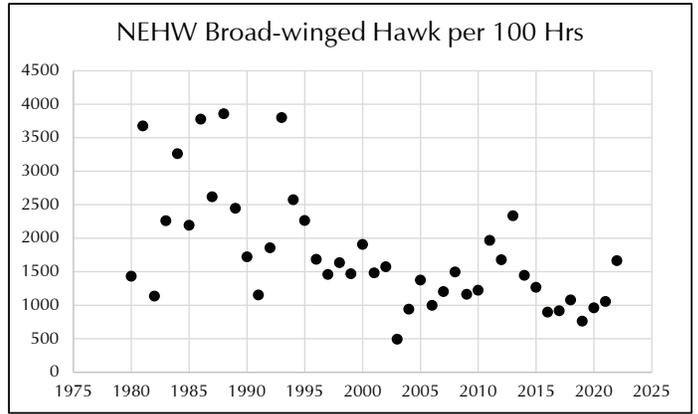
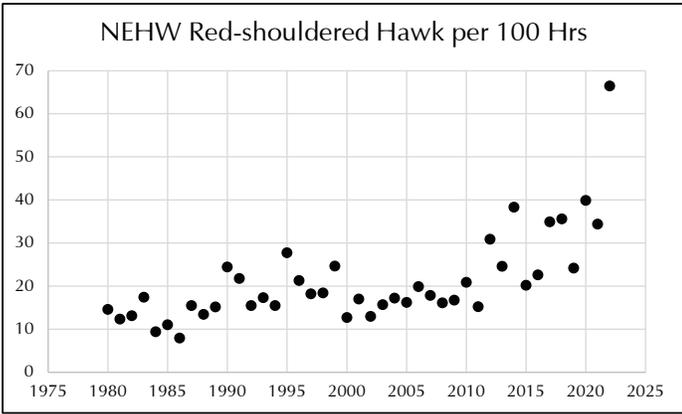


Harrier, Accipiters

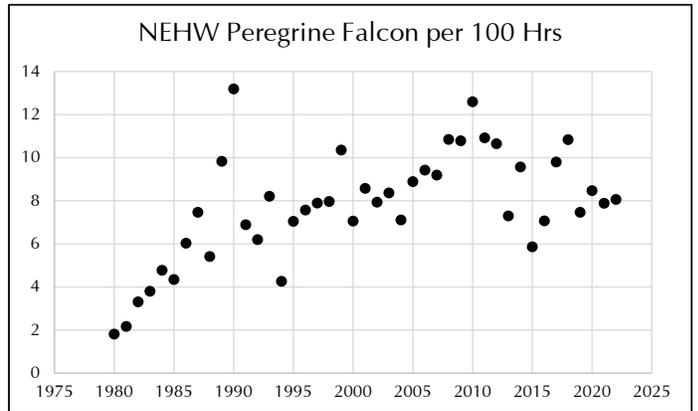
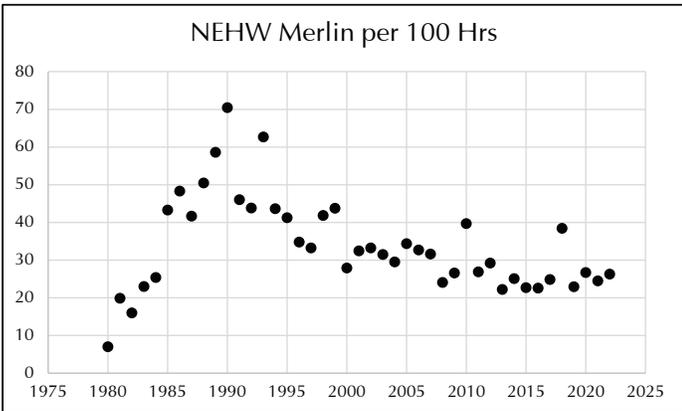
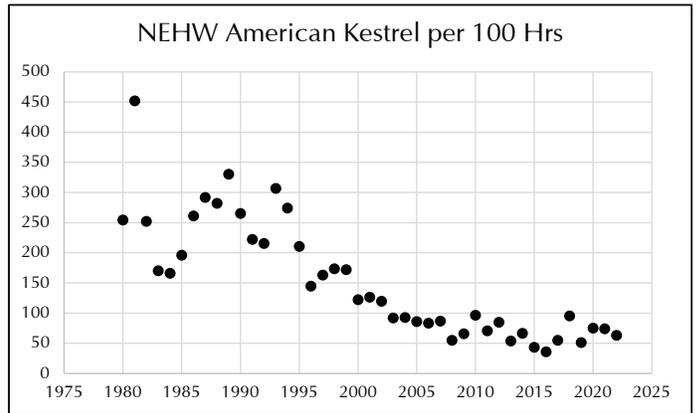
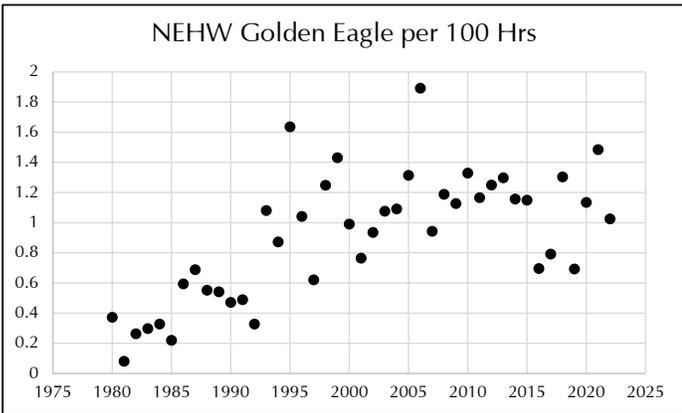


NorthEast Hawk Watch Fall Migration Trends, 1980–2022

Buteos



Golden Eagle, Falcons



Peak Daily Site Counts—Fall 2022

BROAD-WINGED HAWK			RED-SHOULDERED HAWK			SHARP-SHINNED HAWK			AMERICAN KESTREL			OSPREY		
Quaker Ridge	9/16	14823	Quaker Ridge	10/28	532	Lighthouse Point	9/15	344	Fort Tilden	9/15	223	Fire Island	9/15	165
Wachusett	9/21	7918	Hook Mountain	10/28	402	Quaker Ridge	9/29	315	Fire Island	9/29	164	Fort Tilden	9/14	150
Mount Watatic	9/21	6686	Quaker Ridge	11/9	267	Quaker Ridge	10/6	284	Lighthouse Point	9/15	142	Fort Tilden	9/23	147
Washington Valley	9/24	5605	Quaker Ridge	10/29	259	Chestnut Ridge	10/6	277	Fire Island	9/15	117	Fort Tilden	9/15	131
Pack Monadnock	9/17	4987	Chestnut Ridge	10/28	224	Chestnut Ridge	9/16	263	Lighthouse Point	10/2	85	Fort Tilden	9/24	115
Clarry Hill	9/17	4351	Chestnut Ridge	11/9	182	Lighthouse Point	9/24	261	Fort Tilden	9/29	78	Fire Island	9/23	113
Maltby Lake	9/24	3965	Quaker Ridge	11/15	140	Lighthouse Point	10/27	254	Lighthouse Point	10/8	75	Fort Tilden	9/8	111
Hook Mountain	9/16	3756	Chestnut Ridge	10/29	129	Hook Mountain	9/16	246	Fire Island	10/27	74	Fort Tilden	9/28	103
Greenlaw	9/16	3325	Hook Mountain	11/9	115	Lighthouse Point	9/29	239	Cadillac Mt	9/29	69	Fort Tilden	9/20	100
State Line	9/24	3290	Hook Mountain	11/18	101	Quaker Ridge	9/16	221	Fort Tilden	9/14	62	Lighthouse Point	9/7	77
State Line	9/16	3215	Quaker Ridge	11/29	101	Chestnut Ridge	9/24	203	Lighthouse Point	9/14	59	Lighthouse Point	9/24	69
Quaker Ridge	9/24	3183	Purple Chicadee	10/28	92	Chestnut Ridge	9/15	179	State Line	10/7	54	Lighthouse Point	9/23	68
Clarry Hill	9/16	3037	State Line	10/28	91	Quaker Ridge	9/28	172	Chestnut Ridge	9/14	53	Lighthouse Point	9/17	63
Wachusett	9/30	2385	Pack Monadnock	10/29	86	Quaker Ridge	9/30	167	Lighthouse Point	10/3	51	Clarry Hill	9/6	61
Wachusett	9/16	2100	State Line	10/29	85	Chestnut Ridge	10/7	163	Lighthouse Point	9/23	50	Lighthouse Point	9/8	60
Wildcat Ridge	9/16	2020	Hook Mountain	11/29	85	Quaker Ridge	10/3	158	Quaker Ridge	9/14	48	Fire Island	9/29	57
Wachusett	9/23	2000	Lighthouse Point	10/28	78	Chestnut Ridge	9/14	156	Washington Valley	9/15	46			
Clarry Hill	9/18	1979	Chestnut Ridge	11/15	77	State Line	10/6	154	Lighthouse Point	10/4	44	NORTHERN HARRIER		
State Line	9/15	1912	Quaker Ridge	11/8	64	Chestnut Ridge	9/23	151	State Line	9/9	43	Lighthouse Point	9/24	41
Wachusett	9/17	1910	State Line	11/9	60	Chestnut Ridge	9/17	150	Quaker Ridge	10/3	42	Lighthouse Point	9/23	26
Pack Monadnock	9/21	1701	Hook Mountain	10/29	54	Lighthouse Point	10/8	150	Fort Tilden	9/23	41	Fire Island	9/29	24
Washington Valley	9/15	1669	Hook Mountain	10/30	53	Quaker Ridge	9/24	148				Fort Tilden	9/24	22
Barre Falls	9/21	1665				Quaker Ridge	10/8	141	MERLIN			Lighthouse Point	9/15	21
Washington Valley	9/16	1665	GOLDEN EAGLE			Cadillac Mt	9/29	136	Fire Island	10/27	137	Lighthouse Point	10/2	19
Chestnut Ridge	9/16	1569	Wachusett	10/29	2	Chestnut Ridge	10/9	129	Fire Island	9/23	131	Lighthouse Point	10/3	18
Quaker Ridge	9/23	1568	Scott's Mt	10/29	2	Chestnut Ridge	10/3	117	Fire Island	9/15	106	Fort Tilden	9/23	17
Chestnut Hill	9/15	1559	Pack Monadnock	11/2	2	Hook Mountain	9/24	113	Fire Island	9/20	72	Fort Tilden	9/28	17
Washington Valley	9/20	1556	Purple Chicadee	11/2	2				Fire Island	10/3	68	Lighthouse Point	10/4	17
Shatterack Mountain	9/17	1476	Chestnut Ridge	11/3	2	COOPER'S HAWK			Fire Island	9/29	59	Fire Island	9/15	16
Lighthouse Point	9/24	1469	Chestnut Ridge	11/4	2	Lighthouse Point	10/8	215	Fire Island	9/24	46	Fort Tilden	9/29	15
Lenoir	9/24	1414	Chestnut Ridge	11/5	2	Lighthouse Point	10/2	173	Fort Tilden	9/23	39	Chestnut Ridge	10/17	15
Blueberry Hill	9/17	1409	Quaker Ridge	11/7	2	Lighthouse Point	10/28	165	Fire Island	9/14	34			
Lighthouse Point	9/23	1395	Wildcat Ridge	11/8	2	Lighthouse Point	9/29	139	Fire Island	10/8	33	TURKEY VULTURE		
Quaker Ridge	9/28	1309	Wachusett	11/9	2	Lighthouse Point	10/27	131	Fire Island	10/11	32	Quaker Ridge	10/28	391
Quaker Ridge	9/14	1258	Scott's Mt	11/9	2	Lighthouse Point	9/15	115	Fire Island	9/16	30	State Line	10/28	389
Quaker Ridge	9/15	1108	Hook Mountain	11/12	2	Quaker Ridge	10/28	115	Lighthouse Point	10/2	29	Chestnut Ridge	10/28	383
Montclair	9/24	1102	3 more days	Nov	2	Lighthouse Point	10/3	98	Fort Tilden	10/27	28	Hook Mountain	10/19	370
Scott's Mt	9/17	1058				Quaker Ridge	10/6	90	Fort Tilden	9/14	27	Montclair	10/28	367
Chestnut Hill	9/17	1037	BALD EAGLE			Lighthouse Point	9/24	88	Fort Tilden	9/20	23	State Line	10/19	365
			Clarry Hill	10/27	53	Lighthouse Point	10/23	65	Fire Island	10/18	23	Chestnut Ridge	10/29	315
			Clarry Hill	11/2	52	Lighthouse Point	10/6	61	Lighthouse Point	9/23	18	Chestnut Ridge	10/21	291
RED-TAILED HAWK			Lighthouse Point	9/24	35	Chestnut Ridge	9/30	59	Fire Island	10/5	18	Quaker Ridge	10/29	263
Lighthouse Point	10/28	171	Quaker Ridge	9/24	32	Quaker Ridge	10/8	55	Fire Island	9/8	17	State Line	10/26	225
Lighthouse Point	11/8	89	Clarry Hill	11/8	32	Quaker Ridge	10/16	51				Chestnut Ridge	10/18	210
Clarry Hill	10/28	87	Clarry Hill	10/28	30	Quaker Ridge	10/7	47	PEREGRINE FALCON			Chestnut Ridge	11/9	208
Pack Monadnock	11/7	56	Clarry Hill	9/15	27	Hook Mountain	10/28	47	State Line	10/13	15	State Line	10/29	207
State Line	10/28	54	Putney Mountain	9/24	26				Lighthouse Point	9/11	14	Wachusett	10/29	207
Clarry Hill	11/2	50	Mt. Philo	9/7	25	NORTHERN GOSHAWK			Fire Island	10/27	14			
Putney Mountain	10/27	46	Wachusett	9/15	25	Greenlaw	10/28	4	Fire Island	10/11	10	BLACK VULTURE		
State Line	11/8	40	Greenlaw	9/16	24	Putney Mountain	10/2	3	Lighthouse Point	10/16	9	State Line	11/14	27
Greenlaw	10/27	39	Wachusett	9/23	24	Pack Monadnock	10/29	3	Fire Island	9/23	8	Hook Mountain	11/10	23
Montclair	10/27	34	Greenlaw	9/15	23	Pack Monadnock	10/30	3	Lighthouse Point	9/24	8	State Line	10/17	22
Montclair	10/28	34	Washington Valley	9/23	22	4 days with 2 NG		2	Lighthouse Point	10/2	8	Hook Mountain	10/19	14
Greenlaw	11/1	34	Lighthouse Point	10/8	22	57 days with 1 NG		1	State Line	10/2	8	Bear Mountain	11/3	14
Scott's Mt	11/7	34	Clarry Hill	11/15	22				Fire Island	10/3	8	Purple Chicadee	11/7	14
Clarry Hill	11/9	31				ROUGH-LEGGED HAWK			Fire Island	10/3	8	Purple Chicadee	11/25	11
Lighthouse Point	10/29	30				Clarry Hill	11/8	2	Lighthouse Point	10/8	8	Hook Mountain	11/26	14
Hook Mountain	10/28	29	SWAINSON'S HAWK			Greenlaw	10/27	1	Hook Mountain	10/15	8	Lenoir	9/18	13
Putney Mountain	11/2	28	Quaker Ridge	9/29	1	Greenlaw	11/1	1	Fort Tilden	10/9	7	Purple Chicadee	10/19	11
Clarry Hill	10/27	27	Lighthouse Point	10/27	1	Wachusett	11/15	1	Fire Island	9/30	6	State Line	11/10	11
Scott's Mt	10/27	27	Quaker Ridge	10/30	1				Pack Monadnock	10/15	6			

Region 45

Greenlaw Mountain, Fall 2022 - St. Andrews, New Brunswick

Date	HRS	BV	TV	OS	BE	NH	SS	CH	NG	RS	BW	RT	RL	GE	AK	ML	PG	UR	TOTAL
8/24	5.5	0	0	4	2	1	0	0	0	0	7	0	0	0	0	0	0	0	17
8/26	6.5	0	0	9	2	0	1	0	0	0	4	1	0	0	0	0	0	0	14
9/1	8.0	0	0	5	3	0	3	0	0	0	7	1	0	0	7	0	0	1	27
9/4	8.0	0	1	11	6	7	45	0	0	0	13	0	0	0	7	4	0	2	96
9/5	8.0	0	0	12	7	9	32	0	0	0	48	2	0	0	5	0	0	3	118
9/6	6.5	0	0	3	3	4	18	1	2	0	4	0	0	0	5	1	0	1	42
9/7	4.0	0	0	3	0	1	12	0	0	0	4	0	0	0	0	0	0	0	20
9/8	8.0	0	0	8	4	0	14	0	0	0	6	0	0	0	6	0	0	0	38
9/9	7.5	0	0	4	4	1	4	0	1	0	4	0	0	0	5	0	0	0	23
9/10	4.0	0	0	2	2	2	4	1	0	0	11	0	0	0	1	0	0	0	23
9/13	3.3	0	0	2	4	0	0	0	0	0	2	0	0	0	0	0	0	0	8
9/14	8.5	0	3	11	6	0	1	0	0	0	102	0	0	0	2	0	0	4	129
9/15	9.5	0	0	4	23	4	5	0	0	0	726	0	0	0	9	0	0	10	781
9/16	9.5	0	0	6	24	1	19	0	0	0	3325	1	0	0	5	0	0	2	3383
9/18	6.0	0	0	9	0	3	22	1	1	0	578	0	0	0	3	0	0	3	620
9/22	8.0	0	5	8	2	5	15	1	1	0	179	1	0	0	4	2	1	5	229
9/24	7.5	0	5	10	6	2	11	0	0	0	101	2	0	0	0	0	4	3	144
9/27	6.5	0	10	2	6	1	22	0	1	0	34	5	0	0	11	3	3	3	101
9/28	8.8	0	27	3	6	2	19	1	1	0	260	3	0	0	34	2	1	3	362
9/29	7.5	0	11	3	5	2	60	0	1	0	127	8	0	0	20	1	1	5	245
9/30	6.5	0	7	6	0	2	30	0	0	2	26	0	0	0	6	0	2	3	84
10/1	8.5	0	23	2	7	5	31	1	0	0	14	18	0	0	16	6	1	2	126
10/2	7.0	0	3	2	2	0	8	0	1	0	0	4	0	0	1	1	2	0	24
10/4	4.0	0	3	1	2	0	4	0	0	0	0	0	0	0	1	0	0	2	13
10/5	7.5	0	7	1	1	5	17	1	1	0	1	2	0	0	3	2	1	2	44
10/7	8.5	0	11	1	7	3	4	0	0	0	0	1	0	0	0	1	3	4	35
10/9	7.5	0	58	2	11	4	14	2	2	1	0	4	0	0	0	1	0	1	100
10/10	6.5	0	40	2	8	1	16	0	1	1	0	2	0	0	2	0	2	2	77
10/11	6.5	0	20	3	1	2	22	1	0	0	0	2	0	0	0	1	3	1	56
10/15	5.3	0	28	6	3	4	29	0	0	0	0	2	0	0	0	5	0	2	79
10/19	4.0	0	3	1	9	0	7	0	0	0	0	0	0	0	0	0	1	2	23
10/20	5.8	0	4	1	4	1	18	0	1	0	0	3	0	0	2	0	1	1	35
10/21	5.5	0	18	1	0	0	9	2	0	0	0	2	0	0	0	0	1	1	34
10/22	4.5	0	14	0	5	1	13	0	0	0	0	6	0	0	0	0	1	0	40
10/26	6.0	0	7	2	3	4	5	1	1	0	5	0	0	0	0	0	2	1	32
10/27	8.5	0	50	0	16	10	14	0	1	0	39	1	0	0	0	0	0	3	134
10/28	5.0	0	17	0	1	2	5	0	4	0	0	16	0	0	0	0	0	1	46
10/29	6.0	1	9	1	0	4	14	1	0	0	2	6	0	0	0	0	0	2	40
11/1	7.5	0	6	0	6	1	3	0	0	0	0	34	1	0	0	1	0	0	52
11/2	5.0	0	13	0	2	2	4	0	1	0	0	11	0	0	0	0	1	1	35
11/7	5.0	0	1	0	13	0	1	0	0	0	0	0	0	0	0	0	2	0	17
11/8	6.5	0	34	0	7	5	1	0	0	0	0	4	0	0	0	0	2	0	53
11/13	5.0	0	0	0	18	0	2	0	0	0	0	5	0	0	0	0	0	0	25
11/14	6.0	0	12	0	17	0	1	1	0	0	0	4	0	0	0	1	0	0	36
TOTAL	289.0	1	450	150	258	101	579	15	21	7	5585	194	2	0	153	34	34	76	7660

Cooper Fall 2022 - Cooper, Maine

Date	HRS	BV	TV	OS	BE	NH	SS	CH	NG	RS	BW	RT	RL	GE	AK	ML	PG	UR	TOTAL
9/5	5.0	0	3	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4
9/6	6.0	0	4	1	2	0	0	0	0	0	0	0	0	0	0	0	0	0	7
9/7	6.0	0	4	0	2	0	0	0	0	0	0	0	0	0	1	2	0	0	9
9/8	5.0	0	2	0	1	0	0	1	0	0	0	0	0	0	0	1	0	0	5
9/10	6.0	0	2	3	0	1	0	0	0	0	0	0	0	0	0	2	0	0	8
9/14	5.0	0	3	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	4
9/15	6.0	0	2	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	4
9/16	6.0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1
9/17	6.0	0	2	0	1	0	0	1	0	0	4	0	0	0	1	0	0	0	9
9/18	6.5	0	2	1	1	0	0	0	0	0	0	0	0	0	1	1	0	0	6
9/24	5.0	0	0	1	0	0	1	1	0	0	4	0	0	0	0	0	0	0	7
9/25	5.3	0	4	1	1	0	1	1	0	0	0	0	0	0	0	2	0	0	10
9/27	3.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9/28	5.8	0	1	0	0	0	0	0	0	0	6	0	0	0	0	0	0	0	7
9/29	6.0	0	3	0	2	0	0	0	0	0	8	0	0	0	0	0	0	0	13
10/2	6.0	0	4	0	2	0	4	0	0	0	0	0	0	0	0	0	0	0	10
10/3	4.0	0	3	0	2	0	6	0	0	0	0	0	0	0	1	0	0	0	12
10/5	4.0	0	0	0	2	0	0	1	0	0	0	0	0	0	0	0	0	0	3
10/10	3.0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1
10/11	2.0	0	6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	6
TOTAL	101.5	0	43	7	23	0	13	5	0	0	22	0	0	0	5	8	0	0	126

Region 44

Cadillac Mountain 2022 - Acadia National Park, Maine

Date	HRS	BV	TV	OS	BE	NH	SS	CH	NG	RS	BW	RT	RL	GE	AK	ML	PG	UR	TOTAL
8/22	1.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8/24	4.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8/25	5.0	0	0	1	2	0	8	0	0	0	1	0	0	0	0	0	0	1	13
8/27	6.0	0	6	7	4	2	21	0	0	0	2	0	0	0	0	1	0	0	43
8/28	3.0	0	0	1	3	0	5	0	0	0	0	0	0	0	2	0	0	0	11
8/29	5.0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1
8/30	5.0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
9/1	5.0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	2
9/2	4.8	0	3	7	10	3	18	0	0	0	4	2	0	0	15	0	0	4	66
9/3	4.0	0	8	0	0	0	3	0	0	0	2	1	0	0	4	0	0	1	19
9/4	5.0	0	0	1	1	0	2	0	0	0	0	0	0	0	0	1	0	0	5
9/6	5.5	0	0	4	0	3	105	1	0	0	5	0	0	0	14	4	1	1	138
9/7	5.8	0	3	6	2	4	76	1	0	0	8	1	0	0	33	2	1	5	142
9/8	5.0	0	0	1	0	0	16	0	0	0	3	0	0	0	5	0	0	2	27
9/9	6.3	0	3	10	4	4	96	0	0	0	6	0	0	0	34	0	0	4	157
9/10	5.0	0	0	3	3	4	61	0	1	0	3	1	0	0	24	3	0	2	105
9/11	5.5	0	1	3	4	2	45	0	0	0	1	0	0	0	19	2	0	3	80
9/12	5.0	0	0	0	1	2	12	0	0	0	0	0	0	0	8	1	0	0	24
9/13	3.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9/14	5.0	0	0	2	0	1	0	0	0	0	0	0	0	0	0	0	0	3	6
9/15	5.3	0	3</																

Mt. Ascutney State Park Fall 2022 - Windsor, Vermont

Date	HRS	BV	TV	OS	BE	NH	SS	CH	NG	RS	BW	RT	RI	GE	AK	ML	PG	UR	TOTAL
9/1	4.5	0	0	1	1	0	1	0	0	0	0	0	0	0	0	0	0	3	6
9/2	4.3	0	0	0	1	0	0	0	0	0	3	0	0	0	1	0	2	2	9
9/8	4.3	0	0	0	0	1	0	3	0	0	1	0	0	0	0	1	0	6	6
9/9	4.3	0	0	0	0	1	0	6	0	0	5	0	0	0	0	1	0	5	18
9/12	4.5	0	0	0	0	0	0	3	0	0	2	0	0	0	0	0	0	2	7
9/14	4.3	0	0	0	1	0	0	2	0	0	0	0	0	0	1	1	1	6	6
9/15	4.3	0	0	1	2	0	2	2	0	0	18	0	0	0	0	0	0	3	28
9/16	4.3	0	0	2	4	0	1	2	0	0	102	0	0	0	1	2	1	0	115
9/27	3.3	0	0	0	1	0	2	2	0	0	0	0	0	0	1	1	1	0	8
9/28	3.8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9/29	4.3	0	0	0	3	1	1	6	0	0	2	0	0	0	2	1	0	0	16
10/3	4.3	0	0	0	0	0	1	0	0	0	0	0	0	0	0	2	0	0	3
10/4	4.3	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	2
10/5	4.3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10/6	4.3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10/7	3.3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL	66.0	0	0	4	13	5	8	26	0	0	133	0	0	5	9	5	16	224	

Concord School Fall 2022 - New Hampshire

Date	HRS	BV	TV	OS	BE	NH	SS	CH	NG	RS	BW	RT	RI	GE	AK	ML	PG	UR	TOTAL
9/12	4.8	0	16	1	1	0	0	0	0	0	8	2	0	0	1	0	0	6	35
9/16	5.0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	2	5
9/21	5.0	0	2	1	0	0	0	0	0	0	230	1	0	0	2	0	0	0	236
9/23	4.0	0	2	0	0	0	1	0	0	0	9	5	0	0	0	0	0	32	49
9/27	5.0	0	0	0	1	0	0	0	0	0	4	1	0	0	0	2	0	0	8
TOTAL	23.8	0	21	2	2	0	1	0	0	0	252	10	0	0	3	2	0	40	333

Putney Mountain Fall 2022 - Putney, Vermont

Date	HRS	BV	TV	OS	BE	NH	SS	CH	NG	RS	BW	RT	RI	GE	AK	ML	PG	UR	TOTAL
8/27	5.0	0	0	0	2	0	1	0	0	0	2	0	0	0	0	0	0	0	5
8/28	5.5	0	0	0	0	1	1	0	0	0	1	0	0	0	0	1	0	0	4
8/29	8.0	3	0	0	0	0	1	0	0	0	6	0	0	0	0	0	0	0	10
8/30	7.5	0	0	1	0	0	0	1	0	0	4	0	0	0	0	0	0	0	6
8/31	8.5	0	0	2	4	1	5	0	0	0	7	0	0	0	2	0	0	0	21
9/1	8.0	0	0	0	0	0	3	0	0	0	5	0	0	0	1	0	0	0	9
9/2	8.0	0	0	0	0	0	6	0	0	0	13	0	0	0	0	0	0	0	19
9/3	7.0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0	0	0	2
9/4	8.3	0	0	1	3	0	2	0	0	0	41	0	0	0	1	0	0	0	48
9/7	8.0	0	0	1	0	2	1	0	0	0	5	0	0	0	0	0	0	0	9
9/8	9.3	0	0	4	8	0	15	0	0	0	770	0	0	0	1	0	1	0	799
9/9	8.5	0	0	5	1	0	29	5	0	0	657	0	0	0	2	1	1	0	701
9/10	9.3	0	0	3	5	2	28	2	0	0	276	0	0	0	1	1	2	0	320
9/11	8.3	0	0	0	0	1	2	1	0	0	7	0	0	0	2	0	0	0	13
9/12	9.0	0	0	5	3	3	17	5	0	0	403	0	0	0	2	0	0	0	438
9/14	9.5	0	0	7	2	3	62	7	1	0	193	0	0	0	13	3	2	0	293
9/15	9.8	0	0	9	7	2	34	3	0	0	723	0	0	0	7	1	2	0	788
9/16	9.5	0	0	4	6	0	29	1	0	0	295	0	0	0	4	1	1	0	341
9/17	9.3	0	0	1	1	0	20	3	0	0	144	0	0	1	2	0	0	0	172
9/18	8.8	0	0	3	2	1	20	3	0	0	383	0	0	0	6	0	0	0	418
9/19	7.0	0	0	0	0	0	6	0	0	0	10	0	0	0	0	0	0	0	19
9/20	2.3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9/21	9.3	0	0	3	0	2	14	5	1	0	337	0	0	0	0	0	1	0	363
9/22	2.8	0	0	5	3	1	22	1	0	0	40	0	0	0	6	2	1	0	81
9/23	9.3	0	0	8	3	2	36	1	0	0	103	0	0	0	5	3	1	0	162
9/24	9.5	0	7	3	26	1	31	4	0	0	78	1	0	1	6	4	1	0	168
9/25	6.3	0	2	0	0	0	1	0	0	0	0	1	0	0	0	0	0	0	4
9/26	8.3	0	5	1	11	2	17	3	1	0	10	1	0	0	0	0	0	0	51
9/27	8.0	0	9	2	3	1	35	2	0	0	205	0	0	0	7	0	2	0	267
9/28	9.3	0	3	6	3	2	83	8	0	0	51	15	0	0	11	1	3	0	186
9/29	9.0	0	1	4	7	0	16	5	0	0	5	8	0	0	4	1	1	0	52
9/30	8.8	0	3	1	1	0	15	2	0	2	1	3	0	0	2	0	0	0	30
10/1	9.0	0	2	2	3	1	19	1	0	0	2	2	0	0	0	0	0	0	33
10/2	9.0	0	10	3	5	1	45	1	3	0	17	8	0	1	5	3	3	0	105
10/3	8.5	0	15	0	6	0	36	1	0	0	2	6	0	0	1	2	0	0	69
10/4	8.3	0	31	0	1	1	38	1	0	3	1	7	0	0	4	1	1	0	89
10/5	8.5	0	7	1	1	2	11	1	1	1	0	3	0	0	2	0	1	0	31
10/6	8.0	0	0	0	2	0	40	0	0	2	0	5	0	0	2	1	0	0	52
10/7	8.0	0	5	1	0	0	20	0	0	0	0	2	0	0	3	0	0	0	31
10/8	9.3	0	27	1	6	1	35	4	1	0	0	7	0	0	3	2	3	0	90
10/9	9.0	0	33	0	3	0	31	3	0	0	0	5	0	0	0	0	0	0	75
10/10	9.5	0	0	1	1	1	4	1	0	0	0	0	0	0	1	2	1	0	12
10/11	8.8	0	28	0	1	1	29	5	1	4	0	3	0	0	1	1	2	0	76
10/12	9.0	0	9	0	1	2	35	0	1	0	0	6	0	0	5	1	1	0	61
10/13	3.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10/14	5.0	0	7	0	0	0	1	8	2	0	0	0	1	0	1	0	2	0	22
10/15	8.0	0	4	0	1	0	34	1	0	1	0	3	0	1	4	3	0	0	52
10/16	9.0	0	28	1	2	3	47	5	1	4	0	21	0	0	5	0	0	0	117
10/17	7.8	0	0	1	0	3	26	0	0	0	0	0	0	0	2	1	1	0	34
10/18	8.5	0	1	1	0	0	30	1	0	0	0	0	0	1	5	2	1	0	42
10/19	8.5	0	25	1	1	2	68	2	0	0	0	6	0	0	10	5	0	0	120
10/20	8.3	0	60	1	3	4	74	1	0	0	0	7	0	0	9	3	0	0	162
10/21	8.0	4	4	0	4	2	44	3	1	1	0	5	0	0	3	2	2	0	75
10/22	8.5	3	3	0	0	2	38	3	0	1	0	7	0	0	2	3	1	0	63
10/23	8.0	0	0	0	1	4	36	0	0	0	0	0	0	0	1	2	0	0	44
10/24	4.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10/25	0.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10/26	5.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10/27	8.0	0	21	1	7	0	23	1	0	5	0	46	0	0	2	0	3	0	109
10/28	8.0	0	10	0	0	0	3	0	0	5	0	19	0	1	0	0	0	0	38
10/29	8.3	0	1	0	0	1	5	0	0	4	0	7	0	1	0	0	0	0	19
10/30	8.0	0	2	0	1	2	3	0	0	0	0	12	0	0	0	0	0	0	20
10/31	7.0	0	5	0	1	0	4	1	0	1	0	3	0	0	0	0	0	0	15
11/1	7.5	0	0	1	0	0	4	0	0</										

East St. Adams 2022 - Adams, Massachusetts

Date	HRS	BV	TV	OS	BE	NH	SS	CH	NG	RS	BW	RT	RL	GE	AK	ML	PG	UR	TOTAL
9/13	3.0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	2
9/14	6.5	0	0	1	0	0	0	1	0	0	29	0	0	0	0	0	0	0	31
9/15	7.0	0	0	0	1	0	4	0	0	0	32	0	0	0	0	0	0	0	37
9/16	6.0	0	0	0	2	0	1	1	0	0	27	0	0	0	0	1	0	0	32
9/17	7.0	0	0	1	1	0	6	2	0	0	133	0	0	0	0	0	0	3	146
9/18	6.5	0	0	3	4	0	3	2	0	0	68	0	0	0	0	0	0	0	80
9/21	5.5	0	0	1	3	0	1	0	0	0	13	0	0	0	0	0	0	2	20
9/23	3.5	0	0	1	2	0	0	0	0	0	3	0	0	0	0	1	0	1	8
9/24	3.3	0	0	0	2	0	1	0	0	0	0	0	0	0	1	0	0	1	5
9/25	3.5	0	0	0	1	0	1	1	0	0	0	0	0	0	0	0	0	0	3
9/29	5.8	0	0	0	5	0	9	1	0	0	2	5	0	0	4	1	1	0	28
10/7	5.0	0	0	0	0	0	1	0	0	0	0	0	0	1	0	0	0	1	3
10/8	4.0	0	0	0	2	0	8	0	0	0	0	1	0	0	0	1	0	0	12
TOTAL	86.0	0	0	8	24	0	50	9	0	0	431	6	0	1	6	6	2	12	555

Wachusett Fall 2022 - Princeton, Massachusetts

Date	HRS	BV	TV	OS	BE	NH	SS	CH	NG	RS	BW	RT	RL	GE	AK	ML	PG	UR	TOTAL		
8/12	4.8	0	0	0	0	0	0	1	0	0	1	1	0	0	0	0	1	0	1	4	
8/13	7.8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	
8/14	4.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	
8/15	5.8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
8/16	5.8	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1	2	2	
8/18	5.8	0	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	2	
8/19	5.3	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1	1	
8/20	3.8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
8/24	5.3	0	0	3	2	0	0	0	0	0	0	0	0	0	0	0	0	0	5	5	
8/25	4.8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
8/26	2.3	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1	1	
8/27	6.8	0	0	0	1	0	0	2	0	0	4	3	0	0	1	0	0	2	13	13	
8/28	4.5	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1	1	
8/29	5.8	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	
8/30	5.0	0	0	3	0	0	1	0	0	0	1	0	0	0	1	0	0	0	6	6	
8/31	5.5	0	0	3	8	0	1	0	0	0	2	0	0	0	1	1	0	0	18	18	
9/1	5.5	0	0	1	5	0	5	0	0	0	2	0	0	0	1	0	0	1	15	15	
9/2	6.5	0	0	6	2	0	0	1	0	0	8	0	0	0	0	0	0	2	19	19	
9/3	6.8	0	0	10	5	0	1	3	0	0	9	3	0	0	1	0	0	0	32	32	
9/4	5.8	0	1	2	1	0	1	0	0	0	3	1	0	0	0	1	0	1	11	11	
9/7	5.8	0	0	10	7	2	4	1	0	0	8	0	0	0	3	0	3	4	41	41	
9/8	8.8	0	0	10	8	1	3	2	0	0	23	1	0	0	4	3	3	5	64	64	
9/9	6.8	0	1	7	7	1	7	6	0	2	11	1	0	0	3	4	0	5	55	55	
9/10	7.5	0	0	4	3	3	4	9	0	1	11	1	0	0	11	0	1	4	52	52	
9/11	3.5	0	0	3	0	1	1	0	0	0	0	0	0	0	0	0	0	0	5	5	
9/12	7.0	0	0	21	14	0	58	5	0	0	16	0	0	0	5	0	0	6	125	125	
9/14	7.8	0	0	2	1	3	23	0	0	2	165	0	0	0	9	3	0	8	216	216	
9/15	6.8	0	0	8	25	4	31	6	0	0	895	0	0	0	9	2	0	6	986	986	
9/16	8.0	0	0	20	21	4	39	1	0	0	2100	0	0	0	9	1	2	5	2202	2202	
9/17	7.8	0	0	20	14	1	30	16	0	0	1910	2	0	0	6	3	1	12	2015	2015	
9/18	5.8	0	0	4	0	0	1	0	0	0	11	0	0	0	1	0	0	2	19	19	
9/19	3.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
9/20	3.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
9/21	7.8	0	0	14	10	1	28	2	0	0	7918	1	0	0	0	0	0	6	7980	7980	
9/23	6.5	0	0	5	24	1	26	5	0	1	2000	2	0	0	3	1	0	8	2077	2077	
9/24	6.0	0	0	3	5	0	3	3	0	0	15	0	0	0	4	2	1	11	48	48	
9/25	5.5	0	0	4	0	1	0	0	0	0	0	0	0	0	0	0	0	2	7	7	
9/26	7.5	0	0	4	0	0	3	2	0	2	29	1	0	0	0	0	2	7	50	50	
9/27	4.0	0	0	0	0	0	1	1	0	0	1	1	0	0	0	0	0	0	4	4	
9/28	6.3	0	1	3	8	1	17	2	0	0	422	1	0	0	8	0	0	2	465	465	
9/29	7.8	0	2	2	18	1	71	26	0	2	17	12	0	0	15	1	0	12	179	179	
9/30	7.8	0	1	2	14	6	25	16	0	3	2385	5	0	0	7	3	0	11	2478	2478	
10/2	6.5	0	6	2	4	1	8	4	0	1	4	7	0	0	10	4	0	11	62	62	
10/3	6.0	0	0	0	2	1	11	1	0	1	0	0	0	0	3	0	6	25	25		
10/6	6.8	0	38	0	4	1	5	9	0	0	1	6	0	0	5	0	1	4	74	74	
10/7	5.8	0	13	2	4	1	7	2	0	0	1	5	0	0	1	1	0	5	42	42	
10/8	5.8	0	2	1	8	1	3	1	0	0	0	2	0	0	7	1	1	11	38	38	
10/9	4.8	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	2	2	
10/10	5.3	0	13	1	0	2	5	1	0	0	0	6	0	0	1	0	0	1	30	30	
10/11	5.8	0	3	1	2	0	1	7	0	1	0	0	0	0	1	0	0	2	18	18	
10/12	6.0	0	14	2	3	0	2	2	0	0	0	6	0	0	1	0	0	0	30	30	
10/14	2.3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
10/15	6.8	0	95	2	2	0	3	6	0	1	0	1	0	0	3	2	0	6	121	121	
10/16	6.8	0	121	3	13	1	17	16	0	0	0	13	0	0	0	3	0	5	192	192	
10/17	3.0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	2	2	
10/18	5.3	1	44	3	1	2	0	0	0	0	0	2	0	0	0	1	1	2	57	57	
10/19	6.3	0	95	0	7	0	2	0	0	0	0	2	0	0	3	2	0	5	116	116	
10/20	5.5	0	20	0	0	0	1	0	0	0	0	5	0	0	0	0	0	0	26	26	
10/21	7.5	0	154	3	2	0	5	5	0	1	0	13	0	0	0	0	1	6	190	190	
10/22	7.8	0	139	0	2	1	3	3	0	3	0	6	0	0	0	0	0	4	161	161	
10/23	4.8	0	1	0	0	0	0	2	0	0	0	0	0	0	0	1	0	0	4	4	
10/27	6.8	0	30	3	9	0	2	16	0	4	0	10	0	0	12	6	3	8	103	103	
10/28	7.3	1	47	0	2	5	12	6	0	17	0	14	0	0	1	3	2	11	121	121	
10/29	7.3	0	207	0	14	2	5	5	0	29	0	14	0	2	1	1	0	26	306	306	
10/30	5.3	0	9	0	3	0	2	3	0	2	0	6	0	0	0	0	0	4	29	29	
11/2	6.3	0	18	0	9	0	1	1	0	23	0	8	0	0	0	0	0	6	66	66	
11/3	1.3	0	1	0	0	1	0	0	0	1	0	1	0	0	0	0	0	1	5	5	
11/5	1.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
11/8	1.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
11/9	5.5	0	0	0	1	0	3	1	0	3	0	7	0	2	0	0	0	1	3	21	21
11/14	1.0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1	2	2	
11/15	4.5	0	2	0	0	1	0														

Blueberry Hill 2022 - Southwick, Massachusetts

Date	HRS	BV	TV	OS	BE	NH	SS	CH	NG	RS	BW	RT	RL	GE	AK	ML	PG	UR	TOTAL
9/28	8.3	0	1	1	6	3	18	2	0	0	61	0	0	0	8	4	0	1	105
9/29	3.5	0	0	0	2	0	35	4	0	0	2	2	0	0	2	0	0	1	48
9/30	6.5	0	0	0	0	1	2	2	0	0	3	1	0	0	3	0	0	1	13
10/2	2.0	0	0	0	1	0	0	0	0	0	1	0	0	0	2	0	0	1	5
10/3	4.0	0	14	0	0	1	1	0	0	0	0	0	0	0	1	1	0	0	18
10/6	5.3	0	52	0	0	0	12	2	0	0	0	0	0	0	4	0	0	1	71
10/11	5.0	0	0	0	3	0	3	0	0	0	0	0	0	0	0	0	0	0	6
10/12	5.5	0	93	0	1	1	4	1	0	0	0	0	0	0	1	0	0	1	102
10/14	2.0	0	27	0	1	0	2	0	0	0	0	0	0	0	1	0	0	0	31
10/15	5.0	0	16	0	0	0	2	0	0	0	0	0	0	0	1	0	0	1	20
10/16	5.5	0	18	0	0	0	2	0	0	1	0	1	0	0	1	2	0	0	25
10/18	5.5	0	32	4	1	4	12	1	0	1	0	0	0	0	4	4	0	0	63
10/19	5.5	0	39	0	0	0	5	1	0	1	0	0	0	0	3	0	1	1	51
10/20	5.5	0	28	2	2	1	3	1	0	0	0	0	0	0	0	0	0	0	37
10/21	4.3	0	68	0	0	0	4	1	0	1	0	0	0	0	1	1	0	0	76
10/22	4.0	0	7	0	0	0	4	2	0	0	0	0	0	0	2	2	0	0	17
10/27	5.0	0	29	0	0	2	9	2	0	0	0	6	0	0	0	0	0	0	48
10/28	4.5	0	10	0	0	0	4	2	0	3	0	0	0	0	0	0	0	0	19
10/29	6.0	0	15	0	0	2	4	0	0	13	0	1	0	0	0	0	2	0	37
10/30	4.0	0	2	0	0	0	0	0	0	6	0	0	0	0	0	1	0	0	9
10/31	4.0	0	3	0	0	1	2	0	0	1	0	0	0	0	1	0	0	0	8
11/2	4.8	0	11	0	0	0	1	1	0	8	0	4	0	0	0	0	1	0	26
11/3	4.0	0	0	0	0	1	1	0	0	3	0	0	0	0	0	0	0	0	4
11/5	4.0	0	2	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	3
11/7	3.5	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	2
11/8	4.0	0	7	0	0	0	1	0	0	1	0	3	0	0	0	0	0	0	12
11/14	2.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11/15	3.3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11/22	3.5	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1
11/23	3.0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	2
TOTAL	233.0	0	532	45	30	34	240	27	0	41	3238	23	0	0	73	27	7	18	4335

Booth Hill Fall 2022 - West Hartland, Connecticut

Date	HRS	BV	TV	OS	BE	NH	SS	CH	NG	RS	BW	RT	RL	GE	AK	ML	PG	UR	TOTAL
9/7	4.0	0	10	1	1	0	0	36	2	0	0	0	0	0	1	0	0	0	51
9/8	5.0	0	3	1	2	0	1	0	0	0	6	2	0	0	0	0	0	0	15
9/9	5.0	0	14	1	3	0	3	0	0	2	10	1	0	0	1	0	0	1	36
9/10	4.5	0	6	0	2	0	2	0	0	0	3	1	0	0	1	0	0	0	15
9/14	5.0	1	17	0	2	1	1	0	0	0	77	1	0	0	2	0	0	0	102
9/15	4.0	0	16	0	1	0	2	0	0	1	43	1	0	0	0	0	0	0	64
9/16	6.0	0	9	0	2	0	0	2	0	3	63	0	0	0	2	0	0	0	81
TOTAL	33.5	1	75	3	13	1	9	2	0	6	238	8	0	0	7	0	0	1	364

Johnnycake Mountain Fall 2022 - Burlington, Connecticut

Date	HRS	BV	TV	OS	BE	NH	SS	CH	NG	RS	BW	RT	RL	GE	AK	ML	PG	UR	TOTAL
9/8	4.0	0	10	3	2	0	0	0	0	0	1	0	0	0	0	0	0	0	16
9/10	4.0	5	6	0	1	1	0	1	0	1	3	0	0	0	3	0	0	0	21
9/14	6.0	3	12	8	4	1	0	2	0	2	172	1	0	0	9	0	0	6	220
9/15	5.5	0	9	1	3	0	0	0	0	5	14	4	0	0	2	0	0	0	38
9/16	5.0	0	12	3	2	0	0	1	0	3	472	5	0	0	2	0	0	0	500
9/17	4.0	0	4	4	3	0	0	2	0	0	85	5	0	0	2	0	0	0	105
9/18	4.0	6	12	1	1	0	0	1	0	0	4	4	0	0	2	0	0	0	27
9/19	4.0	0	3	0	0	0	0	0	0	0	5	1	0	0	1	0	0	0	10
9/20	4.0	0	7	4	3	0	0	0	1	0	86	1	0	0	3	0	0	0	105
9/21	4.0	0	4	3	3	0	2	1	0	0	11	1	0	0	4	0	0	0	29
9/23	4.0	0	10	2	1	0	2	1	0	0	123	4	0	0	3	0	0	0	146
9/26	2.5	0	4	0	5	0	1	1	0	4	20	5	0	0	0	0	0	0	40
9/28	3.5	0	10	0	4	0	3	1	0	2	143	3	0	0	3	0	0	0	170
TOTAL	54.5	14	103	29	32	2	8	12	0	17	1139	30	0	0	34	0	0	7	1427

Mohonk Preserve Fall 2022 - New Paltz, New York

Date	HRS	BV	TV	OS	BE	NH	SS	CH	NG	RS	BW	RT	RL	GE	AK	ML	PG	UR	TOTAL
9/8	4.0	0	0	1	6	0	0	0	0	0	1	1	0	0	1	0	0	0	0
9/14	5.0	0	0	2	3	0	6	0	0	0	40	1	0	0	3	2	0	1	0
9/15	6.0	0	0	1	5	0	6	0	0	0	23	2	0	0	2	0	0	0	0
9/17	5.0	0	0	4	1	0	11	1	0	0	298	4	0	0	1	0	0	0	0
9/20	5.0	0	0	2	6	0	24	3	0	0	119	1	0	0	2	0	0	2	0
9/21	4.0	0	0	0	0	0	6	2	0	0	33	7	0	0	1	1	0	1	0
10/6	5.5	0	34	0	3	1	50	0	0	0	0	1	0	0	2	0	0	0	0
10/12	6.0	0	24	1	0	0	27	2	0	0	0	0	0	0	0	2	1	0	0
10/31	5.0	0	23	0	8	2	2	1	0	1	0	1	0	0	0	0	0	2	0
11/7	5.5	0	0	0	1	1	3	1	0	2	0	2	0	0	1	0	0	1	0
TOTAL	51.5	0	81	11	33	4	135	10	0	3	514	20	0	0	13	5	0	8	0

Chestnut Hill Fall 2022 - Litchfield, Connecticut

Date	HRS	BV	TV	OS	BE	NH	SS	CH	NG	RS	BW	RT	RL	GE	AK	ML	PG	UR	TOTAL
9/8	3.0	0	0	0	0	0	1	0	0	0	1	7	0	0	0	0	0	0	10
9/9	3.0	0	0	2	0	1	1	2	0	0	0	0	0	0	0	0	0	0	6
9/10	4.0	0	0	0	1	0	1	0	0	0	4	0	0	0	0	0	0	4	10
9/12	1.0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	2
9/14	5.0	0	0	0	0	0	3	2	0	1	180	0	0	0	1	0	0	0	187
9/15	8.5	0	0	3	5	0	7	4	0	1	1559	0	0	0	0	0	0	0	1579
9/16	5.5	0	0	0	2	0	1	6	0	0	155	0	0	0	0	0	0	0	164
9/17	5.0	0	0	1	6	0	1	3	0	0	1037	0	0	0	0	0	0	0	1048
9/18	3.5	0	0	0	0	0	4	1	0	0	0	0	0	0	0	0	0	0	5
9/20	3.0	0	0	0	0	0	0	0	0	0	18	0	0	0	0	0	0	0	18
9/21	3.3	0	0	0	0	0	0	0	0	0	14	0	0	0	0	0	0	1	15
9/23	4.5	0	0	1	4	0	4	5	0	0	157	0	0	0	0	0	0	0	171
9/24	4.3	0	0	0	5	0	9	2	0	0	36	0	0	0	2	0	0	0	54
TOTAL	53.5	0	0	7	23	1	32	26	0	3	3168	0	0	0	3	1	0	5	3269

Botsford Hill Fall 2022 - Bridgewater, Connecticut

Date	HRS	BV	TV	OS	BE	NH	SS	CH	NG	RS	BW	RT	RL	GE	AK	ML	PG	UR	TOTAL
9/9	3.0	0	0	0	1	1	0	0	0	0	6	0	0	0	0				

Quaker Ridge Fall 2022 - Greenwich, Connecticut

Date	HRS	BV	TV	OS	BE	NH	SS	CH	NG	RS	BW	RT	RL	GE	AK	ML	PG	UR	TOTAL
9/30	10.0	0	5	5	5	4	167	14	0	2	215	0	0	0	34	0	1	0	452
10/2	9.0	0	0	3	0	2	48	8	0	0	14	1	0	0	13	1	1	1	92
10/3	9.0	0	13	3	6	11	158	28	0	3	21	0	0	0	42	1	1	0	287
10/4	7.0	0	0	2	0	3	12	3	0	0	3	0	0	0	3	3	0	0	29
10/5	3.0	0	0	1	0	1	22	3	0	0	1	0	0	0	5	0	0	0	33
10/6	10.0	0	49	2	11	6	284	90	0	17	29	3	0	0	34	1	1	0	527
10/7	10.0	0	4	4	3	4	104	47	0	2	21	0	0	0	36	1	0	0	226
10/8	10.0	0	31	5	8	4	141	55	0	27	2	0	0	0	33	0	1	1	308
10/9	8.0	0	22	0	0	3	12	9	0	2	0	0	0	0	4	0	0	0	52
10/10	8.0	0	7	0	3	0	11	4	0	0	0	0	0	0	0	0	0	0	25
10/11	10.0	0	85	6	1	3	70	13	0	8	3	0	0	0	15	0	0	0	204
10/12	9.0	4	61	14	9	0	46	15	0	2	1	0	0	0	10	0	4	0	166
10/13	8.0	0	2	2	0	0	6	6	0	0	0	0	0	0	1	0	0	0	17
10/14	9.0	0	88	4	5	2	33	21	0	3	0	0	0	0	2	0	0	0	158
10/15	5.0	1	3	2	1	0	20	10	0	5	1	1	0	1	7	0	1	0	53
10/16	8.0	0	134	4	5	1	48	51	0	28	0	2	0	0	7	5	0	1	286
10/17	8.0	0	39	2	2	1	54	24	0	4	1	0	0	0	10	3	0	0	140
10/18	9.0	1	136	0	10	2	60	25	0	27	0	1	0	0	19	0	0	0	281
10/19	8.0	1	35	5	3	4	30	18	0	8	0	0	0	0	13	2	1	0	120
10/20	9.0	9	46	2	3	3	29	26	0	3	0	0	0	1	8	3	2	0	135
10/21	9.0	0	146	2	6	4	31	17	0	17	0	0	0	0	9	0	0	0	232
10/22	8.0	0	109	2	3	2	25	18	0	8	0	3	0	0	1	1	0	0	172
10/23	8.0	0	3	0	2	7	85	24	0	6	0	0	0	0	2	6	0	0	135
10/24	6.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10/25	7.0	0	0	0	0	0	3	1	0	1	0	0	0	0	0	0	0	0	5
10/26	8.0	0	8	1	1	1	9	12	0	13	0	0	0	1	1	0	0	1	48
10/27	9.0	0	41	1	9	2	57	45	0	37	0	0	0	0	5	1	0	2	200
10/28	9.0	2	391	0	9	6	84	115	0	532	0	21	0	0	3	0	0	0	1163
10/29	8.2	1	263	0	12	2	45	41	0	259	0	12	0	0	0	0	0	2	637
10/30	8.0	0	17	0	4	1	17	20	0	45	0	9	0	1	1	0	0	1	116
10/31	8.0	0	17	0	2	1	8	4	0	7	0	5	0	1	0	0	0	1	46
11/1	8.0	0	10	0	0	0	3	2	0	1	0	0	0	0	0	0	0	0	16
11/2	8.0	3	79	1	3	2	4	6	0	51	0	8	0	0	0	0	1	1	159
11/3	8.0	0	53	1	2	0	11	6	0	10	0	1	0	0	1	0	0	1	86
11/4	8.0	0	15	0	0	1	5	7	0	6	0	1	0	0	2	0	0	0	37
11/5	4.0	0	0	0	0	0	2	1	0	0	0	0	0	0	0	0	0	0	3
11/6	7.0	0	0	0	0	0	2	1	0	0	0	0	0	0	0	0	0	0	3
11/7	8.0	0	14	0	2	0	6	8	0	0	0	0	0	2	0	0	0	1	33
11/8	9.0	0	12	0	1	2	12	8	0	64	0	2	0	0	0	0	1	0	102
11/9	8.0	0	55	1	2	2	6	8	0	267	0	5	0	0	0	0	0	0	346
11/10	8.0	0	22	0	1	1	4	1	0	7	0	0	0	0	0	0	0	0	36
11/11	7.0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1
11/12	3.0	0	2	0	2	0	1	1	0	1	0	0	0	0	0	0	0	0	8
11/13	6.0	0	2	0	2	1	1	0	0	1	0	2	0	0	1	0	0	0	10
11/14	8.0	2	3	0	0	0	2	2	0	21	0	3	0	0	0	0	1	0	34
11/15	8.0	0	22	0	0	1	2	3	0	140	0	6	0	0	0	1	0	0	175
11/16	8.0	0	14	0	0	0	0	0	0	8	0	1	0	0	0	0	0	0	24
11/17	8.0	0	3	0	2	0	0	0	0	15	0	0	0	0	0	0	0	0	20
11/18	8.0	0	3	0	1	2	2	0	0	5	0	3	0	0	0	0	0	0	16
11/19	8.0	2	20	0	5	2	3	1	0	35	0	2	0	0	0	0	0	0	70
11/20	8.0	0	3	1	8	2	2	0	0	1	0	1	0	0	0	1	0	0	19
11/21	3.3	0	5	0	0	2	1	1	0	3	0	4	0	0	0	0	0	0	16
11/22	7.8	0	17	0	3	0	2	1	0	12	0	8	0	0	0	0	0	0	43
11/23	3.5	0	12	0	0	0	0	1	0	1	0	2	0	0	0	0	0	0	16
11/24	7.5	1	25	0	0	3	4	2	0	24	0	7	0	1	0	0	0	2	69
11/25	4.3	0	2	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	3
11/26	7.5	0	30	0	2	0	4	4	0	12	0	15	0	1	0	1	0	0	69
11/27	4.0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1
11/28	8.0	1	7	1	2	0	5	0	0	10	0	5	0	1	0	0	2	0	34
11/29	8.0	2	22	0	0	1	7	2	0	101	0	6	0	0	0	0	1	0	142
12/1	8.0	0	9	0	1	0	2	4	0	6	1	5	0	0	0	0	0	0	28
93	736.4	33	2247	375	359	156	3408	914	0	1871	25112	148	0	11	629	94	28	19	35404

Other: 2 Swainson's Hawks on 9/29 and 10/30

Purple Chickadee 2021 - Ringwood, New Jersey

Date	HRS	BV	TV	OS	BE	NH	SS	CH	NG	RS	BW	RT	RL	GE	AK	ML	PG	UR	TOTAL
8/13	1.5	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	3
8/14	3.0	0	1	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	1
8/16	1.0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1
8/18	2.3	0	3	1	1	0	0	0	0	0	6	0	0	0	0	0	0	0	11
8/19	1.0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1
8/28	3.0	1	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	2
9/1	4.8	0	2	2	1	0	0	1	0	0	0	1	0	0	0	0	0	0	7
9/4	4.5	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	2
9/5	5.5	0	3	2	0	0	0	1	0	0	1	0	0	0	1	0	0	0	8
9/7	6.0	0	0	2	0	0	0	0	0	0	3	0	0	0	0	0	0	0	5
9/8	8.0	0	0	4	3	3	2	1	0	0	23	0	0	0	1	1	0	0	38
9/9	8.0	0	0	4	4	1	7	2	0	2	17	0	0	0	4	0	1	0	42
9/10	2.5	0	0	1	0	0	4	0	0	0	1	0	0	0	0	0	0	0	6
9/12	6.5	0	1	3	1	1	16	2	0	0	3	0	0	0	4	0	0	3	34
9/14	9.0	0	5	2	10	3	22	5	0	0	23	2	0	0	21	3	1	4	101
9/15	9.0	0	0	3	5	2	21	2	0	1	176	0	0	0	5	1	2	4	222
9/16	9.0	0	0	2	2	1	42	5	0	0	615	0	0	0	4	0	1	3	675
9/17	7.8	0	2	5	2	1	16	5	0	1	123	1	0	0	4	0	0	1	161
9/18	4.0	0	0	0	0	0	1	0	0	0	4	0	0	0	0	0	0	0	5
9/19	6.5	0	0	2	0	0	5	0	0	0	4	0	0	0	2	0	0	0	13
9/20	8.8	0	0	1	4	0	13	6	0	0	37	3	0	0	3	1	0	2	70
9/21	7.8	0	0	5	4	2	13	7	0	0	61	2	0	0	0	1	0	2	97
9/23	8.5	0	1	4	12	0	19	11	0	2	335	4	0	0	5	1	0	6	400
9/24	4.5	0	0	0	0	0	7	2	0	0	3	0	0	0	0	0	0	1	13
9/26	2.5	0	0	0	0	0	0	1	0	1	3	0	0	0	3	0	0	0	8
9/27	6.5	0	5	8	0	0	2	7	0	2									

Lenoir Wildlife Sanctuary 2021 - Yonkers, New York

Date	HRS	BV	TV	OS	BE	NH	SS	CH	NG	RS	BW	RT	RL	GE	AK	ML	PG	UR	TOTAL
8/13	1.0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
8/14	1.5	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
8/20	13.8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8/27	2.5	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
8/28	2.0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
9/10	3.5	0	0	3	0	1	1	1	0	0	1	0	0	0	0	0	0	0	7
9/11	14.3	0	0	0	0	0	3	0	0	0	0	0	0	0	0	0	0	0	3
9/15	6.5	2	2	8	12	0	5	2	0	0	70	2	0	2	0	2	0	0	107
9/16	5.0	0	1	1	3	1	5	1	0	0	160	1	0	2	2	0	0	0	175
9/17	3.0	0	0	7	3	0	3	1	0	0	49	0	0	1	0	0	0	0	64
9/18	3.5	13	12	16	1	0	2	0	0	0	1	0	0	0	1	0	0	0	46
9/21	2.5	0	0	2	0	0	4	1	0	0	1	0	0	0	1	0	0	0	9
9/24	7.5	8	17	9	21	4	33	18	0	0	1414	0	0	14	0	1	0	0	1539
9/25	2.8	0	0	5	0	0	8	1	0	0	13	0	0	0	0	0	0	0	27
10/7	2.8	0	0	5	0	0	8	1	0	0	13	0	0	0	0	0	0	0	27
10/8	5.0	0	27	9	8	1	17	4	0	3	4	1	0	8	0	3	0	0	85
10/9	4.0	4	68	2	9	0	8	1	0	1	0	2	0	9	0	5	0	0	109
10/15	4.0	3	47	0	0	1	9	4	0	3	0	5	0	3	0	2	2	0	79
18	85.0	30	174	72	57	8	106	35	0	7	1726	11	0	40	1	13	2	2282	

Wildcat Ridge Fall 2022 - Hibernia, New Jersey

Date	HRS	BV	TV	OS	BE	NH	SS	CH	NG	RS	BW	RT	RL	GE	AK	ML	PG	UR	TOTAL
8/15	4.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8/16	2.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8/31	5.0	0	0	0	0	0	1	0	0	0	3	0	0	0	0	0	0	0	4
9/1	1.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9/3	4.0	0	0	2	1	0	1	4	0	0	1	0	0	0	0	0	0	0	9
9/5	5.0	0	0	4	0	0	1	2	0	0	0	0	0	0	0	0	0	0	7
9/9	3.0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	2
9/10	4.0	0	0	0	1	0	6	2	0	0	6	0	0	2	1	0	0	0	18
9/16	10.0	0	0	9	5	1	37	0	0	2	2020	2	0	1	0	0	3	0	2080
9/17	7.0	0	0	6	6	1	28	10	0	2	205	1	0	5	0	1	2	0	267
9/18	6.0	0	0	2	1	0	3	1	0	0	3	0	0	0	0	0	0	0	10
9/19	4.0	0	0	0	0	0	2	0	0	0	1	0	0	0	0	0	0	0	3
9/21	4.5	0	0	0	0	0	3	0	0	0	4	0	0	0	0	0	0	0	3
9/23	6.5	0	0	0	1	0	4	0	0	1	4	0	0	1	0	0	0	0	11
9/24	5.0	0	0	0	1	0	23	7	0	1	6	0	0	0	0	0	0	2	40
9/27	4.5	8	0	2	1	0	0	0	0	0	4	0	0	0	0	0	0	0	17
9/29	5.0	0	0	0	1	0	4	2	0	2	1	0	0	0	0	0	0	0	10
10/2	2.5	0	0	0	0	1	6	5	0	0	0	4	0	0	0	0	0	0	16
10/6	4.0	0	0	0	0	0	5	2	0	1	0	0	0	0	0	0	0	2	10
10/7	5.0	0	0	0	1	0	5	2	0	2	0	1	0	0	0	0	0	0	11
10/11	4.0	0	0	0	0	0	0	1	0	0	0	3	0	0	0	0	0	1	5
10/14	4.0	6	0	0	0	0	4	0	0	0	0	3	0	0	0	0	0	1	14
10/16	2.8	0	0	1	0	1	22	5	0	0	0	2	0	5	0	2	1	0	39
10/18	5.0	2	0	0	0	0	6	2	0	0	0	2	0	0	0	0	0	1	13
10/21	4.0	2	0	0	0	0	9	1	0	0	0	1	0	0	0	0	0	1	14
10/23	3.0	0	0	0	0	1	3	2	0	0	0	3	0	0	0	0	0	0	9
10/27	5.5	5	43	0	0	0	1	1	0	1	0	4	0	0	0	0	0	2	57
10/30	4.5	0	0	0	1	0	5	3	0	1	0	4	0	0	0	0	0	0	14
11/3	5.5	2	0	0	0	0	0	0	0	2	0	2	0	0	0	0	0	1	7
11/7	4.0	0	0	0	0	0	0	0	0	0	0	3	0	0	0	0	0	0	3
11/8	2.3	0	5	0	0	0	0	0	0	3	0	1	0	2	0	0	0	0	11
11/9	4.5	2	12	0	0	0	0	3	0	0	0	6	0	0	1	0	0	2	26
11/14	4.5	5	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1	7
33	146.0	32	60	26	20	5	179	56	0	18	2255	43	0	2	14	2	3	22	2737

Montclair Hawk Lookout Fall 2022 - Montclair, New Jersey

Date	HRS	BV	TV	OS	BE	NH	SS	CH	NG	RS	BW	RT	RL	GE	AK	ML	PG	UR	TOTAL
9/1	8.0	0	14	0	0	0	3	0	0	0	0	5	0	0	0	0	0	0	24
9/2	8.0	0	12	0	0	0	4	0	0	0	0	6	0	0	0	0	0	0	24
9/5	8.0	5	25	1	0	0	1	1	0	0	0	4	0	0	0	0	0	0	38
9/7	8.0	0	4	0	0	0	0	0	0	0	1	1	0	0	1	0	0	0	7
9/10	4.5	2	0	3	1	1	0	0	0	0	0	0	0	2	0	0	0	0	9
9/13	8.0	0	4	1	0	1	2	0	0	0	2	0	0	0	0	0	0	0	10
9/14	8.0	1	16	1	3	0	15	0	0	0	17	5	0	3	0	0	0	0	61
9/15	8.0	0	27	0	5	0	19	0	0	0	39	4	0	4	0	0	3	0	101
9/16	8.0	1	79	0	8	0	15	0	0	0	247	6	0	0	1	0	3	0	360
9/17	8.0	0	0	12	10	4	36	4	0	0	36	1	0	1	0	1	1	0	106
9/19	7.0	3	4	1	2	0	2	0	0	0	1	1	0	0	0	0	0	0	14
9/20	8.0	0	12	4	0	0	12	1	0	0	9	7	0	0	0	0	0	1	46
9/21	8.0	0	13	1	0	0	5	2	0	0	3	0	0	0	0	0	0	0	24
9/22	3.5	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	2
9/23	8.0	5	8	1	6	0	4	5	0	0	156	4	0	4	0	0	1	0	194
9/24	7.0	0	0	7	14	1	28	15	0	0	1102	0	0	0	1	0	0	0	1168
9/25	3.0	0	0	1	0	2	1	2	0	0	24	0	0	0	0	0	0	0	30
9/26	8.0	0	7	2	6	0	2	0	0	0	0	1	0	0	0	0	0	0	18
9/27	8.0	0	7	0	6	0	5	0	0	0	9	2	0	1	0	0	0	0	30
9/28	8.0	0	18	1	4	0	6	1	0	0	39	8	0	1	0	0	2	0	80
9/29	8.0	0	13	0	2	4	13	0	0	0	15	6	0	0	0	0	0	0	53
9/30	8.0	1	55	0	2	2	6	0	0	0	1	5	0	3	0	0	0	0	75
10/3	8.0	0	10	0	1	0	5	4	0	0	0	1	0	0	0	0	0	0	21
10/6	8.0	0	14	0	0	0	10	5	0	0	0	0	0	0	0	0	0	0	29
10/7	8.0	0	17	0	2	0	4	5	0	0	0	10	0	0	1	0	0	0	39
10/8	8.0	0	3	0	5	0	17	26	0	4	1	2	0	9	1	0	3	0	71
10/10	8.0	3	90	0	0	3	13	9	0	0	0	17	0	2	0	1	0	0	138
10/11	8.0	0	107	0	0	0	4	1	0	0	0	3	0	0	0	0	0	0	115
10/12	8.0	0	17	0	1	0	2	0	0	0	0	4	0	0	0	0	0	0	24
10/13	5.0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1
10/14	8.0	0	30	0	0	0	3	3	0	0	0	5	0	0	0	0	0	0	41
10/17	6.0	0	19	0	0	1	2	4	0	0	0	3	0	0	0	0	0	0	29
10/18	8.0	0	76	0	0	0	6	2	0	1	0	6	0	0	0	0	0	0	91
10/19	8.0	0	30	0	0	0	8	0	0	0	0								

Washington Valley Fall 2022 - Martinsville, New Jersey

Date	HRS	BV	TV	OS	BE	NH	SS	CH	NG	RS	BW	RT	RL	GE	AK	ML	PG	UR	TOTAL
9/1	5.0	0	0	2	3	0	0	0	0	0	0	0	0	0	1	0	1	0	7
9/2	4.0	0	0	0	0	0	0	0	0	0	4	0	0	0	3	0	0	0	7
9/8	5.5	0	0	3	4	0	0	0	0	0	0	0	0	0	0	1	0	0	8
9/9	3.5	0	0	1	0	0	0	0	0	0	5	0	0	0	1	0	0	0	7
9/15	4.5	0	0	2	11	4	31	3	0	0	1669	0	0	0	46	8	0	0	1774
9/16	6.0	0	0	6	9	9	20	3	0	0	1665	0	0	0	10	5	1	0	1728
9/20	8.0	0	0	9	8	5	84	2	0	1	1556	0	0	0	36	9	0	0	1710
9/21	2.5	0	0	0	1	4	0	0	0	0	42	0	0	0	0	0	0	0	47
9/23	8.5	0	0	6	22	6	51	1	0	0	309	2	0	0	33	2	1	0	433
9/24	4.0	0	0	5	11	5	77	6	0	0	5605	1	0	0	39	6	0	0	5755
9/27	5.0	0	0	1	3	0	6	3	0	0	158	2	0	0	2	3	0	0	178
9/28	6.5	0	0	5	7	0	56	3	0	4	312	2	0	0	24	4	0	0	417
9/29	5.0	0	26	2	5	1	37	6	0	5	243	4	0	0	6	1	1	0	337
10/6	4.5	0	0	0	0	0	3	0	0	1	0	0	0	0	9	0	0	0	13
10/7	4.5	0	0	1	2	0	19	1	0	0	0	0	0	0	6	3	0	0	32
10/9	4.0	0	0	1	2	0	11	1	0	3	1	0	0	0	2	2	0	0	23
10/11	3.5	0	0	0	2	1	2	0	0	0	0	0	0	0	3	0	0	0	8
10/14	6.0	0	0	0	5	0	10	1	0	2	0	0	0	0	1	0	0	0	19
10/16	0.0	0	0	0	4	0	3	3	0	3	0	2	0	0	2	3	1	0	21
10/18	5.0	0	0	1	2	1	19	3	0	3	0	13	0	0	4	4	0	0	50
10/21	4.0	0	0	0	0	0	0	1	0	3	0	1	0	0	0	1	0	0	6
10/27	7.0	0	0	0	2	0	19	6	0	18	0	14	0	0	1	2	1	0	63
10/29	3.5	0	0	0	2	0	1	0	0	1	0	0	0	0	2	0	0	0	6
11/7	5.0	0	0	0	1	0	1	1	0	2	0	3	0	0	0	0	0	0	8
11/8	6.0	0	0	0	1	0	3	1	0	21	0	4	0	1	0	0	0	0	31
11/12	1.8	0	0	0	1	0	0	0	0	0	0	0	0	1	0	0	0	0	2
11/13	0.0	0	0	0	1	0	0	1	0	1	0	1	0	0	0	0	0	0	4
11/14	6.0	0	0	0	3	0	2	0	0	7	0	24	0	1	0	0	2	0	39
11/15	3.3	0	0	0	0	1	0	0	0	34	0	9	0	0	0	0	0	0	44
29	132.0	0	26	45	111	34	459	46	0	109	11569	82	0	3	231	54	8	0	12777

Lighthouse Point Fall 2022 - New Haven, Connecticut

Date	HRS	BV	TV	OS	BE	NH	SS	CH	NG	RS	BW	RT	RL	GE	AK	ML	PG	UR	TOTAL
11/18	7.5	0	1	1	0	5	2	2	0	1	0	2	0	0	0	2	0	0	17
11/19	4.0	0	1	1	2	0	0	0	0	0	0	1	0	0	0	0	2	0	7
11/20	7.3	4	2	0	2	3	3	3	0	2	0	3	0	1	0	0	0	0	23
11/21	5.0	0	0	0	1	2	0	0	0	3	0	1	0	0	0	1	0	0	8
11/23	6.0	0	0	0	0	0	1	2	0	9	0	2	0	0	0	0	0	0	14
11/24	4.8	0	0	0	1	1	1	1	0	0	0	0	0	0	0	0	0	0	4
11/25	1.3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11/26	9.0	0	1	0	2	4	2	16	0	11	0	23	0	0	0	8	1	0	68
11/27	3.0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	1	0	0	3
11/28	6.0	0	8	0	0	1	1	5	0	1	0	16	0	1	1	3	1	5	43
11/30	2.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12/1	7.5	0	1	0	0	0	2	1	0	0	0	2	0	0	0	0	2	1	9
12/4	4.3	0	10	0	1	0	1	2	0	2	0	6	0	0	0	2	0	0	24
12/8	3.0	0	9	0	1	0	0	3	0	0	0	2	0	0	0	0	0	0	15
12/9	1.8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
88	531.3	13	544	760	228	314	2168	1842	2	216	3721	430	0	3	762	261	106	188	11559

Other: 1 Swainson's Hawk on 10/27

Fire Island Fall 2022 - Islip, New York

Date	HRS	BV	TV	OS	BE	NH	SS	CH	NG	RS	BW	RT	RL	GE	AK	ML	PG	UR	TOTAL
9/8	6	0	0	25	0	2	1	2	0	0	0	0	0	0	0	17	5	0	52
9/9	2	0	0	6	0	2	1	0	0	0	0	0	0	0	2	1	1	0	13
9/10	8.75	0	0	4	0	0	0	0	0	0	0	0	0	0	0	5	0	0	9
9/11	6.25	0	0	6	0	1	0	0	0	0	0	0	0	0	0	4	0	0	11
9/12	8	0	0	8	0	0	0	0	0	0	0	0	0	0	0	14	0	0	22
9/14	6	0	0	13	0	0	1	0	0	0	0	0	0	0	16	34	3	0	67
9/15	7	0	0	165	0	16	11	1	0	0	0	0	0	0	117	106	4	0	420
9/16	6.5	0	0	19	0	3	4	0	0	0	0	0	0	0	3	30	0	0	59
9/17	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9/18	3	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
9/19	3	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
9/20	8.75	0	0	9	1	5	2	0	0	0	0	0	0	0	16	72	4	1	110
9/21	5	0	0	8	0	0	0	1	0	0	0	0	0	0	0	3	1	0	13
9/22	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1
9/23	9.75	0	0	113	0	7	0	0	0	0	0	0	0	0	33	131	8	0	292
9/24	8	0	0	18	0	3	1	0	0	0	0	0	0	0	11	46	0	0	81
9/25	4.5	0	0	2	0	1	0	0	0	0	0	0	0	0	2	6	0	0	11
9/26	4	0	0	1	0	0	0	0	0	0	0	0	0	0	2	2	1	0	6
9/27	6.5	0	0	3	0	0	0	0	0	0	0	0	0	0	1	2	2	1	9
9/28	6	0	0	1	0	3	4	0	0	0	0	0	0	0	3	8	3	0	18
9/29	8.5	0	0	57	0	24	4	3	0	0	0	0	0	0	164	59	3	0	314
9/30	7.5	0	0	11	0	5	1	3	0	0	0	0	0	0	17	12	6	0	55
10/1	2	0	0	0	0	0	0	0	0	0	0	0	0	0	1	2	2	0	5
10/2	5	0	0	1	0	0	0	0	0	0	0	0	0	0	1	7	1	0	10
10/3	6	0	0	18	0	8	0	0	0	0	0	0	0	0	25	68	8	0	127
10/4	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	12	3	0	15
10/5	5.5	0	0	6	0	0	0	0	0	0	0	0	0	0	0	18	4	0	28
10/6	7	0	0	3	0	1	0	1	0	0	0	0	0	0	1	15	1	0	22
10/7	7	0	0	6	0	2	0	0	0	0	0	0	0	0	1	9	2	0	20
10/8	7.5	0	0	17	0	3	7	2	0	0	0	0	0	0	29	33	2	0	93
10/9	4	0	0	1	0	2	0	1	0	0	0	0	0	0	1	4	3	0	12
10/10	4.5	0	0	2	0	0	0	0	0	0	0	0	0	0	1	6	0	0	9
10/11	7.75	0	0	9	0	2	4	0	0	0	0	0	0	0	12	32	10	0	69
10/12	6	0	0	2	0	1	1	1	0	0	0	0	0	0	2	13	0	0	20
10/13	5.5	0	0	1	0	0	0	0	0	0	0	0	0	0	0	7	5	0	13
10/14	7	0	0	8	0	0	0	1	0	0	0	0	0	0	3	6	3	0	21
10/15	5	0	0	1	0	2	0	0	0	0	0	0	0	0	1	2	1	0	7
10/16	5	0	0	7	1	2	4	0	0	0	0	0	0	0	1	6	5	0	26
10/18	7.75	0	0	14	2	0	0	1	0	0	0	1	0	0	5	23	5	0	51
10/19	5	0	0	4	0	5	1	0	0	0	0	0	0	0	5	17	0	0	32
10/20	5	0	0	3	0	4	0	0	0	0	0	0	0	0	2	11	0	0	20
10/21	6	0	0	2	0	1	2	1											

Blueberry Hill 2022 - Southwick, Massachusetts

Date	HRS	BV	TV	OS	BE	NH	SS	CH	NG	RS	BW	RT	RL	GE	AK	ML	PG	UR	TOTAL
9/28	8.3	0	1	1	6	3	18	2	0	0	61	0	0	0	8	4	0	1	105
9/29	3.5	0	0	0	2	0	35	4	0	0	2	2	0	0	2	0	0	1	48
9/30	6.5	0	0	0	0	1	2	2	0	0	3	1	0	0	3	0	0	1	13
10/2	2.0	0	0	0	1	0	0	0	0	0	1	0	0	0	2	0	0	1	5
10/3	4.0	0	14	0	0	1	1	0	0	0	0	0	0	0	1	1	0	0	18
10/6	5.3	0	52	0	0	0	12	2	0	0	0	0	0	0	4	0	0	1	71
10/11	5.0	0	0	0	3	0	3	0	0	0	0	0	0	0	0	0	0	0	6
10/12	5.5	0	93	0	1	1	4	1	0	0	0	0	0	0	1	0	0	1	102
10/14	2.0	0	27	0	1	0	2	0	0	0	0	0	0	0	1	0	0	0	31
10/15	5.0	0	16	0	0	0	2	0	0	0	0	0	0	0	1	0	0	1	20
10/16	5.5	0	18	0	0	0	2	0	0	1	0	1	0	0	1	2	0	0	25
10/18	5.5	0	32	4	1	4	12	1	0	1	0	0	0	0	4	4	0	0	63
10/19	5.5	0	39	0	0	0	5	1	0	1	0	0	0	0	3	0	1	1	51
10/20	5.5	0	28	2	2	1	3	1	0	0	0	0	0	0	0	0	0	0	37
10/21	4.3	0	68	0	0	0	4	1	0	1	0	0	0	0	1	1	0	0	76
10/22	4.0	0	7	0	0	0	4	2	0	0	0	0	0	0	2	2	0	0	17
10/27	5.0	0	29	0	0	2	9	2	0	0	0	6	0	0	0	0	0	0	48
10/28	4.5	0	10	0	0	0	4	2	0	3	0	0	0	0	0	0	0	0	19
10/29	6.0	0	15	0	0	2	4	0	0	13	0	1	0	0	0	0	2	0	37
10/30	4.0	0	2	0	0	0	0	0	0	6	0	0	0	0	0	1	0	0	9
10/31	4.0	0	3	0	0	1	2	0	0	1	0	0	0	0	1	0	0	0	8
11/2	4.8	0	11	0	0	0	1	1	0	8	0	4	0	0	0	0	1	0	26
11/3	4.0	0	0	0	0	1	1	0	0	3	0	0	0	0	0	0	0	0	4
11/5	4.0	0	2	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	3
11/7	3.5	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	2
11/8	4.0	0	7	0	0	0	1	0	0	1	0	3	0	0	0	0	0	0	12
11/14	2.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11/15	3.3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11/22	3.5	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1
11/23	3.0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	2
TOTAL	233.0	0	532	45	30	34	240	27	0	41	3238	23	0	0	73	27	7	18	4335

Booth Hill Fall 2022 - West Hartland, Connecticut

Date	HRS	BV	TV	OS	BE	NH	SS	CH	NG	RS	BW	RT	RL	GE	AK	ML	PG	UR	TOTAL
9/7	4.0	0	10	1	1	0	0	36	2	0	0	0	0	0	1	0	0	0	51
9/8	5.0	0	3	1	2	0	1	0	0	0	6	2	0	0	0	0	0	0	15
9/9	5.0	0	14	1	3	0	3	0	0	2	10	1	0	0	1	0	0	1	36
9/10	4.5	0	6	0	2	0	2	0	0	0	3	1	0	0	1	0	0	0	15
9/14	5.0	1	17	0	2	1	1	0	0	0	77	1	0	0	2	0	0	0	102
9/15	4.0	0	16	0	1	0	2	0	0	1	43	1	0	0	0	0	0	0	64
9/16	6.0	0	9	0	2	0	0	2	0	3	63	0	0	0	2	0	0	0	81
TOTAL	33.5	1	75	3	13	1	9	2	0	6	238	8	0	0	7	0	0	1	364

Johnnycake Mountain Fall 2022 - Burlington, Connecticut

Date	HRS	BV	TV	OS	BE	NH	SS	CH	NG	RS	BW	RT	RL	GE	AK	ML	PG	UR	TOTAL
9/8	4.0	0	10	3	2	0	0	0	0	0	1	0	0	0	0	0	0	0	16
9/10	4.0	5	6	0	1	1	0	1	0	1	3	0	0	0	3	0	0	0	21
9/14	6.0	3	12	8	4	1	0	2	0	2	172	1	0	0	9	0	0	0	220
9/15	5.5	0	9	1	3	0	0	0	0	5	14	4	0	0	2	0	0	0	38
9/16	5.0	0	12	3	2	0	0	1	0	3	472	5	0	0	2	0	0	0	500
9/17	4.0	0	4	4	3	0	0	2	0	0	85	5	0	0	2	0	0	0	105
9/18	4.0	6	12	1	1	0	0	1	0	0	4	4	0	0	2	0	0	0	27
9/19	4.0	0	3	0	0	0	0	0	0	0	5	1	0	0	1	0	0	0	10
9/20	4.0	0	7	4	3	0	0	0	1	0	86	1	0	0	3	0	0	0	105
9/21	4.0	0	4	3	3	0	2	1	0	0	11	1	0	0	4	0	0	0	29
9/23	4.0	0	10	2	1	0	2	1	0	0	123	4	0	0	3	0	0	0	146
9/26	2.5	0	4	0	5	0	1	1	0	4	20	5	0	0	0	0	0	0	40
9/28	3.5	0	10	0	4	0	3	1	0	2	143	3	0	0	3	0	0	0	170
TOTAL	54.5	14	103	29	32	2	8	12	0	17	1139	30	0	0	34	0	0	7	1427

Mohonk Preserve Fall 2022 - New Paltz, New York

Date	HRS	BV	TV	OS	BE	NH	SS	CH	NG	RS	BW	RT	RL	GE	AK	ML	PG	UR	TOTAL
9/8	4.0	0	0	1	6	0	0	0	0	0	1	1	0	0	1	0	0	0	10
9/14	5.0	0	0	2	3	0	6	0	0	0	40	1	0	0	3	2	0	0	58
9/15	6.0	0	0	1	5	0	6	0	0	0	23	2	0	0	2	0	0	0	39
9/17	5.0	0	0	4	1	0	11	1	0	0	298	4	0	0	1	0	0	0	320
9/20	5.5	0	0	2	6	0	24	3	0	0	119	1	0	0	2	0	0	2	159
9/21	4.0	0	0	0	0	0	6	2	0	0	33	7	0	0	1	1	0	1	51
10/6	5.5	0	34	0	3	1	50	0	0	0	0	1	0	0	2	0	0	0	91
10/12	6.0	0	24	1	0	0	27	2	0	0	0	0	0	0	2	0	0	1	57
10/31	5.0	0	23	0	8	2	2	1	0	1	0	1	0	0	0	0	0	2	40
11/7	5.5	0	0	0	1	1	3	1	0	2	0	2	0	0	1	0	0	1	12
TOTAL	51.5	0	81	11	33	4	135	10	0	3	514	20	0	0	13	5	0	8	837

Chestnut Hill Fall 2022 - Litchfield, Connecticut

Date	HRS	BV	TV	OS	BE	NH	SS	CH	NG	RS	BW	RT	RL	GE	AK	ML	PG	UR	TOTAL
9/8	3.0	0	0	0	0	0	1	0	0	0	1	7	0	0	0	1	0	0	10
9/9	3.0	0	0	2	0	1	1	2	0	0	0	0	0	0	0	0	0	0	6
9/10	4.0	0	0	0	1	0	1	0	0	0	4	0	0	0	0	0	0	4	10
9/12	1.0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	2
9/14	5.0	0	0	0	0	0	3	2	0	1	180	0	0	0	1	0	0	0	187
9/15	8.5	0	0	3	5	0	7	4	0	1	1559	0	0	0	0	0	0	0	1579
9/16	5.5	0	0	0	2	0	1	6	0	0	155	0	0	0	0	0	0	0	164
9/17	5.0	0	0	1	6	0	1	3	0	0	1037	0	0	0	0	0	0	0	1048
9/18	3.5	0	0	0	0	0	4	1	0	0	0	0	0	0	0	0	0	0	5
9/20	3.0	0	0	0	0	0	0	0	0	0	18	0	0	0	0	0	0	0	18
9/21	3.3	0	0	0	0	0	0	0	0	0	14	0	0	0	0	0	0	1	15
9/23	4.5	0	0	1	4	0	4	5	0	0	157	0	0	0	0	0	0	0	171
9/24	4.3	0	0	0	5	0	9	2	0	0	36	0	0	0	2	0	0	0	54
TOTAL	53.5	0	0	7	23	1	32	26	0	3	3168	0	0	0	3	1	0	5	3269

Botsford Hill Fall 2022 - Bridgewater, Connecticut

Date	HRS	BV	TV	OS	BE	NH	SS	CH	NG	RS	BW	RT	RL	GE	AK	ML	PG	UR	TOTAL
9/9	3.0	0	0	0	1	1	0	1	0	0	6	0	0						

Fort Tilden Fall 2022 - Queens, New York

Date	HRS	BV	TV	OS	BE	NH	SS	CH	NG	RS	BW	RT	RL	GE	AK	ML	PG	UR	TOTAL
10/14	8.5	0	0	33	2	3	15	8	0	0	0	1	0	0	26	7	3	0	98
10/16	6.5	0	0	7	0	9	18	7	0	0	0	1	0	0	16	3	1	0	62
10/18	6.0	0	0	5	1	3	9	4	0	0	0	0	0	0	3	12	4	0	41
10/21	5.5	0	0	8	1	4	10	3	0	0	0	0	0	0	1	4	2	0	33
10/23	4.5	0	0	2	0	2	4	3	0	0	0	0	0	0	0	2	1	0	14
10/27	9.5	0	0	7	3	8	72	24	0	8	0	13	0	0	20	28	3	0	186
10/28	6.5	0	0	2	3	4	13	9	0	9	0	2	0	0	7	2	0	0	51
10/29	5.5	0	0	1	1	4	6	5	0	1	0	0	0	0	2	2	0	0	22
11/8	6.0	0	0	0	1	1	6	4	0	1	0	5	0	0	3	5	0	0	26
11/13	3.0	0	0	0	0	2	1	0	0	0	0	0	0	0	0	0	0	0	3
11/14	6.0	0	0	0	0	4	3	5	0	0	0	2	0	0	2	3	0	0	19
11/26	5.0	0	0	0	0	3	2	1	0	0	0	2	0	0	2	1	0	0	11
30	198.0	0	20	1200	43	173	337	135	0	19	7	33	0	0	731	259	44	2	3003

Recent Year Counts for Major Sites (with previous year averages and % change in 2022)

Region 45

Greenlaw Mountain - St. Andrews, New Brunswick (ave for 2012 - 2021, % change in 2022)

YR	DYS	HRS	BV	TV	OS	BE	NH	SS	CH	NG	RS	BW	RT	RL	GE	AK	M	PF	UR	TOT	XTOT	PH	XPH
2017	49	325	0	492	142	90	64	571	11	13	6	1989	151	0	2	166	34	30	102	3865	1384	12	4.3
2018	48	342	1	374	162	199	95	572	12	28	5	600	272	2	4	164	45	28	100	2663	1688	8	4.9
2019	40	271	0	293	173	133	34	456	10	6	1	3040	112	0	0	134	24	21	72	4510	1177	17	4.4
2020	42	285	0	366	138	207	78	464	12	20	3	5035	216	3	1	136	29	25	89	6822	1421	24	5.0
2021	40	274	0	630	125	225	65	469	8	12	6	7089	148	0	1	183	34	12	73	9080	1361	33	5.0
2022	44	289	1	450	150	258	101	579	15	21	7	5585	194	2	0	153	34	34	76	7660	1624	27	5.6
<i>ave10</i>	<i>45</i>	<i>286</i>	<i>0.1</i>	<i>323</i>	<i>152</i>	<i>114</i>	<i>71</i>	<i>519</i>	<i>10</i>	<i>15</i>	<i>3.5</i>	<i>3774</i>	<i>183</i>	<i>0.6</i>	<i>1.2</i>	<i>162</i>	<i>37</i>	<i>21</i>	<i>83</i>	<i>5469</i>	<i>1371</i>	<i>19</i>	<i>4.8</i>
<i>%chg</i>	<i>-1</i>	<i>1</i>	<i>900</i>	<i>39</i>	<i>-2</i>	<i>127</i>	<i>43</i>	<i>12</i>	<i>44</i>	<i>42</i>	<i>100</i>	<i>48</i>	<i>6</i>	<i>233</i>	<i>-100</i>	<i>-5</i>	<i>-8</i>	<i>62</i>	<i>-8</i>	<i>40</i>	<i>18</i>	<i>37</i>	<i>17</i>

Cooper - Cooper, Maine (ave for 2012 - 2021, % change in 2022)

YR	DYS	HRS	BV	TV	OS	BE	NH	SS	CH	NG	RS	BW	RT	RL	GE	AK	ML	PF	UR	TOT	XBWV	PH	XPH
2017	24	134	0	82	1	8	2	2	1	0	0	0	0	0	0	3	2	0	0	101	19	0.8	0.1
2018	16	89	0	32	0	13	0	0	0	0	0	4	0	0	0	1	1	1	1	53	17	0.6	0.2
2019	12	55	0	26	0	5	0	0	2	0	0	9	0	0	0	0	0	0	0	42	7	0.8	0.1
2020	14	51	0	17	0	0	1	0	1	0	0	6	1	0	0	3	1	0	0	30	7	0.6	0.1
2021	22	86	0	32	0	3	0	2	2	0	0	17	0	0	2	7	1	0	0	66	17	0.8	0.2
2022	20	102	0	43	7	23	0	13	5	0	0	22	0	0	0	5	8	0	0	126	61	1.2	0.6
<i>ave10</i>	<i>11</i>	<i>55</i>	<i>0</i>	<i>26</i>	<i>0</i>	<i>5.1</i>	<i>1.5</i>	<i>2</i>	<i>1.3</i>	<i>0</i>	<i>0</i>	<i>11</i>	<i>0.1</i>	<i>0</i>	<i>0.3</i>	<i>4.0</i>	<i>0.9</i>	<i>0.1</i>	<i>0.9</i>	<i>53</i>	<i>16</i>	<i>1.5</i>	<i>0.4</i>
<i>%chg</i>	<i>75</i>	<i>84</i>	<i>68</i>	<i>1650</i>	<i>351</i>	<i>-100</i>	<i>767</i>	<i>285</i>				<i>95</i>	<i>-100</i>		<i>-100</i>	<i>25</i>	<i>789</i>	<i>-100</i>	<i>-100</i>	<i>138</i>	<i>279</i>	<i>-15</i>	<i>42</i>

Region 44

Cadillac Mountain - Acadia National Park, Maine (ave for 2012 - 2021, % change in 2022)

YR	DYS	HRS	BV	TV	OS	BE	NH	SS	CH	NG	RS	BW	RT	RL	GE	AK	ML	PF	UR	TOT	XBWV	PH	XPH
2017	60	255	0	92	109	113	75	683	18	2	3	585	63	0	0	395	55	37	130	2360	1683	9	7
2018	60	270	0	133	102	75	79	544	18	7	2	429	20	0	0	495	24	33	139	2100	1538	8	6
2019	51	274	0	193	155	150	67	1112	22	2	0	363	19	0	0	542	53	22	138	2838	2282	10	8
2020	56	257	0	159	123	99	85	758	19	10	1	1039	38	0	0	468	56	24	94	2973	1775	12	7
2021	48	225	0	274	142	204	66	593	13	6	0	395	18	0	0	449	49	21	119	2349	1680	10	7
2022	59	254	0	100	141	133	80	988	9	3	1	1013	48	0	0	343	55	14	75	3003	1890	12	7
<i>ave10</i>	<i>54</i>	<i>249</i>	<i>0</i>	<i>120</i>	<i>138</i>	<i>91</i>	<i>91</i>	<i>792</i>	<i>19</i>	<i>6</i>	<i>1</i>	<i>784</i>	<i>34</i>	<i>0</i>	<i>0</i>	<i>467</i>	<i>56</i>	<i>24</i>	<i>105</i>	<i>2727</i>	<i>1823</i>	<i>11</i>	<i>7</i>
<i>%chg</i>	<i>9</i>	<i>2</i>		<i>-16</i>	<i>3</i>	<i>46</i>	<i>-12</i>	<i>25</i>	<i>-51</i>	<i>-48</i>	<i>-17</i>	<i>29</i>	<i>40</i>	<i>-100</i>	<i>-100</i>	<i>-27</i>	<i>-2</i>	<i>-42</i>	<i>-28</i>	<i>10</i>	<i>4</i>	<i>3</i>	<i>0</i>

Mount Philo State Park - Charlotte, Vermont (ave for 2018 - 2021, % change in 2022)

YR	DYS	HRS	BV	TV	OS	BE	NH	SS	CH	NG	RS	BW	RT	RL	GE	AK	ML	PF	UR	TOT	XBWV	PH	XPH
2018	3	19	10	28	1	5	1	1	11	0	14	190	29	3	0	2	0	3	49	347	119	19	6
2019	16	87	3	44	39	118	20	67	14	0	1	3213	8	0	0	54	6	8	24	3619	359	42	4
2020	7	37	0	163	7	60	6	25	6	0	1	982	10	0	0	37	4	5	14	1320	175	36	5
2021	15	60	0	347	30	77	13	37	4	0	7	3319	24	0	0	59	2	0	20	3939	273	65	5
2022	12	56	0	60	30	76	7	43	5	0	1	1416	6	0	1	60	2	3	8	1718	242	31	4
<i>ave4</i>	<i>10</i>	<i>51</i>	<i>3</i>	<i>146</i>	<i>19</i>	<i>65</i>	<i>10</i>	<i>33</i>	<i>9</i>	<i>0</i>	<i>6</i>	<i>1926</i>	<i>18</i>	<i>1</i>	<i>0</i>	<i>38</i>	<i>3</i>	<i>4</i>	<i>27</i>	<i>2306</i>	<i>232</i>	<i>40</i>	<i>5</i>
<i>%chg</i>	<i>17</i>	<i>11</i>	<i>-100</i>	<i>-59</i>	<i>56</i>	<i>17</i>	<i>-30</i>	<i>32</i>	<i>-43</i>		<i>-83</i>	<i>-26</i>	<i>-66</i>	<i>-100</i>		<i>58</i>	<i>-33</i>	<i>-25</i>	<i>-70</i>	<i>-26</i>	<i>5</i>	<i>-24</i>	<i>-13</i>

Clarry Hill - Union, Maine (ave for 2012 - 2021, % change in 2022)

YR	DYS	HRS	BV	TV	OS	BE	NH	SS	CH	NG	RS	BW	RT	RL	GE	AK	ML	PF	UR	TOT	XBWV	PH	XPH
2017	44	328	0	716	228	315	102	760	49	7	34	3969	370	1	6	211	31	25	31	6855	2170	21	7
2018	36	286	0	884	231	468	95	1014	71	6	27	2358	316	3	8	216	33	34	28	5792	2550	20	9
2019	36	304	1	1271	299	449	64	735	38	4	36	6782	201	0	2	288	44	17	33	10265	2211	34	7
2020	36	303	0	1414	194	590	174	977	48	8	45	8414	609	14	10	248	22	24	55	12846	3018	42	10
2021	37	294	0	2219	253	405	142	644	48	6	56	14584	287	1	5	130	20	19	27	18846	2043	64	7
2022	32	240	0	848	254	407	113	657	39	3	83	11235	305	2	2	122	21	15	31	14137	2054	59	9
<i>ave10</i>	<i>34</i>	<i>263</i>	<i>0</i>	<i>893</i>	<i>239</i>	<i>338</i>	<i>102</i>	<i>731</i>	<i>55</i>	<i>5</i>	<i>39</i>	<i>9404</i>	<i>302</i>	<i>2</i>	<i>5</i>	<i>172</i>	<i>29</i>	<i>24</i>	<i>30</i>	<i>12371</i>	<i>2074</i>	<i>49</i>	<i>8</i>
<i>%chg</i>	<i>-5</i>	<i>-9</i>	<i>-100</i>	<i>-5</i>	<i>6</i>	<i>21</i>	<i>10</i>	<i>-10</i>	<i>-29</i>	<i>-44</i>	<i>114</i>	<i>19</i>	<i>1</i>	<i>0</i>	<i>-63</i>	<i>-29</i>	<i>-29</i>	<i>-38</i>	<i>5</i>	<i>14</i>	<i>-1</i>	<i>19</i>	<i>8</i>

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Interlakes School - Meredith, New Hampshire (ave for 2012 - 2021, % change in 2022)

YR	DYS	HRS	BV	TV	OS	BE	NH	SS	CH	NG	RS	BW	RT	RL	GE	AK	M	PF	UR	TOT	XBWV	PH	XPH
2017	2	10	0	12	1	4	0	12	0	0	0	123	1	0	0	0	1	2	2	158	23	16	2
2018	2	10	0	28	1	5	0	1	1	0	0	76	8	0	0	0	1	0	5	126	22	13	2
2019	2	10	0	14	5	7	1	2	0	0	0	476	1	0	0	0	0	0	3	509	19	51	2
2020	2	9	0	18	4	5	0	15	0	0	0	895	0	0	0	0	0	2	1	940	27	104	3
2021	2	15	0	25	12	29	1	53	2	0	2	7212	0	0	0	14	1	0	2	7354	117	490	8
2022	2	12	0	18	2	10	1	33	3	0	0	256	1	0	0	8	2	0	1	335	61	28	5
<i>ave10</i>	<i>2</i>	<i>10</i>	<i>0</i>	<i>17</i>	<i>4</i>	<i>6</i>	<i>0.2</i>	<i>12</i>	<i>1</i>	<i>0</i>	<i>0</i>	<i>972</i>	<i>1.6</i>	<i>0</i>	<i>0</i>	<i>1.7</i>	<i>0</i>	<i>1</i>	<i>4</i>	<i>1020</i>	<i>31</i>	<i>79</i>	<i>3</i>
<i>%chg</i>	<i>-5</i>	<i>23</i>		<i>9</i>	<i>-51</i>	<i>61</i>	<i>400</i>	<i>187</i>	<i>200</i>		<i>-100</i>	<i>-74</i>	<i>-38</i>			<i>371</i>	<i>567</i>	<i>-100</i>	<i>-72</i>	<i>-67</i>	<i>96</i>	<i>-65</i>	<i>77</i>

Concord School - Concord, New Hampshire (ave for 2012 - 2021, % change in 2022)

YR	DYS	HRS	BV	TV	OS	BE	NH	SS	CH	NG	RS	BW	RT	RL	GE	AK	M	PF	UR	TOT	XBWV	PH	XPH
2017	6	24	0	41	2	0	0	1	0	0	0	19	1	0	0	2	0	0	6	72	12	3	0
2018	5	20	0	16	0	3	1	7	0	0	0	63	4	0	0	1	0	1	6	102	23	5	1
2019	6	28	0	17	2	3	0	1	0	0	0	86	7	0	0	0	0	0	4	120	17	4	1
2020	3	7	0	17	1	1	0	5	0	0	0	51	9	0	0	0	0	1	33	118	50	17	7
2021	5	24	0	32	3	0	0	4	0	0	0	120	10	0	0	0	0	0	8	177	25	7	1
2022	5	24	0	21	2	2	0	1	0	0	0	252	10	0	0	3	2	0	40	333	60	14	3
<i>ave10</i>	<i>6</i>	<i>20</i>	<i>0</i>	<i>25</i>	<i>1</i>	<i>1</i>	<i>0</i>	<i>3</i>	<i>1</i>	<i>0</i>	<i>0</i>	<i>72</i>	<i>5</i>	<i>0</i>	<i>0</i>	<i>0.8</i>	<i>0</i>	<i>0.2</i>	<i>13</i>	<i>123</i>	<i>26</i>	<i>6.7</i>	<i>2</i>
<i>%chg</i>	<i>-14</i>	<i>18</i>		<i>-16</i>	<i>67</i>	<i>82</i>	<i>-100</i>	<i>-71</i>	<i>-100</i>		<i>-100</i>	<i>249</i>	<i>92</i>			<i>275</i>		<i>-100</i>	<i>208</i>	<i>170</i>	<i>132</i>	<i>108</i>	<i>47</i>

Putney Mountain - Putney, Vermont (ave for 2012 - 2021, % change in 2022)

YR	DYS	HRS	BV	TV	OS	BE	NH	SS	CH	NG	RS	BW	RT	RL	GE	AK	ML	PF	UR	TOT	XBWV	PH	XPH
2017	71	562	2	460	139	151	51	1456	105	7	32	11728	428	1	5	181	45	32	0	14823	2633	26	5
2018	70	508	0	514	148	144	77	1840	147	23	43	12045	588	2	16	298	56	30	0	15971	3412	31	7
2019	71	583	2	331	95	83	59	1075	57	8	27	5721	393	0	6	164	48	22	0	8091	2037	14	3
2020	70	592	0	327	103	172	70	1255	72	15	44	5958	552	0	11	187	51	40	0	8857	2572	15	4
2021	72	590	2	935	161	206	71	1573	95	7	53	14668	573	1	11	211	48	34	0	18649	3044	32	5
2022	73	564	10	385	95	173	71	1352	103	13	52	4801	276	0	10	157	53	41	0	7592	2396	13	4
<i>ave10</i>	<i>70</i>	<i>537</i>	<i>1</i>	<i>436</i>	<i>147</i>	<i>123</i>	<i>70</i>	<i>1457</i>	<i>119</i>	<i>21</i>	<i>38</i>	<i>7458</i>	<i>542</i>	<i>2.2</i>	<i>9</i>	<i>195</i>	<i>46</i>	<i>32</i>	<i>0</i>	<i>10695</i>	<i>2801</i>	<i>20</i>	<i>5</i>
<i>%chg</i>	<i>4</i>	<i>5</i>	<i>900</i>	<i>-12</i>	<i>-35</i>	<i>41</i>	<i>2</i>	<i>-7</i>	<i>-13</i>	<i>-38</i>	<i>37</i>	<i>-36</i>	<i>-49</i>	<i>-100</i>	<i>18</i>	<i>-19</i>	<i>15</i>	<i>27</i>	<i>-100</i>	<i>-29</i>	<i>-14</i>	<i>-32</i>	<i>-20</i>

Pack Monadnock - Peterboro, New Hampshire (ave for 2012 - 2021, % change in 2022)

YR	DYS	HRS	BV	TV	OS	BE	NH	SS	CH	NG	RS	BW	RT	RL	GE	AK	ML	PF	UR	TOT	XBWV	PH	XPH
2017	72	515	0	324	219	163	82	1179	142	16	181	8744	341	2	7	166	106	64	68	11804	2736	23	5
2018	66	455	0	98	181	176	64	668	124	11	126	6756	246	2	22	171	58	31	108	8842	1988	19	4
2019	79	557	0	268	171	180	54	1027	105	9	181	7840	223	0	4	185	64	64	128	10503	2395	19	4
2020	74	558	0	172	162	185	108	1325	180	12	223	8815	293	0	5	257	143	30	122	12032	3045	22	5
2021	76	548	2	641	182	227	85	1291	157	13	223	6055	329	1	11	165	100	57	66	9605	2907	18	5
2022	77	553	1	493	137	210	84	886	149	22	301	9369	300	0	11	175	130	44	58	12370	2507	22	5
<i>ave10</i>	<i>74</i>	<i>542</i>	<i>0</i>	<i>237</i>	<i>208</i>	<i>153</i>	<i>89</i>	<i>1180</i>	<i>144</i>	<i>27</i>	<i>164</i>	<i>9345</i>	<i>352</i>	<i>1</i>	<i>9</i>	<i>170</i>	<i>96</i>	<i>49</i>	<i>79</i>	<i>12302</i>	<i>2720</i>	<i>23</i>	<i>5</i>
<i>%chg</i>	<i>4</i>	<i>2</i>	<i>400</i>	<i>108</i>	<i>-34</i>	<i>38</i>	<i>-5</i>	<i>-25</i>	<i>4</i>	<i>-18</i>	<i>83</i>	<i>0</i>	<i>-15</i>	<i>-100</i>	<i>20</i>	<i>3</i>	<i>35</i>	<i>-10</i>	<i>-27</i>	<i>1</i>	<i>-8</i>	<i>-1</i>	<i>-9</i>

Mount Watatic - Ashby, Massachusetts (ave for 2012 - 2021, % change in 2022)

YR	DYS	HRS	BV	TV	OS	BE	NH	SS	CH	NG	RS	BW	RT	RL	GE	AK	M	PF	UR	TOT	XBWV	PH	XPH
2017	11	85	0	1	51	41	14	178	33	0	0	5039	0	0	0	68	22	1	33	5481	441	65	5
2018	12	84	1	11	52	52	8	176	33	0	4	3874	3	0	0	39	9	4	25	4291	405	51	5
2019	14	95	0	9	33	64	6	201	23	1	8	2069	2	0	0	46	13	1	10	2486	408	26	4
2020	18	125	0	48	74	103	8	267	55	0	5	5986	16	0	0	82	13	3	23	6683	649	54	5
2021	18	121	2	48	44	137	20	181	69	0	12	4790	17	0	1	76	33	6	40	5476	636	45	5
2022	16	96	2	44	54	110	12	232	46	1	4	8745	4	0	1	44	8	3	22	9332	541	97	6
<i>ave10</i>	<i>12</i>	<i>81</i>	<i>0</i>	<i>32</i>	<i>46</i>	<i>56</i>	<i>8</i>	<i>164</i>	<i>36</i>	<i>0</i>	<i>4</i>	<i>3981</i>	<i>6</i>	<i>0</i>	<i>0</i>	<i>41</i>	<i>15</i>	<i>3</i>	<i>21</i>	<i>4412</i>	<i>399</i>	<i>67</i>	<i>5</i>
<i>%chg</i>	<i>33</i>	<i>18</i>	<i>567</i>	<i>40</i>	<i>17</i>	<i>98</i>	<i>52</i>	<i>41</i>	<i>29</i>	<i>900</i>	<i>-5</i>	<i>120</i>	<i>-37</i>	<i>900</i>	<i>7</i>	<i>-45</i>	<i>11</i>	<i>5</i>	<i>112</i>	<i>35</i>	<i>46</i>	<i>20</i>	

Wachusett - Princeton, Massachusetts (ave for 2012 - 2021, % change in 2022)

YR	DYS	HRS	BV	TV	OS	BE	NH	SS	CH	NG	RS	BW	RT	RL	GE	AK	M	PF	UR	TOT	XBWV	PH	XPH
2017	57	328	1	293	144	117	23	322	121	1	14	10348	99	0	0	132	19	37	118	11789	1147	36	3
2018	47	258	6	267	100	135	17	281	132	0	13	5042	65	0	1	121	44	21	82	6327	1012	25	4
2019	64	391	7	404	133	148	10	359	114	0	12	2832	85	0	0	141	52	34	152	4484	1241	11	3
2020	73	433	14	783	129	156	45	427	160	0	93	6955	199	3	3	226	61	27	168	9451	1699	22	4
2021	73	435	0	948	170	232	28	406	166	0	57	4458	174	1	5	193	63	25	213	7139	1733	16	4
2022	76	423	4	1078	200	303	52	486	207	0	125	17974	193	1	5	149	54	26	262	21119	2063	50	5
<i>ave10</i>	<i>53</i>	<i>317</i>	<i>4</i>	<i>323</i>	<i>161</i>	<i>145</i>	<i>24</i>	<i>380</i>	<i>117</i>	<i>1</i>	<i>24</i>	<i>10740</i>	<i>84</i>	<i>1</i>	<i>2</i>	<i>138</i>	<i>38</i>	<i>28</i>	<i>125</i>	<i>12335</i>	<i>1269</i>	<i>43</i>	<i>4</i>
<i>%chg</i>	<i>44</i>	<i>34</i>	<i>3</i>	<i>234</i>	<i>24</i>	<i>109</i>	<i>118</i>	<i>28</i>	<i>77</i>	<i>-100</i>	<i>412</i>	<i>67</i>	<i>130</i>	<i>67</i>	<i>194</i>	<i>8</i>	<i>42</i>	<i>-8</i>	<i>109</i>	<i>71</i>	<i>63</i>	<i>16</i>	<i>19</i>

Pinnacle Rock - Medford, Massachusetts (ave for 2012 - 2021, % change in 2022)

YR	DYS	HRS	BV	TV	OS	BE	NH	SS	CH	NG	RS	BW	RT	RL	GE	AK	M	PF	UR	TOT	XBWV	PH	XPH
2017	20	97	0	2	9	7	9	95	29	0	1	0	2	0	0	6	1	4	19	184	182	2	2
2018	24	136	0	19	13	22	15	276	69	0	4	9	20	0	0	17	12	5	66	547	519	4	4
2019	18	96	0	5	5	18	1	22	9	0	1	0	25	0	0	3	3	3	10	105	100	1	1
2020	12	32	0	4	51	5	10	117	60	0	2	0	8	0	0	4	4	7	16	288	284	9	9
2021	34	214	0	18	50	14	11	46	28	1	4	6	6	0	0	10	8	5	17	224	200	1	1
2022	41	256	0	27	29	27	11	222	77	0	5	139	61	0	1	25	9	6	58	697	531	3	2
<i>ave10</i>	<i>20</i>	<i>94</i>	<i>0</i>	<i>8</i>	<i>18</i>	<i>9</i>	<i>6</i>	<i>97</i>	<i>31</i>	<i>0</i>	<i>2</i>	<i>4</i>	<i>10</i>	<i>0</i>	<i>0.1</i>	<i>7</i>	<i>5</i>	<i>3.5</i>	<i>18</i>	<i>218</i>	<i>207</i>	<i>2.9</i>	<i>2.7</i>
<i>%chg</i>	<i>109</i>	<i>173</i>		<i>246</i>	<i>63</i>	<i>210</i>	<i>90</i>	<i>129</i>	<i>147</i>	<i>-100</i>	<i>194</i>	<i>3464</i>	<i>487</i>	<i>900</i>	<i>242</i>	<i>70</i>	<i>71</i>	<i>226</i>	<i>219</i>	<i>157</i>	<i>-5</i>	<i>-24</i>	

Barre Falls - Barre, Massachusetts (ave for 2012 - 2021, % change in 2022)

YR	DYS	HRS	BV	TV	OS	BE	NH	SS	CH	NG	RS	BW	RT	RL	GE	AK	ML	PF	UR	TOT	XBWV	PH	XPH
2017	54	256	2	334	39	52	8	192	63	1	16	2159	153	0	1	41	11	6	34	3112	617	12.2	2.4
2018	49	219	0	156	45	58	13	341	65	1	11	1134	148	0	4	55	20	4	35	2090	800	9.5	3.6
2019	31	160	0	88	31	22	4	120	22	0	2	295	23	0	2	18	8	4	19	658	275	4.1	1.7
2020	33	181	0	274	24	42	6	153	38	0	5	587	59	0	0	26	13	3	33	1263	402	7.0	2.2
2021	19	85	0	50	17	34	1	68	15	0	1	261	27	0	0	16	9	0	11	510	199	6.0	2.3
2022	9	42	0	11	8	21	0	45	7	1	3	1916	11	0	0	8	2	0	1	2034	107	48.1	2.5
<i>ave10</i>	<i>43</i>	<i>206</i>	<i>0</i>	<i>194</i>	<i>65</i>	<i>48</i>	<i>14</i>	<i>318</i>	<i>67</i>	<i>2</i>	<i>14</i>	<i>3637</i>	<i>126</i>	<i>0</i>	<i>1</i>	<i>56</i>	<i>16</i>	<i>8</i>	<i>35</i>	<i>4600</i>	<i>769</i>	<i>22</i>	<i>4</i>
<i>%chg</i>	<i>-79</i>	<i>-79</i>	<i>-100</i>	<i>-94</i>	<i>-88</i>	<i>-56</i>	<i>-100</i>	<i>-86</i>	<i>-90</i>	<i>-50</i>	<i>-79</i>	<i>-47</i>	<i>-91</i>	<i>-100</i>	<i>-100</i>	<i>-86</i>	<i>-88</i>	<i>-100</i>	<i>-97</i>	<i>-56</i>	<i>-86</i>	<i>123</i>	<i>-29</i>

Shatterack Mountain - Russell, Massachusetts (ave for 2012 - 2021, % change in 2022)

YR	DYS	HRS	BV	TV	OS	BE	NH	SS	CH	NG	RS	BW	RT	RL	GE	AK	ML	PF	UR	TOT	XBWV	PH	XPH
2017	25	132	0	100	17	20	12	189	28	1	21	1904	58	0	0	34	11	2	5	2402	398	18	3
2018	33	175	0	336	38	54	15	321	51	0	38	3080	116	0	4	44	10	5	14	4126	710	24	4
2019	33	150	0	194	32	62	16	210	36	0	13	2565	6	0	2	61	13	4	9	3223	464	22	3
2020	30	161	0	256	17	40	10	210	41	0	23	2966	82	0	5	25	10	5	14	3704	482	23	3
2021	22	109	0	146	30	13	7	97	30	0	11	1173	5	0	0	21	4	2	17	1556	237	14	2
2022	34	161	0	294	56	17	15	242	38	0	32	2813	23	0	0	30	11	5	8	3584	477	22	3
<i>ave10</i>	<i>30</i>	<i>154</i>	<i>0</i>	<i>223</i>	<i>44</i>	<i>31</i>	<i>14</i>	<i>303</i>	<i>37</i>	<i>1</i>	<i>20</i>	<i>2952</i>	<i>66</i>	<i>0</i>	<i>2</i>	<i>42</i>	<i>12</i>	<i>7</i>	<i>15</i>	<i>3768</i>	<i>593</i>	<i>24</i>	<i>4</i>
<i>%chg</i>	<i>12</i>	<i>4</i>		<i>32</i>	<i>26</i>	<i>-46</i>	<i>8</i>	<i>-20</i>	<i>2</i>	<i>-100</i>	<i>58</i>	<i>-5</i>	<i>-65</i>	<i>-100</i>	<i>-29</i>	<i>-4</i>	<i>-23</i>	<i>-47</i>	<i>-5</i>	<i>-20</i>	<i>-7</i>	<i>-23</i>	

Blueberry Hill - Granville, Massachusetts (ave for 2011 - 2016, 2018-2021, % change in 2022)

YR	DYS	HRS	BV	TV	OS	BE	NH	SS	CH	NG	RS	BW	RT	RL	GE	AK	ML	PF	UR	TOT	XBWV	PH	XPH
2016	9	44	0	59	3	5	2	12	8	0	3	3	17	0	1	8	0	0	2	123	61	2.8	1
2018	13	52	0	104	5	5	8	107	27	1	11	1108	58	0	0	28	8	2	14	1486	274	29	5
2019	1	7	0	0	1	3	0	14	2	0	0	485	0	0	0	2	0	0	2	509	24	73	3
2020	36	182	1	127	22	46	21	173	38	4	48	2456	111	0	1	108	25	2	17	3200	616	18	3
2021	35	160	0	618	23	9	14	180	30	2	22	966	27	1	1	82	14	6	18	2013	429	13	3
2022	48	233	0	532	45	30	34	240	27	0	41	3238	23	0	0	73	27	7	18	4335	565	19	2
ave10	38	188	0	196	57	25	24	296	43	3	23	2321	104	0	2	117	14	5	17	3247	730	23	4
%chg	27	24	-100	172	-21	21	39	-19	-38	-100	77	39	-78	-100	-100	-37	89	43	6	34	-23	-18	-34

Booth Hill - West Hartland, Connecticut (ave for 2009-2017, 2021, % change in 2022)

YR	DYS	HRS	BV	TV	OS	BE	NH	SS	CH	NG	RS	BW	RT	RL	GE	AK	ML	PF	UR	TOT	XBWV	PH	XPH
2014	2	9	0	4	2	3	0	6	0	1	0	1659	0	0	0	2	1	0	0	1678	15	197	2
2015	3	15	0	5	4	9	1	20	2	0	1	1454	0	0	0	3	2	1	0	1502	43	100	3
2016	3	18	0	21	11	17	0	18	0	1	0	414	0	0	0	3	0	0	0	485	50	27	3
2017	2	9	0	12	5	9	3	10	0	0	3	380	4	0	0	16	0	0	0	442	50	49	6
2021	2	11	0	11	2	3	1	1	1	0	2	212	4	0	0	0	0	0	0	237	14	22	1
2022	7	34	1	75	3	13	1	9	2	0	6	238	8	0	0	7	0	0	1	364	50	11	1
ave10	2	11	0	6	5	8	1	16	1	1	1	1125	1	0	0	4	1	0	0	1167	36	117	3
%chg	250	213		1127	-41	70	0	-44	125	-100	800	-79	800		-100	80	-100	-100		-69	39	-91	-57

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Johnnycake Mountain- Connecticut (ave for 2011 - 2018, 2020 - 2021, % change in 2022)

YR	DYS	HRS	BV	TV	OS	BE	NH	SS	CH	NG	RS	BW	RT	RL	GE	AK	ML	PF	UR	TOT	XBWV	PH	XPH
2016	15	66	35	109	48	49	2	56	42	0	5	1010	18	0	0	46	2	2	0	1424	270	22	4
2017	6	30	13	5	27	15	3	13	5	0	2	1144	4	0	0	9	0	0	0	1240	78	42	3
2018	4	26	4	44	21	20	5	33	19	0	0	1708	9	0	0	17	3	3	0	1886	130	73	5
2020	15	63	3	0	18	37	1	22	16	0	4	328	0	0	1	25	0	1	22	478	147	8	2
2021	3	8	3	16	7	10	1	0	1	0	2	39	5	0	0	0	0	0	14	98	40	12	5
2022	13	55	14	103	29	32	2	8	12	0	17	1139	30	0	0	34	0	0	7	1427	171	26	3
ave10	10	45	10	25	42	31	4	54	13	0	2	2389	4	0	1	30	2	2	4	2612	187	58	4
%chg	31	21	46	307	-31	3	-44	-85	-8	-100	750	-52	614		-100	15	-100	-100	84	-45	-9	-55	-26

Mohonk Preserve - New Paltz, New York (ave for 2010 - 2012, 2015 - 2021, % change in 2022)

YR	DYS	HRS	BV	TV	OS	BE	NH	SS	CH	NG	RS	BW	RT	RL	GE	AK	ML	PF	UR	TOT	XBWV	PH	XPH
2017	59	314	11	471	79	105	43	645	115	2	52	4059	305	1	7	50	28	20	19	6012	1471	19	5
2018	32	161	3	108	81	100	30	751	108	1	34	4453	170	0	3	78	29	15	6	5970	1406	37	9
2019	44	208	2	174	50	151	28	357	101	1	38	1030	92	0	1	104	22	23	13	2187	981	11	5
2020	30	176	33	317	54	97	47	320	67	0	26	2846	91	0	1	116	21	6	10	4052	856	23	5
2021	19	110	0	181	18	93	22	393	50	0	8	1552	30	0	1	67	6	2	9	2432	699	22	6
2022	10	52	0	81	11	33	4	135	10	0	3	514	20	0	0	13	5	0	8	837	242	16	5
ave10	31	148	7	153	44	69	24	353	62	1	20	2096	100	0	2	56	16	10	13	3027	771	21	5
%chg	-67	-65	-100	-47	-75	-52	-84	-62	-84	-100	-85	-75	-80	-100	-100	-77	-68	-100	-40	-72	-69	-23	-10

Chestnut Hill - Litchfield, Connecticut (ave for 2012 - 2021, % change in 2022)

YR	DYS	HRS	BV	TV	OS	BE	NH	SS	CH	NG	RS	BW	RT	RL	GE	AK	ML	PF	UR	TOT	XBWV	PH	XPH
2017	16	74	0	0	10	17	1	27	0	0	0	1631	0	0	0	14	1	0	3	1704	73	23	1
2018	9	40	0	0	6	17	1	47	6	0	0	2818	0	0	0	16	0	2	4	2917	99	73	2
2019	18	66	0	0	14	9	1	38	7	0	0	1792	0	0	0	7	1	0	3	1872	80	28	1
2020	16	47	0	0	12	20	1	28	11	0	0	2639	0	0	0	9	3	0	3	2726	87	58	2
2021	16	57	0	0	15	32	4	35	11	0	0	2343	0	0	0	12	1	2	11	2466	123	43	2
2022	13	54	0	0	7	23	1	32	26	0	3	3168	0	0	0	3	1	0	5	3269	101	61	2
ave10	16	64	0	0	19	23	2	40	7	0	0	3411	3	0	0	12	1	1	9	3527	116	58	2
%chg	-17	-16		-100	-62	2	-55	-19	261	-100		-7	-100		-100	-75	11	-100	-43	-7	-13	5	1

Botsford Hill - Bridgewater, Connecticut (ave for 2012 - 2021, % change in 2022)

YR	DYS	HRS	BV	TV	OS	BE	NH	SS	CH	NG	RS	BW	RT	RL	GE	AK	ML	PF	UR	TOT	XBWV	PH	XPH
2017	11	44	0	0	19	12	2	60	4	0	0	1264	1	0	0	15	6	0	10	1393	129	32	3
2018	11	53	0	0	17	12	4	63	4	0	0	2571	0	0	0	10	1	0	9	2691	120	51	2
2019	14	49	0	0	13	29	0	55	2	0	0	2240	1	0	1	8	1	0	14	2364	124	48	3
2020	15	46	0	0	7	14	2	24	3	0	0	865	0	0	0	11	0	1	2	929	64	20	1
2021	15	54	0	0	16	17	2	30	7	0	0	645	0	0	0	6	2	1	18	744	99	14	2
2022	11	49	0	0	15	23	8	44	13	0	1	1844	0	0	0	10	2	1	9	1970	126	41	3
<i>ave10</i>	<i>14</i>	<i>58</i>	<i>0</i>	<i>0</i>	<i>23</i>	<i>17</i>	<i>3</i>	<i>71</i>	<i>5</i>	<i>0</i>	<i>0</i>	<i>2924</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>11</i>	<i>3</i>	<i>0</i>	<i>12</i>	<i>3068</i>	<i>144</i>	<i>48</i>	<i>2</i>
<i>%chg</i>	<i>-22</i>	<i>-16</i>			<i>-33</i>	<i>39</i>	<i>142</i>	<i>-38</i>	<i>165</i>			<i>-37</i>	<i>-100</i>		<i>-100</i>	<i>-6</i>	<i>-33</i>	<i>233</i>	<i>-26</i>	<i>-36</i>	<i>-13</i>	<i>-15</i>	<i>6</i>

Bear Mountain - Fort Montgomery, New York (ave for 2012 - 2021, % change in 2022)

YR	DYS	HRS	BV	TV	OS	BE	NH	SS	CH	NG	RS	BW	RT	RL	GE	AK	ML	PF	UR	TOT	XBWV	PH	XPH
2017	40	215	0	0	42	108	6	117	28	2	0	1828	9	0	0	23	2	11	13	2189	361	10	2
2018	45	238	0	0	55	66	8	374	56	0	16	1217	86	0	5	48	11	12	28	1982	765	8	3
2019	48	186	1	0	43	79	5	116	30	0	38	4051	63	0	0	28	5	14	13	4486	434	24	2
2020	37	158	0	63	35	71	7	150	36	0	13	442	51	1	3	44	8	8	10	942	437	6	3
2021	42	174	0	145	42	77	6	218	36	0	13	702	14	0	2	68	12	5	11	1351	504	8	3
2022	35	144	19	30	29	59	6	163	46	0	32	1152	68	0	0	50	6	2	11	1673	472	12	3
<i>ave10</i>	<i>52</i>	<i>271</i>	<i>0</i>	<i>21</i>	<i>47</i>	<i>85</i>	<i>8</i>	<i>237</i>	<i>35</i>	<i>1</i>	<i>16</i>	<i>1301</i>	<i>67</i>	<i>0</i>	<i>3</i>	<i>41</i>	<i>8</i>	<i>8</i>	<i>14</i>	<i>1892</i>	<i>570</i>	<i>8</i>	<i>2</i>
<i>%chg</i>	<i>-33</i>	<i>-47</i>		<i>44</i>	<i>-38</i>	<i>-30</i>	<i>-24</i>	<i>-31</i>	<i>32</i>	<i>-100</i>	<i>101</i>	<i>-11</i>	<i>2</i>	<i>-100</i>	<i>-100</i>	<i>21</i>	<i>-27</i>	<i>-74</i>	<i>-20</i>	<i>-12</i>	<i>-17</i>	<i>46</i>	<i>48</i>

Mount Peter - Warwick, New York (ave for 2012 - 2021, % change in 2022)

YR	DYS	HRS	BV	TV	OS	BE	NH	SS	CH	NG	RS	BW	RT	RL	GE	AK	ML	PF	UR	TOT	XBWV	PH	XPH
2017	74	480	96	320	111	85	26	841	121	1	122	6874	232	0	4	83	18	26	36	8996	1706	19	4
2018	66	419	79	504	134	112	35	1469	176	2	213	5071	508	0	6	159	15	23	24	8530	2876	20	7
2019	74	479	136	426	123	163	27	693	82	0	203	7360	443	0	9	85	8	14	28	9800	1878	20	4
2020	70	453	109	850	121	177	42	1048	85	0	149	3864	465	0	1	121	20	13	30	7095	2272	16	5
2021	70	473	77	1584	122	140	46	871	114	0	119	6769	113	0	4	125	8	11	17	10120	1690	21	4
2022	63	353	26	393	60	103	16	647	76	0	70	3306	183	0	2	64	11	8	7	4972	1247	14	4
<i>ave10</i>	<i>71</i>	<i>462</i>	<i>103</i>	<i>512</i>	<i>125</i>	<i>117</i>	<i>38</i>	<i>1102</i>	<i>110</i>	<i>1</i>	<i>138</i>	<i>6646</i>	<i>421</i>	<i>0</i>	<i>5</i>	<i>118</i>	<i>17</i>	<i>16</i>	<i>39</i>	<i>9505</i>	<i>2245</i>	<i>21</i>	<i>5</i>
<i>%chg</i>	<i>-11</i>	<i>-23</i>	<i>-75</i>	<i>-23</i>	<i>-52</i>	<i>-12</i>	<i>-58</i>	<i>-41</i>	<i>-31</i>	<i>-100</i>	<i>-49</i>	<i>-50</i>	<i>-56</i>		<i>-60</i>	<i>-46</i>	<i>-35</i>	<i>-49</i>	<i>-82</i>	<i>-48</i>	<i>-44</i>	<i>-32</i>	<i>-28</i>

Chestnut Ridge - Bedford, New York (ave for 2012 - 2021, % change in 2022)

YR	DYS	HRS	BV	TV	OS	BE	NH	SS	CH	NG	RS	BW	RT	RL	GE	AK	ML	PF	UR	TOT	XBWV	PH	XPH
2017	84	589	29	3098	263	149	90	1270	373	1	494	2133	265	0	13	334	120	32	343	9007	3747	15	6
2018	84	578	86	3414	314	159	103	1932	346	2	272	4278	454	0	3	446	84	27	151	12071	4293	21	7
2019	89	632	29	2589	233	137	59	1414	248	1	439	3363	168	0	9	240	101	25	151	9206	3225	15	5
2020	87	640	41	3423	248	233	138	2123	473	0	802	3140	207	0	14	368	90	37	124	11462	4858	18	8
2021	89	665	59	3798	364	265	201	2759	616	0	555	2501	78	0	15	468	96	27	114	11917	5559	18	8
2022	92	701	59	5051	269	260	149	3917	747	0	###	6883	131	0	14	464	140	36	227	19460	7467	28	11
<i>ave10</i>	<i>94</i>	<i>657</i>	<i>67</i>	<i>2718</i>	<i>284</i>	<i>140</i>	<i>106</i>	<i>1767</i>	<i>334</i>	<i>4</i>	<i>399</i>	<i>4710</i>	<i>253</i>	<i>0</i>	<i>11</i>	<i>328</i>	<i>66</i>	<i>27</i>	<i>155</i>	<i>11367</i>	<i>3872</i>	<i>17</i>	<i>6</i>
<i>%chg</i>	<i>-2</i>	<i>7</i>	<i>-12</i>	<i>86</i>	<i>-5</i>	<i>85</i>	<i>40</i>	<i>122</i>	<i>124</i>	<i>-100</i>	<i>179</i>	<i>46</i>	<i>-48</i>		<i>32</i>	<i>41</i>	<i>113</i>	<i>36</i>	<i>47</i>	<i>71</i>	<i>93</i>	<i>61</i>	<i>79</i>

Hook Mountain - Nyack, New York (ave for 2012 - 2021, % change in 2022)

YR	DYS	HRS	BV	TV	OS	BE	NH	SS	CH	NG	RS	BW	RT	RL	GE	AK	ML	PF	UR	TOT	XBWV	PH	XPH
2017	72	412	55	124	236	190	69	1161	149	1	94	4952	55	0	3	196	65	59	6	7415	2284	18	6
2018	69	415	127	780	166	159	112	2337	204	5	439	3279	200	0	8	217	94	37	3	8167	3981	20	10
2019	64	362	36	232	133	119	35	799	132	0	54	873	22	0	1	139	21	24	8	2628	1487	7	4
2020	82	515	201	972	302	291	124	1357	223	1	390	4590	271	0	8	370	66	27	15	9209	3446	18	7
2021	77	482	180	1330	383	209	137	1800	350	0	337	1069	104	0	14	299	78	37	16	6343	3764	13	8
2022	81	472	135	1332	177	203	82	1215	247	8	###	5268	224	0	8	171	56	34	43	10270	3535	22	7
<i>ave10</i>	<i>74</i>	<i>442</i>	<i>86</i>	<i>496</i>	<i>279</i>	<i>183</i>	<i>100</i>	<i>1614</i>	<i>199</i>	<i>4</i>	<i>227</i>	<i>3303</i>	<i>130</i>	<i>0</i>	<i>7</i>	<i>236</i>	<i>67</i>	<i>35</i>	<i>12</i>	<i>6977</i>	<i>3092</i>	<i>16</i>	<i>7</i>
<i>%chg</i>	<i>9</i>	<i>7</i>	<i>57</i>	<i>169</i>	<i>-36</i>	<i>11</i>	<i>-18</i>	<i>-25</i>	<i>24</i>	<i>122</i>	<i>369</i>	<i>59</i>	<i>72</i>		<i>18</i>	<i>-27</i>	<i>-16</i>	<i>-3</i>	<i>258</i>	<i>47</i>	<i>14</i>	<i>39</i>	<i>7</i>

Quaker Ridge - Greenwich, Connecticut (ave for 2012 - 2021, % change in 2022)

YR	DYS	HRS	BV	TV	OS	BE	NH	SS	CH	NG	RS	BW	RT	RL	GE	AK	ML	PF	UR	TOT	XBWV	PH	XPH
2017	97	720	24	1743	321	172	86	1532	378	2	###	3008	304	0	8	418	93	21	74	9191	4416	13	6
2018	96	674	62	1344	592	317	142	2456	489	4	648	9342	271	0	8	628	133	32	73	16541	5793	25	9
2019	96	695	53	1332	431	215	75	1535	306	0	370	4599	228	0	3	268	66	25	49	9557	3573	14	5
2020	93	641	39	2167	238	215	95	1771	312	1	602	6912	255	0	6	447	69	21	37	13187	4069	21	6
2021	90	689	78	1868	358	231	104	1721	422	0	635	1562	124	0	13	483	89	33	11	7732	4224	11	6
2022	93	736	33	2247	375	359	156	3408	914	0	###	25112	148	0	11	629	94	28	19	35404	8012	48	11
<i>ave10</i>	<i>94</i>	<i>712</i>	<i>42</i>	<i>1432</i>	<i>461</i>	<i>213</i>	<i>129</i>	<i>2156</i>	<i>414</i>	<i>4</i>	<i>614</i>	<i>7623</i>	<i>279</i>	<i>0</i>	<i>9</i>	<i>440</i>	<i>89</i>	<i>29</i>	<i>85</i>	<i>14019</i>	<i>4921</i>	<i>20</i>	<i>7</i>
<i>%chg</i>	<i>-1</i>	<i>3</i>	<i>-22</i>	<i>57</i>	<i>-19</i>	<i>69</i>	<i>21</i>	<i>58</i>	<i>121</i>	<i>-100</i>	<i>205</i>	<i>229</i>	<i>-47</i>	<i>-100</i>	<i>21</i>	<i>43</i>	<i>5</i>	<i>-4</i>	<i>-78</i>	<i>153</i>	<i>63</i>	<i>138</i>	<i>56</i>

Purple Chickadee - Ringwood, New Jersey (ave for 2017 - 2020, % change in 2021)

YR	DYS	HRS	BV	TV	OS	BE	NH	SS	CH	NG	RS	BW	RT	RL	GE	AK	ML	PF	UR	TOT	XBWV	PH	XPH
2017	22	117	3	24	12	10	3	73	56	0	0	858	2	0	0	17	8	3	7	1076	191	9	2
2018	32	170	1	142	13	13	13	201	139	1	12	971	45	0	4	49	11	7	23	1645	531	10	3
2019	26	127	19	133	13	22	4	146	58	1	35	628	75	0	3	43	9	7	30	1226	446	10	4
2020	46	247	27	304	27	59	17	408	176	0	67	2937	107	0	1	89	24	15	80	4338	1070	18	4
2021	55	303	17	313	48	66	37	491	186	0	114	1759	58	0	6	115	21	14	70	3315	1226	11	4
2022	67	374	80	288	58	80	43	499	232	0	223	1530	91	0	5	101	10	19	69	3328	1430	9	4
<i>ave5</i>	<i>36</i>	<i>193</i>	<i>13</i>	<i>183</i>	<i>23</i>	<i>34</i>	<i>15</i>	<i>264</i>	<i>123</i>	<i>0.4</i>	<i>46</i>	<i>1431</i>	<i>57</i>	<i>0</i>	<i>3</i>	<i>63</i>	<i>15</i>	<i>9</i>	<i>42</i>	<i>2320</i>	<i>693</i>	<i>11</i>	<i>3</i>
<i>%chg</i>	<i>85</i>	<i>94</i>	<i>497</i>	<i>57</i>	<i>157</i>	<i>135</i>	<i>191</i>	<i>89</i>	<i>89</i>	<i>-100</i>	<i>389</i>	<i>7</i>	<i>59</i>	<i>79</i>	<i>79</i>	<i>61</i>	<i>-32</i>	<i>107</i>	<i>64</i>	<i>43</i>	<i>106</i>	<i>-22</i>	<i>15</i>

Region 40

State Line - Alpine, New Jersey (ave for 2012 - 2021, % change in 2022)

YR	DYS	HRS	BV	TV	OS	BE	NH	SS	CH	NG	RS	BW	RT	RL	GE	AK	ML	PF	UR	TOT	XBWV	PH	XPH
2017	76	445	45	1628	448	219	71	818	266	2	286	1216	431	0	0	288	70	57	97	5942	3053	13	7
2018	76	467	26	3388	956	373	98	1794	572	1	388	3210	634	0	1	685	124	86	73	12409	5785	27	12
2019	75	446	65	2290	420	186	53	834	261	2	186	1368	491	0	1	359	56	46	43	6661	2938	15	7
2020	80	430	41	1780	278	190	66	897	267	1	355	1295	519	1	1	318	60	63	4	6136	3020	14	7
2021	82	497	66	3469	477	333	85	1426	368	0	337	917	281	0	3	489	71	72	10	8404	3952	17	8
2022	75	474	113	3508	473	351	92	1466	450	0	559	9886	694	0	3	571	62	80	26	18334	4827	39	10
<i>ave10</i>	<i>75</i>	<i>447</i>	<i>70</i>	<i>1999</i>	<i>549</i>	<i>188</i>	<i>78</i>	<i>1382</i>	<i>297</i>	<i>3</i>	<i>288</i>	<i>2272</i>	<i>476</i>	<i>0</i>	<i>2</i>	<i>388</i>	<i>63</i>	<i>55</i>	<i>97</i>	<i>8208</i>	<i>3867</i>	<i>18</i>	<i>9</i>
<i>%chg</i>	<i>0</i>	<i>6</i>	<i>61</i>	<i>76</i>	<i>-14</i>	<i>86</i>	<i>18</i>	<i>6</i>	<i>51</i>	<i>-100</i>	<i>94</i>	<i>335</i>	<i>46</i>	<i>-100</i>	<i>100</i>	<i>47</i>	<i>-2</i>	<i>45</i>	<i>-73</i>	<i>123</i>	<i>25</i>	<i>110</i>	<i>18</i>

Lenoir Wildlife Sanctuary - Yonkers, New York (ave for 2008 - 2009, 2011 - 2015, 2018 - 2020, % change in 2021)

YR	DYS	HRS	BV	TV	OS	BE	NH	SS	CH	NG	RS	BW	RT	RL	GE	AK	ML	PF	UR	TOT	XBWV	PH	XPH
2015	23	69	23	481	33	56	7	51	28	0	39	10	51	0	1	7	5	4	0	796	282	12	4
2018	25	95	39	621	211	114	18	267	61	0	45	3115	75	0	0	146	12	16	2	4742	967	50	10
2019	24	92	58	210	95	76	2	59	16	0	9	45	32	0	0	40	3	5	2	652	339	7	4
2020	46	176	119	419	163	118	4	136	38	1	70	375	135	0	1	52	7	18	2	1658	745	9	4
2021	22	98	33	477	126	75	2	91	20	0	13	271	10	0	0	78	10	3	0	1209	428	12	4
2022	18	85	30	174	72	57	8	106	35	0	7	1726	11	0	0	40	1	13	2	2282	352	27	4
<i>ave10</i>	<i>30</i>	<i>104</i>	<i>47</i>	<i>516</i>	<i>111</i>	<i>78</i>	<i>9</i>	<i>161</i>	<i>35</i>	<i>0</i>	<i>31</i>	<i>814</i>	<i>66</i>	<i>0</i>	<i>1</i>	<i>55</i>	<i>9</i>	<i>8</i>	<i>3</i>	<i>1942</i>	<i>565</i>	<i>20</i>	<i>6</i>
<i>%chg</i>	<i>-41</i>	<i>-18</i>	<i>-36</i>	<i>-66</i>	<i>-35</i>	<i>-27</i>	<i>-9</i>	<i>-34</i>	<i>1</i>	<i>-100</i>	<i>-77</i>	<i>112</i>	<i>-83</i>	<i>-100</i>	<i>-100</i>	<i>-27</i>	<i>-88</i>	<i>57</i>	<i>-26</i>	<i>17</i>	<i>-38</i>	<i>37</i>	<i>-27</i>

Wildcat Ridge - Hibernia, New Jersey (ave for 2012 - 2021, % change in 2022)

YR	DYS	HRS	BV	TV	OS	BE	NH	SS	CH	NG	RS	BW	RT	RL	GE	AK	ML	PF	UR	TOT	XBWV	PH	XPH
2017	40	189	26	0	40	23	3	129	43	0	2	502	20	0	1	14	7	6	16	832	304	4	2
2018	31	166	31	0	49	32	14	280	83	2	7	3031	43	0	0	24	9	3	38	3646	584	22	4
2019	47	252	27	0	40	30	5	284	114	1	16	840	104	0	2	32	8	10	37	1550	683	6	3
2020	48	235	50	206	21	50	7	118	132	1	8	1499	72	0	2	27	5	5	28	2231	476	9	2
2021	52	253	30	20	42	56	5	314	98	0	25	1911	48		2	35	20	6	36	2648	687	10	3
2022	33	146	32	60	26	20	5	179	56	0	18	2255	43	0	2	14	2	3	22	2737	390	19	3
<i>ave10</i>	<i>47</i>	<i>258</i>	<i>25</i>	<i>27</i>	<i>63</i>	<i>54</i>	<i>10</i>	<i>348</i>	<i>100</i>	<i>1</i>	<i>14</i>	<i>2806</i>	<i>54</i>	<i>0</i>	<i>1</i>	<i>41</i>	<i>10</i>	<i>6</i>	<i>20</i>	<i>3581</i>	<i>723</i>	<i>14</i>	<i>3</i>
<i>%chg</i>	<i>-30</i>	<i>-43</i>	<i>30</i>	<i>122</i>	<i>-59</i>	<i>-63</i>	<i>-51</i>	<i>-49</i>	<i>-44</i>	<i>-100</i>	<i>27</i>	<i>-20</i>	<i>-21</i>	<i>67</i>	<i>67</i>	<i>-66</i>	<i>-81</i>	<i>-45</i>	<i>11</i>	<i>-24</i>	<i>-46</i>	<i>36</i>	<i>-4</i>

Montclair Hawk Lookout - Montclair, New Jersey (ave for 2012 - 2021, % change in 2022)

YR	DYS	HRS	BV	TV	OS	BE	NH	SS	CH	NG	RS	BW	RT	RL	GE	AK	ML	PF	UR	TOT	XBWV	PH	XPH
2017	88	670	61	2866	251	184	51	1187	321	1	418	2396	298	0	1	296	126	82	44	8583	3260	13	5
2018	91	600	80	1863	272	160	53	1090	340	2	347	5442	174	0	1	324	92	45	9	10294	2909	17	5
2019	84	619	99	491	125	102	13	362	185	1	103	1208	133	0	0	119	52	34	9	3036	1238	5	2
2020	83	569	193	2241	155	153	53	565	353	1	287	848	285	0	0	180	150	47	23	5534	2252	10	4
2021	84	597	85	1975	217	190	61	831	423	1	337	915	194	0	0	270	73	64	20	5657	2682	9	4
2022	63	436	28	1595	39	97	25	317	167	0	14	1702	293	0	1	41	5	3	25	4352	1027	10	2
<i>ave10</i>	<i>85</i>	<i>583</i>	<i>75</i>	<i>1559</i>	<i>259</i>	<i>150</i>	<i>49</i>	<i>1052</i>	<i>291</i>	<i>1</i>	<i>306</i>	<i>3663</i>	<i>208</i>	<i>0</i>	<i>1</i>	<i>262</i>	<i>92</i>	<i>49</i>	<i>36</i>	<i>8053</i>	<i>2756</i>	<i>14</i>	<i>5</i>
<i>%chg</i>	<i>-26</i>	<i>-25</i>	<i>-63</i>	<i>2</i>	<i>-85</i>	<i>-36</i>	<i>-49</i>	<i>-70</i>	<i>-43</i>	<i>-100</i>	<i>-95</i>	<i>-54</i>	<i>41</i>	<i>-17</i>	<i>-84</i>	<i>-95</i>	<i>-94</i>	<i>-30</i>	<i>-46</i>	<i>-63</i>	<i>-29</i>	<i>-51</i>	

Scott's Mountain - MCR Harmony Twp., New Jersey (ave for 2012 - 2021, % change in 2022)

YR	DYS	HRS	BV	TV	OS	BE	NH	SS	CH	NG	RS	BW	RT	RL	GE	AK	ML	PF	UR	TOT	XBWV	PH	XPH
2017	89	624	0	0	169	274	81	1460	242	13	228	6786	477	1	13	167	54	61	96	10123	3337	16	5
2018	87	582	0	0	217	259	72	2018	273	11	152	8466	598	0	15	195	58	50	114	12498	4032	21	7
2019	91	599	0	0	182	244	72	967	177	8	257	4966	467	0	14	121	50	43	91	7659	2693	13	4
2020	90	592	0	0	196	255	92	1579	229	8	394	4893	749	1	28	191	63	47	133	8858	3965	15	7
2021	90	620	0	0	137	313	79	1544	185	4	210	7747	415	0	17	209	62	37	82	11041	3294	18	5
2022	90	604	0	0	132	209	54	1330	198	4	348	4578	428	0	14	157	49	50	76	7627	3049	13	5
<i>ave10</i>	<i>88</i>	<i>599</i>	<i>0</i>	<i>0</i>	<i>197</i>	<i>248</i>	<i>90</i>	<i>1700</i>	<i>217</i>	<i>9</i>	<i>199</i>	<i>9589</i>	<i>658</i>	<i>0</i>	<i>15</i>	<i>180</i>	<i>64</i>	<i>43</i>	<i>119</i>	<i>13328</i>	<i>3739</i>	<i>22</i>	<i>6</i>
<i>%chg</i>	<i>2</i>	<i>1</i>	<i>-33</i>	<i>-16</i>	<i>-40</i>	<i>-22</i>	<i>-9</i>	<i>-57</i>	<i>75</i>	<i>-52</i>	<i>-35</i>	<i>-100</i>	<i>-7</i>	<i>-13</i>	<i>-23</i>	<i>16</i>	<i>-36</i>	<i>-43</i>	<i>-18</i>	<i>-43</i>	<i>-20</i>		

Washington Valley - Martinsville, New Jersey (ave for 2017 - 2021, % change in 2022)

YR	DYS	HRS	BV	TV	OS	BE	NH	SS	CH	NG	RS	BW	RT	RL	GE	AK	ML	PF	UR	TOT	XBWV	PH	XPH
2017	33	172	0	108	41	94	17	427	52	0	154	1224	63	1	5	152	35	6	0	2379	1047	14	6
2018	37	200	4	33	86	155	60	1105	198	2	249	3188	99	0	4	304	82	10	0	5579	2354	28	12
2019	43	205	107	125	92	155	23	302	143	0	163	933	90	0	2	161	62	1	1	2360	1195	12	6
2020	48	233	0	70	116	178	40	863	142	0	210	5132	158	0	1	565	113	26	1	7615	2413	33	10
2021	31	124	80	541	38	120	41	582	104	0	117	1080	30	1	2	209	81	11	3	3040	1339	25	11
2022	29	132	0	26	45	111	34	459	46	0	109	11569	82	0	3	231	54	8	0	12777	1182	97	9
<i>ave5</i>	<i>38</i>	<i>187</i>	<i>38</i>	<i>175</i>	<i>75</i>	<i>140</i>	<i>36</i>	<i>656</i>	<i>128</i>	<i>0</i>	<i>179</i>	<i>2311</i>	<i>88</i>	<i>0</i>	<i>3</i>	<i>278</i>	<i>75</i>	<i>11</i>	<i>1</i>	<i>4195</i>	<i>1670</i>	<i>22</i>	<i>9</i>
<i>%chg</i>	<i>-24</i>	<i>-29</i>	<i>-100</i>	<i>-85</i>	<i>-40</i>	<i>-21</i>	<i>-6</i>	<i>-30</i>	<i>-64</i>	<i>-100</i>	<i>-39</i>	<i>401</i>	<i>-7</i>	<i>-100</i>	<i>7</i>	<i>-17</i>	<i>-28</i>	<i>-26</i>	<i>-100</i>	<i>205</i>	<i>-29</i>	<i>338</i>	<i>0</i>

Coastal Region

Lighthouse Point - New Haven, Connecticut (ave for 2012 - 2021, % change in 2022)

YR	DYS	HRS	BV	TV	OS	BE	NH	SS	CH	NG	RS	BW	RT	RL	GE	AK	ML	PF	UR	TOT	XBWV	PH	XPH
2017	91	588	12	527	1084	181	263	2136	1080	2	298	441	243	2	0	1070	277	124	377	8120	7140	14	12
2018	103	631	4	239	1630	342	439	3634	2272	3	243	225	409	1	3	1717	475	215	589	12440	11972	20	19
2019	96	614	0	337	1035	232	183	1658	1509	4	159	208	291	0	2	657	229	99	295	6899	6354	11	10
2020	97	634	43	524	932	229	255	2321	1127	0	209	190	321	0	2	963	275	139	388	7918	7161	12	11
2021	92	586	16	360	1148	323	263	1250	1007	0	130	5378	239	0	6	1180	253	129	230	11916	6162	20	11
2022	88	531	13	544	760	228	314	2168	1842	2	216	3721	430	0	3	762	261	106	188	11559	7281	22	14
<i>ave10</i>	<i>94</i>	<i>630</i>	<i>15</i>	<i>427</i>	<i>1058</i>	<i>239</i>	<i>302</i>	<i>2665</i>	<i>1269</i>	<i>4</i>	<i>188</i>	<i>1166</i>	<i>358</i>	<i>1</i>	<i>4</i>	<i>969</i>	<i>313</i>	<i>154</i>	<i>387</i>	<i>9519</i>	<i>7911</i>	<i>15</i>	<i>13</i>
<i>%chg</i>	<i>-6</i>	<i>-16</i>	<i>-13</i>	<i>28</i>	<i>-28</i>	<i>-5</i>	<i>4</i>	<i>-19</i>	<i>45</i>	<i>-50</i>	<i>15</i>	<i>219</i>	<i>20</i>	<i>-100</i>	<i>-21</i>	<i>-21</i>	<i>-17</i>	<i>-31</i>	<i>-51</i>	<i>21</i>	<i>-8</i>	<i>44</i>	<i>9</i>

Fire Island - Islip, New York (ave for 2012 - 2021, % change in 2022)

YR	DYS	HRS	BV	TV	OS	BE	NH	SS	CH	NG	RS	BW	RT	RL	GE	AK	ML	PF	UR	TOT	XBWV	PH	XPH
2017	74	457	0	0	836	11	144	92	52	0	1	0	1	1	0	712	1177	216	6	3249	3249	7	7
2018	75	452	0	0	496	14	249	480	84	0	0	0	1	0	0	985	1590	172	3	4074	4074	9	9
2019	71	414	0	0	418	8	118	130	71	0	0	0	3	0	0	423	884	103	4	2162	2162	5	5
2020	77	416	0	0	685	14	182	166	44	1	1	0	4	0	0	1155	1099	147	9	3507	3507	8	8
2021	76	456	0	0	501	8	232	106	32	0	0	0	0	0	1	880	886	116	4	2767	2767	6	6
2022	65	361	0	0	607	14	147	103	35	0	0	0	5	0	0	559	1042	124	3	2639	2639	7	7
<i>ave10</i>	<i>71</i>	<i>430</i>	<i>0</i>	<i>0</i>	<i>488</i>	<i>8</i>	<i>173</i>	<i>187</i>	<i>48</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>2.0</i>	<i>0</i>	<i>0</i>	<i>681</i>	<i>1099</i>	<i>150</i>	<i>6</i>	<i>2843</i>	<i>2843</i>	<i>7</i>	<i>7</i>
<i>%chg</i>	<i>-8</i>	<i>-16</i>	<i>-100</i>	<i>-100</i>	<i>24</i>	<i>67</i>	<i>-15</i>	<i>-45</i>	<i>-27</i>	<i>-100</i>	<i>-100</i>	<i>-100</i>	<i>150</i>	<i>-100</i>	<i>-100</i>	<i>-18</i>	<i>-5</i>	<i>-17</i>	<i>-47</i>	<i>-7</i>	<i>-7</i>	<i>9</i>	<i>9</i>

Fort Tilden - Queens, New York (ave for 2018 - 2021, % change in 2022)

YR	DYS	HRS	BV	TV	OS	BE	NH	SS	CH	NG	RS	BW	RT	RL	GE	AK	ML	PF	UR	TOT	XBWV	PH	XPH
2018	7	59	0	17	30	6	103	708	105	0	5	12	9	0	0	1210	332	16	0	2553	2524	43	43
2019	15	95	0	10	232	8	33	149	51	0	3	7	14	0	0	401	242	20	0	1170	1153	12	12
2020	20	134	0	4	454	16	95	261	53	0	11	7	14	0	0	728	230	29	0	1902	1891	14	14
2021	32	198	1	7	879	13	160	257	63	0	5	4	11	0	0	836	295	32	3	2566	2554	13	13
2022	30	198	0	20	1200	43	173	337	135	0	19	7	33	0	0	731	259	44	2	3003	2976	15	15
<i>ave4</i>	<i>19</i>	<i>122</i>	<i>0</i>	<i>10</i>	<i>399</i>	<i>11</i>	<i>98</i>	<i>344</i>	<i>68</i>	<i>0</i>	<i>6</i>	<i>8</i>	<i>12</i>	<i>0</i>	<i>0</i>	<i>794</i>	<i>275</i>	<i>24</i>	<i>1</i>	<i>2048</i>	<i>2031</i>	<i>21</i>	<i>20</i>
<i>%chg</i>	<i>62</i>	<i>63</i>	<i>-100</i>	<i>111</i>	<i>201</i>	<i>300</i>	<i>77</i>	<i>-2</i>	<i>99</i>		<i>217</i>	<i>-7</i>	<i>175</i>			<i>-8</i>	<i>-6</i>	<i>81</i>	<i>167</i>	<i>47</i>	<i>47</i>	<i>-27</i>	<i>-27</i>

Northeast Fall Regional Totals, 2000–2022

YEAR	Sites	HRS	COUNTS PER 100 HOURS																		
			BV	TV	OS	BE	NH	SS	CH	NG	RS	BW	RT	RL	GE	AK	ML	PG	UR	TOT	XBV
2000	31	7869	2.0	65	75	10	23	367	39	1.7	13	1908	56	0.2	1.0	122	28	7	23	2741	767
2001	32	7846	2.9	63	69	9	27	436	38	1.8	17	1485	73	0.1	0.8	126	32	9	18	2408	857
2002	38	7812	1.8	59	87	12	25	365	39	1.4	13	1577	66	0.2	0.9	120	33	8	20	2426	789
2003	40	7901	2.0	57	78	13	35	380	46	1.6	16	493	99	0.4	1.1	92	32	8	20	1378	826
2004	39	8073	2.3	58	67	16	20	359	44	1.4	17	943	68	0.2	1.1	93	30	7	19	1745	742
2005	43	8605	5.7	64	69	15	21	365	52	1.5	16	1378	100	0.1	1.3	86	34	9	23	2242	794
2006	44	9572	2.5	66	80	15	30	392	51	1.7	20	1001	71	0.1	1.9	83	33	9	19	1876	807
2007	43	10077	3.9	65	75	16	35	397	54	2.3	18	1205	65	0.2	0.9	87	32	9	20	2086	813
2008	45	10607	3.1	83	71	17	20	272	45	1.3	16	1499	62	0.3	1.2	55	24	11	16	2197	612
2009	52	11274	3.5	66	56	19	17	309	44	1.8	17	1164	61	0.1	1.1	66	27	11	20	1877	643
2010	42	10391	4.7	63	71	23	33	406	57	2.2	21	1226	68	0.2	1.3	96	40	13	29	2153	860
2011	45	10292	4.1	114	71	22	19	377	58	1.5	15	1968	54	0.1	1.2	71	27	11	21	2844	758
2012	46	10482	4.2	85	81	31	21	348	56	2.3	31	1680	85	0.1	1.2	85	29	11	24	2708	939
2013	43	11177	6.1	81	52	25	17	248	34	1.3	25	2338	54	0.1	1.3	54	22	7	18	2983	557
2014	41	10727	5.6	109	59	29	22	303	47	1.5	38	1448	69	0.1	1.2	67	25	10	22	2255	693
2015	44	11449	5.0	121	60	28	18	235	35	1.2	20	1270	43	0.1	1.1	43	23	6	15	1868	472
2016	38	10630	3.6	85	50	29	16	183	35	2.0	23	900	48	0.1	0.7	36	23	7	15	1456	468
2017	37	10228	4.1	140	52	30	14	184	39	0.8	35	919	45	0.1	0.8	55	25	10	18	1573	509
2018	41	9511	6.4	166	69	41	22	295	67	1.3	36	1081	61	0.1	1.3	95	38	11	20	2011	758
2019	39	9825	7.6	120	51	36	11	160	41	0.5	24	765	40	0.0	0.7	51	23	7	16	1357	464
2020	43	10405	9.6	172	52	43	19	201	45	0.8	40	963	64	0.2	1.1	75	27	8	17	1738	594
2021	45	10167	8.9	233	62	45	20	203	48	0.5	34	1056	38	0.1	1.5	74	24	8	14	1870	572
2022	40	9560	6.3	209	59	44	20	238	63	0.8	66	1667	46	0.1	1.0	63	26	8	15	2535	652
20yrAv	42	9960	5	100	66	25	22	299	47	1	24	1243	63	0.1	1	74	28	9.1	19	2032	684
% diff	-6	-4	33	109	-11	74	-8	-20	36	-44	180	34	-27	-65	-12	-15	-8	-11	-21	25	-5

BV Black Vulture, TV Turkey Vulture, OS Osprey, BE Bald Eagle, NH Northern Harrier, SS Sharp-shinned Hawk, CH Cooper's Hawk, NG Northern 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, PG Peregrine Falcon, UR Unidentified Raptor, XBV Total without Broad-winged Hawks and Vultures.

*To find the original counts, divide by 100 and multiple by the hours. Eg: AK totals for 2016 = 35.9/100 * 10630 = 3816*

Web Sources for Weather Information

by Drew Panko, NEHW Board, Fire Island Raptor Enumerator

Introduction

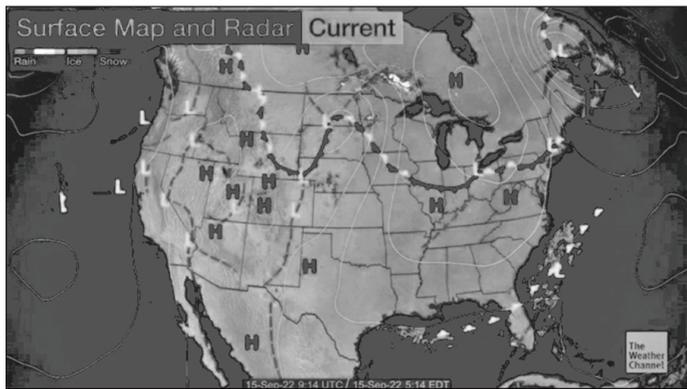
Birders in general and hawk watchers in particular must be aware of the weather. Not only does it determine our comfort level out in the field but it plays an important role in where, when and how visible the birds will be.

And we live in marvelous times with the weather conditions, weather history, and weather predictions at our finger tips over the internet. I remember when the weather information was only available 5 minutes every hour over the radio, with no graphics, sharing time with automobile traffic, and filtered through a non-professional meteorologist who had his/her own point of view on what we needed to know about the weather and no appreciation whatsoever about weather's effects on birds!

So, I'd like to point out some good ways to get immediate weather information from the web. Unfortunately, this newsletter may not be the best way to do it. So, this article is also on the web, at <http://www.battaly.com/nehw/reports/panko/weather.pdf> as a pdf, **in color and with clickable links!** I recommend that you go to the web and read the rest of this article there, then you can click on any link immediately and see what I am talking about—and add it to your favorites if you like it. You could also scan through the article here, to see if there is anything of interest to you and then go to the web. There is also a simplified list of all the websites in this article available on the web at <http://www.battaly.com/nehw/reports/panko/weather.htm>

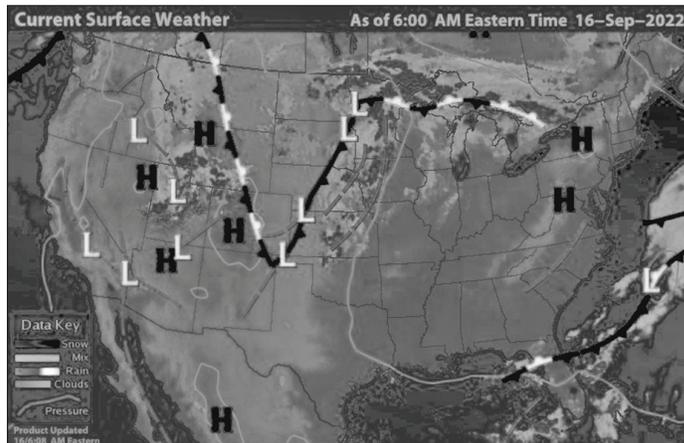
Air Mass

The first thing I like to know about the weather is what kind of air mass we are in and how is it likely to change in the next 12, 24 and 48 hours. Surface weather maps are ideal for this, first from the weather channel:<https://weather.com/maps/currentusweather>



This map is from 9/15/22 (5am). You can see a cold front passed through the northeast overnight and the combined circulation around a high and a low will produce strong NW winds. What more could a hawk watcher want?

<https://www.wunderground.com/maps/current-weather/mixed-surface-analysis>. From 9/16/22:



This map is a day later and from a different website. You can see the progress of the cold front. The good news is that this wunderground map shows the cloud cover as well as the air masses and winds. The bad news is that it shows fewer isobaric lines and often is 6 or 8 hours behind the time noted on the map. But it is also a check on the first weather channel map – they will often draw the locations of the Highs and Lows differently – occasionally very differently. I often prefer the weather channel map but need the wunderground for the cloud cover. So, I like to look at both every day.

If there are serious differences between the two, or I just don't understand what they're trying to tell me I check out: https://www.nws.noaa.gov/outlook_tab.php. This site gives lots of maps, current and forecast.

A weak point for these maps is that they do not show much of Canada or the Atlantic waters. Sometimes a High or Low is located up there and it is a strong determinant of the winds in the Northeast US. A site that maps much of Eastern Canada and the north Atlantic is given on: <https://www.weatherroanoke.com/natlantic.html>

For the final look at the air mass, I go back to the weather channel:<https://weather.com/maps/ustemperaturemap> and <https://weather.com/maps/currentdewpoint>

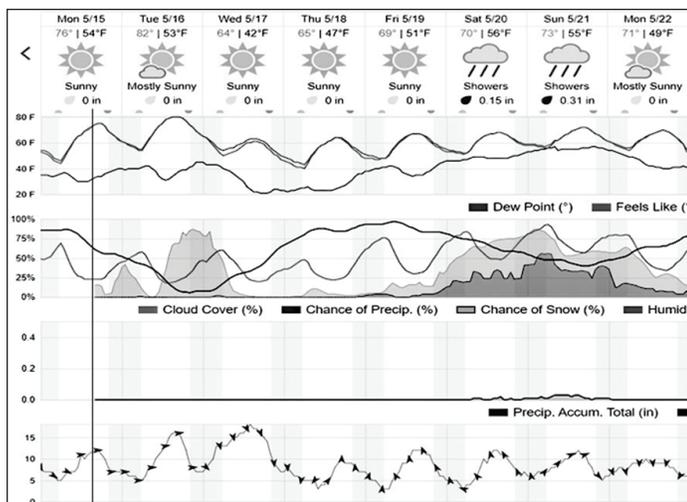
The dewpoint and current temperature are often helpful in defining the boundaries of the air masses and the strength of the cold fronts. Very often a change in dew point defines the edge of an air mass.

Predictions

The best single way to get a prediction for the current day and sometime into the future is the 10-day forecast from wunderground: https://www.wunderground.com/forecast/us/ny/hartsdale?cm_ven=localwx_10day

This is a sample for Hartsdale. You can get the forecast for many other locations by using the "Search Locations" box in the upper right. You can either input a city name or the 3-letter code for the airport near the location you are looking for. You can get the 3-letter

code and location from the map at <https://www.wunderground.com/maps/radar/summary/bgm>. Here is a sample of 8 days of the 10-day forecast for Hartsdale, NY for 5/15/23:



(The chart on the web is in color and much easier to read than the b&w version reproduced here.)

Temperature, Wind Chill, Dew Point, Barometric Pressure, Humidity, Cloud Cover, Chance of Precipitation, Accumulated Precipitation, Wind Speed and Wind Direction are graphically plotted for all days predicted.

Like any prediction it is sometimes wrong, but it is very good for current day and the next. And it is more likely to fail to predict correctly the further out you go. A built-in tendency is for predictions to be early. So, if it predicts north winds on the morning of the fourth day out, it will likely be wrong, but the winds will occur on the fifth day.

Another good place to get the forecast is from the National Weather Service: <https://forecast.weather.gov/MapClick.php?lat=41.06237&lon=-73.70456#.WSywDOsrKUK>

This URL is for the prediction at Westchester County NY Airport. By putting in the 3-letter code for any airport you will get a wide selection of places. If you precede the 3-letter code with the letter "k" you will go directly to the airport. And once there, you can use the map on the lower right to move closer to the location you are interested in. You can also input the city and state for the location you are interested in, but the prediction is a little different from the nearest airport & the exact location is a little vague.

The forecast is given verbally, and is both a strong point and weak point. I like to use it as a check. After I've formed my own opinion on what the weather will be, I'll check the verbal forecast such as:

Tonight: Mostly clear, with a low around 52. West wind 7 to 10 mph.

Tuesday: Increasing clouds, with a high near 81. West wind 8 to 14 mph.

Tuesday Night: Mostly cloudy, with a low around 51. West wind around 10 mph becoming north after midnight.

Wednesday: Sunny, with a high near 64. North wind 13 to 15 mph. Thursday: Etc., etc.

Projected Movement of Highs and Lows

But what I find even more valuable, is a link at the bottom of the above webpage "Forecast Discussion". This gives the SYNOPSIS for the day in more technical 'weather speak', in terms of air masses, their types and predicted movement: The following example is strongly edited to reduce wordiness, so it is not complete, but shows the extent of forecast topics included.

FXUS61 KOKX 081130

AFDOKX

Area Forecast Discussion

National Weather Service New York NY

730 AM EDT Mon May 8 2023

SYNOPSIS...

Weak high pressure builds in from the northwest though tonight, while a frontal boundary stalls over the Mid Atlantic states. A frontal wave over the Ohio Valley tracks to the south of the area on Tuesday, followed by high pressure building in for the second half of the week. A back door cold front will then approach from the north and may enter the area late Friday night into Saturday, then lift back to the north later this coming weekend. Another frontal system will then begin to approach from the southwest on Sunday.

NEAR TERM /UNTIL 6 PM THIS EVENING/...

Following a weak cold frontal passage this morning ...

SHORT TERM /6PM THIS EVENING THROUGH WEDNESDAY/...

With an upper low over the Canadian Maritimes and a shear axis...

LONG TERM /WEDNESDAY NIGHT THROUGH SUNDAY/...

No significant changes in the long term and stuck close to ...

AVIATION /12Z MONDAY THROUGH FRIDAY/...

Weak high pressure builds in from the northwest though tonight...NY Metro (KEWR/KLGA/KJFK/KTEB) TAF Uncertainty...

Gusts may be occasional at times today. an occasional gust higher than forecast can not be ruled out.

Low chance of a shower early Tuesday morning as low pressure passes south and west of the area.

OUTLOOK FOR 12Z TUESDAY THROUGH FRIDAY...

Tuesday: Mainly VFR ...

Wednesday: VFR.

MARINE...

A weak pressure gradient should keep winds and seas below advy levels through the end of the week.

HYDROLOGY...

No hydrologic concerns exist through next week.

TIDES/COASTAL FLOODING...

Based on the Sunday night high tide cycle ...

OKX WATCHES/WARNINGS/ADVISORIES...

CT...None.

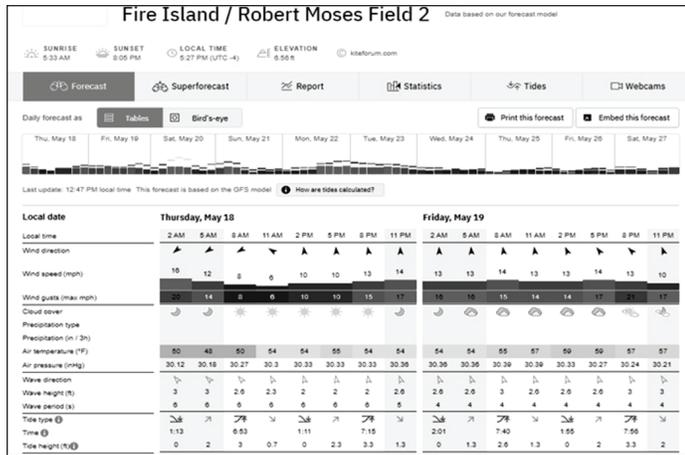
NY...None.

MARINE...None.

This forecast is for a wide area centered around an airport. And the Aviation section is often a nice addition to the Synopsis section. And so is the Marine section for coastal watches.

The webpage also provides links and maps, on the right-hand side. The surface map shows the area being forecasted and it is zoomable to anywhere in the US. If you click anywhere on the map, you will get the local forecast at that point. If you click on the map on open water you will get a specialized Marine Forecast for the marine location. Under the map is a section labeled Additional Resources. Here you will find: a Doppler Radar map (precipitation), Satellite (cloud coverage) maps and many other weather links.

Recent years have brought a new sport to our inshore waters – wind surfing. These wind surfers are extremely interested in what the winds will be and have originated a series of web sites that predict the winds and I have found these to be even more accurate than the National Weather Service predictions – perhaps because they are even more local. Here’s one: https://www.windfinder.com/forecast/fire_island_robert_moses_field_2



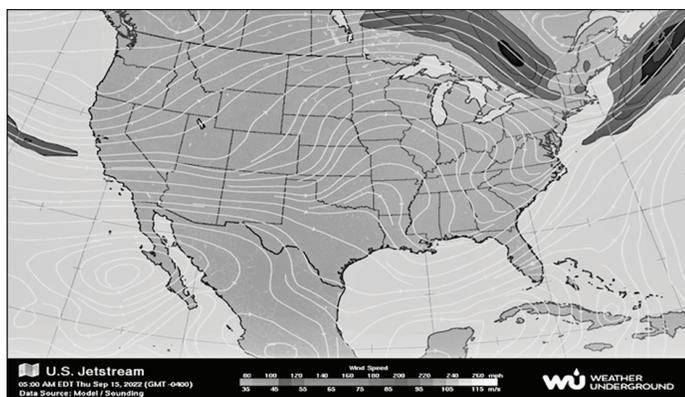
This page gives 6 days of predictions. The accuracy falls off the further out you go. Clicking on “Map”, “Locations” or searching by city name under “Search” will bring you to a surprising number of locations including some inland rivers and lakes. They also offer a number of other graphical and numerical formats and historical data by day and by month. And, in my experience, they give the best prediction of wind speeds and direction.

Clicking on the “more”, at the far right top, will bring you to another group of options, including “wind & weather map” which will bring you to a zoomable global wind map, such as: <https://www.windfinder.com/#9/41.1083/-73.2002>

The jet stream is often helpful in understanding the weather conditions: <https://www.wunderground.com/maps/wind/jet-stream>

This is an instantaneous shot of the Jet Stream at 5 am on 9/15/22. It clearly shows how the jetstream would steer a moderate cold front into our area. Such Jet Stream maps can give you a heads up of approaching cold fronts a day or two in advance and an indicator of how strong and how extensive the NW winds will be.

An even better multiple day, zoomable view of the Global Jet stream is at: <https://www.netweather.tv/charts-and-data/global-jetstream#2023/05/21/0600Z/jetstream/surface/level/overlay=jetstream/orthographic=-6.72,57.59,356>



But this level of detail is not usually necessary. And the instant glimpse at the wunderground site is usually enough for birding purposes.

The jet stream is usually too high to directly impact hawk migration. But often the speed and direction of upper-level winds will impact their movement because their effect, though weakened, can sometimes extend as low as 3000 ft. And this is well within the heights that hawks will fly. Wind speed and direction is available for every 3000 feet for every 6 hours at: <https://www.usairnet.com/cgi-bin/Winds/Aloft.cgi?icao=JFK&hr=06>

Precipitation:

The forecasts will make predictions of the precipitation expected in your area. However, for hawk watch purposes you need more. The weather prediction for your area may be for sunshine and NW winds, but if there is a large area of precipitation between you and the source region of the hawks that pass your site, there will be no hawks at your site.

A very good precipitation map for the entire US is available at: <https://www.wunderground.com/maps/radar/summary> and just for the Northeast at: <https://www.wunderground.com/maps/radar/summary/bgm>

These maps also have the bonus of giving the direction the precipitation is moving and showing the location of all major airports and their 3-letter codes. Which can be converted to the 4-letter code merely by preceding the 3-letter code with a “k”.

For current and the past 12 hours you can access the National Weather Service doppler radars at: <http://weather.rap.ucar.edu/radar/>

This will bring you to the radar site where you can choose the closest radar site near you. Many other data sources are available from the menu at the top of the page. Choose “satellite” and you’ll get a beautiful image of the regional cloud cover: <http://weather.rap.ucar.edu/satellite/>

However, it is a static picture of the current cloud cover with no indication of how it will be changing. If you would like a prediction of the location and movement of precipitation over the next 4 hours or 10 days you can check out: <https://www.msn.com/en-us/weather/maps/precipitation/in-Irvington,NY?loc=eyJljojSXJ2aW5ndG9uliwicil6lk5ldyBZb3JrIiwYyYl6lVuaXRIZCBTdGF0ZXMlLCJlpljoiVVMiLCJnIjojZW4tdXMiLCJ4IjojLTczLjg2NjgzNjU0Nzg1MTU2IiwieSI6IjQxLjAzOTY2NTIyMjE2NzI3In0%3D&weadegreotype=F&ocid=winp1taskbar&zoom=8&rc=1&animation=0>

I don’t use this site enough to be able to determine its accuracy compared to other predictions. Essentially I’m assuming that the website for one of your local TV stations will also have a good Doppler Radar map to show you current and past conditions.

Historical data: Weather that Was

Weather often does not turn out as predicted. You can always get a record of what weather occurred at your nearest airport for the last three days. For the weather at JFK: <https://w1.weather.gov/data/obhistory/KJFK.html>. Here is a sample:

Weather observations for the past three days

New York, Kennedy International Airport

Enter Your "City, ST" or zip code Go metric

Date	Time (edt)	Wind (mph)	Vis. (mi.)	Weather	Sky Cond.	Temperature (°F)				Relative Humidity	Wind Chill (°F)	Heat Index (°F)	Pressure		Precipitation (in.)		
						Air	Dwpt	6 hour Max	6 hour Min				altimeter (in)	sea level (mb)	1 hr	3 hr	6 hr
10	08:51	N 8	10.00	Mostly Cloudy	SCT025 SCT160 BKN230	76	70			82%	NA	77	29.75	1007.5			
10	07:51	N 8	10.00	Mostly Cloudy	FEW010 FEW025 BKN160 BKN230	75	71	75	71	88%	NA	NA	29.75	1007.3			
10	06:51	NW 7	10.00	Mostly Cloudy	FEW012 BKN024 BKN130 BKN220	73	71			94%	NA	NA	29.74	1007.1			
10	05:51	W 7	10.00	Mostly Cloudy	SCT035 SCT130 BKN220	72	70			94%	NA	NA	29.72	1006.5			
10	04:51	W 6	10.00	Mostly Cloudy	FEW013 SCT021 BKN150	72	70			94%	NA	NA	29.71	1006.1			

You can get this data by entering the four-letter code for any airport in the US. Or you can get the nearest airport if you enter a City and State, or zip code.

It is also available by clicking on "3 day History", under more information, on the right, half way down the page on:

<https://forecast.weather.gov/MapClick.php?lat=41.06237&lon=-73.70456#.WSyWDOsrKUK>

For the hawk watches of interest to me, I visit the nearest airport, download and save the data to Excel every three days.

I often would like to know what the weather was at an airport for which I do not save data, sometimes back several years. On <https://www.wunderground.com/history> you can find this data, just scroll down the page. Unfortunately, summaries of weekly and monthly data do not include wind direction. Wind direction it is only available hourly, which requires viewing one day at a time.

There is a way to get these airport surface hourly reports from any airport for as long as the airport has been in operation without paying a commercial company to supply them. A website that does this is: <https://www.climate.gov/> In particular: <https://www.climate.gov/maps-data/dataset/wind-roses-airports-around-world-graphics-or-raw-data-tables>

Carefully follow the detailed directions given on the site, and you can download all the weather data in numerical form from any airport as far back as the airport has been in operation. You can also create "wind roses" which lump the wind speed by direction over any time and date period.

The following website contains an archive of doppler radar maps of the US as the weather actually developed in the past (as far back as 2011!): https://www.pauljhurtado.com/US_Composite_Radar/

Weather Blogs

<https://yaleclimateconnections.org/> and

<https://www.scientificamerican.com/environment/> and

<https://www.climate.gov/>

These are three websites that have more detailed articles on various aspects of weather. Topics such as the ENSO (El Nino & La Nina), Hurricane forecasts, and Hurricane damage reports, and climate change reports and predictions are common topics (one or two a week) on these sites. You Tube and <https://bestweatherblog.blogspot.com/> also have good discussions of weather topics.

General Birding

All the above sites are more or less useful for general birding as well as hawkwatching. But there is one site that specializes in predicting and recording nocturnal, non-raptor migration: <https://birdcast.info/>

It is only active in the spring and fall migration season, but that is when you need the information it provides. And good hawk flights often follow in the morning after a good passerine flight.

Saving Weather Data

There are two uses for this weather information. First is when and where to go to see birds, and second to explain what you and others observed when you were out birding. For the second purpose you may want to save the weather information so that you can go back and search for explanations for what you and others observed. To do this, highlighting the data on the web page and using Cntrl C and Cntrl V to copy and paste it works fine. BUT some pages do not allow you to copy the information this way. To get around this I would recommend "SNAGIT". It will copy anything on your computer screen and save it in whatever format you choose. The snipping tool in Windows will do this as well, but SNAGIT does it better. It will not only copy your screen, it will scroll copy to include more and copy more than will fit on your screen at one time. It will also copy videos with their sound, and do OCR i.e. convert the text in a picture to text that is editable in a word processor.

The bad news is that it costs around \$50 for the base version and is available through: TechSmith Corporation, www.techsmith.com

Post-migration Winter Movement: Snow Cover

Raptors such as Redtails, Harriers, Roughlegs and Shortears will come south only far enough to reach habitats with reduced snow cover. When heavy snow does fall in these areas they will move further south. A website that helps to predict this movement is: <https://www.nohrsc.noaa.gov/nsa/index.html?region=Northeast&year=2023&month=2&day=1&units=e>

Large Scale Climate Parameters

There are two large scale weather phenomenon that do not predict daily weather or hawk movement but which influence the average weather and may have an impact on overall migration and/or breeding success. The first is the NAO – the North Atlantic Oscillation. An article was published in 2015 that related spring migration of BWs at Hawk Mountain PA to the NAO. See footnote (*) below. Values for the NAO may be found at: https://www.cpc.ncep.noaa.gov/products/precip/CWlink/pna/nao_index_mrf.shtml

*Han-Kyu Kim; Marta Sendra Vega; Marian Wahl; Chong Leong Puan; Laurie Goodrich; Keith L. Bildstein. *Journal of Raptor Research* (2015) 49 (4): 471–478. Relationship Between the North Atlantic Oscillation and Spring Migration Phenology of Broad-winged Hawks (*Buteo platypterus*) At Hawk Mountain Sanctuary, 1998–2013. <https://doi.org/10.3356/rapt-49-04-471-478.1>

Graphic and Tabular values for the NAO are available at: <https://>

www.cpc.ncep.noaa.gov/products/precip/CWlink/pna/nao.shtml.

The other large-scale influence on our weather is the ENSO or the El Niño–Southern Oscillation. The ENSO is a periodic fluctuation in sea surface temperature and air pressure in the equatorial Pacific Ocean. The ENSO is one of the most important climate phenomena on Earth due to its ability to change the global atmospheric circulation, which in turn, influences temperature and precipitation across the globe. It has three states, or phases, it can be in. The two opposite phases, “El Niño” and “La Niña,” require certain changes in both the ocean and the atmosphere because ENSO is a coupled climate phenomenon. “Neutral” is in the middle of the continuum.

A large number of types of ENSO data may be found at: <https://www.cpc.ncep.noaa.gov/products/precip/CWlink/MJO/enso.shtml> and the most commonly used ENSO data (3 month averages for surface sea temperatures) at: https://origin.cpc.ncep.noaa.gov/products/analysis_monitoring/ensostuff/ONI_v5.php

Ocean Surface Temps

These are sometimes useful when tropical storms are moving in the area. <https://www.ospo.noaa.gov/Products/ocean/sst/contour>

Finally!

Everyone needs to know how much and when snow is forecast. One site that does a good job to my way of thinking is: <https://www.weather.gov/okx/winter>

If you have any favorite website for weather data that I didn't mention, please let me know! (dpanko@pipeline.com). If you see any website or publication that discusses weather and bird migration, please let me know! (dpanko@pipeline.com). If you have any comments on the usefulness of this article, please let me know! (dpanko@pipeline.com)

A web page has been created that contains most of the websites discussed above. If you visit here: <http://www.battaly.com/nehw/reports/panko/weather.htm> you will have quick and easy access to all the links.

Stiles Thomas 1923-2023

Judith Cinquina

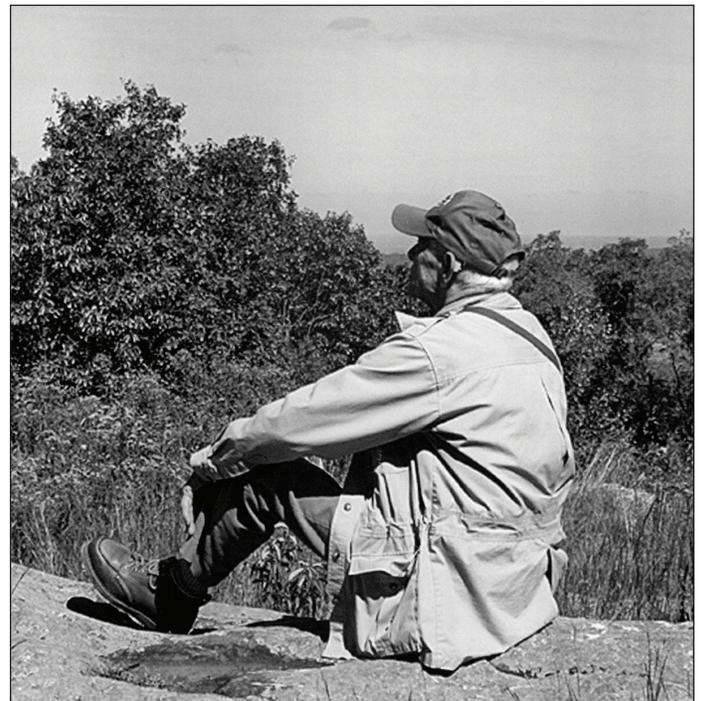
On a rainy night in 1977, thunder crashing and lightning flickering around the dome roof, Stiles Thomas was perched in the top of a silo, lowering a rope to a friend below to bring up a box. His mission was to install nest sites for Barn Owls in abandoned silos in Sussex County, NJ. Compared to his time in WWII as a Sergeant of a Parachute Infantry Regiment in Europe, this was fun. He installed six boxes that year. Three were occupied and produced altogether 14 young owls.

Stiles Thomas was born Christmas Day, 1923 when Barn Owls, hawks and even crows were considered vermin. In his youth, his local Rod and Gun Club paid young boys a nickel or dime for two crow feet, and states paid gunners bounties for dead hawks and owls. It took at least four more decades to get raptors protected by law. And it took even longer to get the public to accept and appreciate what Stiles called “these magnificent creatures.” He lived long enough to have strangers see his binoculars and stop to ask if he were looking for Bald Eagles and to enjoy the excitement in their faces when they stated, “I see them here all the time.” Stiles Thomas died May 7, 2023. He was 99. For over 70 of those years he worked on the hearts and minds of people, getting them involved with wildlife. He celebrated their discoveries and victories as if they were his own. Stiles Thomas was a major force in that monumental change.

In 1950, Stiles sold his gun and bought a pair of binoculars. He had become such a good hunter, that ironically, wildlife was to benefit. The next year, he joined New Jersey Audubon, and soon became a director of one of its sanctuaries. He also founded the Fyke Nature Association of Allendale, NJ and became its first president. In 1956 he began a one-man Eastern Bluebird project that lasted five years and stretched up to six miles between northern New Jersey and New York State. According to Bull's Birds of the New York Area,

(1964), out of 42 boxes he installed in 1960, 28 contained successful nestlings. He got to know Bluebirds so well that occasionally he would install a box and a Bluebird would immediately move in. A persuasive politician by nature, Stiles gave up the solo Bluebird trail and sought projects that involved more people.

The Montclair, NJ Bird Club sponsored an “Across the State Hawk Watch of 1958” that sparked Stiles' interest. He volunteered the Fyke Nature Association, and they were assigned Mount Peter.



Stiles Thomas at Mount Peter. Photo by Jim Wright.

In 1980, I asked him to write about that first fall count for the Highlands Audubon Newsletter.

This was a two-day "watch" held on September 20th and October 18th. Only 90 Broad-wings were tallied on the September date along with 31 other hawks of four species, making the day's total 121. Later, we took much pleasure in finding that we had seen more hawks than were observed at sixteen other locations. This kindled our interest in the whole thing, and many of the twenty-five members present became experienced hawk watchers.

October 18 reinforced their excitement with 227 hawks tallied: "33 Sharp-shins, 6 Coopers, 52 Red-tails, 46 Red-shouldered, 12 Marsh, 25 Sparrow Hawks, 1 Pigeon, 2 Duck Hawks" and 50 unidentified. Stiles continued:

Of the 46 Red-shouldered counted, two remain in my memory. They popped up very close to us... The late afternoon sun shone on their pink breasts as they crossed the ridge... We were stunned by the subtle beauty of these magnificent creatures now so reduced in numbers here in the Northeast. What I would give to live that day again!

For the next 13 years, Stiles organized a fall watch at Mount Peter. He recruited seven different Audubon and Bird Club groups in NJ and NY and dozens of friends to help with the watch. In 1970, he investigated another site on Hook Mountain in Nyack, NY, and in 1971 he handed Mount Peter over to the Highlands Audubon Society and started a watch at the Hook, only to learn that he missed a record 6,658 Broadwings at Mount Peter that September 21. Stiles had no regrets; in fact, it confirmed for him that he had put the Mount Peter site in good hands. He never mentioned to me when we talked in 1980 or at any point thereafter that the Hook recorded 115 Goshawks in 1972 and another 91 in 1973 or counted over 7,000 Broadwings both years. I had to read about the Goshawk record in the 2014 Hawk Migration Studies Spring 2014 issue. The article was by Paul Roberts who described the Goshawk count as "the last 'invasion' of that magnitude in the East." Stiles was out to win accolades, not for himself, but for the hawks.

He started the Bi-State Hawk Watch Coalition in 1978 to oversee both lookouts. At the end of each fall season, Stiles organized a dinner bringing Mount Peter, Hook Mountain and other site volunteers together to celebrate their results and have a bit of fun. He started a running competition between Peter and Hook over which site had the best count on September 16. And the dollar prize passed back and forth as part of the celebration each year. As the interest in hawk watching grew, Stiles was invited to join a committee that eventually formed the Hawk Migration Association of North America in 1974. Their mission was to standardize records and bring sites across North America together under one organization. Meanwhile, Stiles worked on a personal project

Across the road from his Allendale home was a wetland where lettuce and celery were grown until 1945. Stiles saw it as a refuge for wildlife, but it took decades, starting in 1956 for him to convince the town it wasn't a wasteland. A new mayor finally got the message, and the town purchased the Allendale Celery Farm in 1980 with help from Green Acre Funding. In 1983 Stiles was appointed its Marsh Warden, and he handed the Hook site over to Rockland Audubon. "He will be sorely missed," wrote Hook volunteer Martha Webster in a 1983 Fyke newsletter, "not only for his eagle eye, enthusiasm, identification skills, and meticulous record-keeping but also for those tense contests that livened up hawkless lunchtimes." You were never bored birding with Stiles Thomas.

Working with the Fyke Nature Association, Stiles increased the Allendale Celery Farm to 107 acres and recruited scout troops and hundreds of volunteers to maintain trails, platforms and bridges around the marsh. He encouraged competitions and counts to provide interaction with the refuge, but in 2010 at the age of 87, he was asked to organize yet another hawk watch by the NJ Department of Parks and Forestry. A former Mount Peter volunteer, Linn Pierson had started a count at State Line in Alpine, NJ in 1997 but passed away in 2007, and the State recognized the value of her data. Stiles accepted the challenge and turned over some of his duties at the refuge to a deputy warden and got to work. State Line now has 13 full seasons of data and has produced some exciting fall records, including 351 Bald Eagles (2022), 857 Osprey (2015), 559 Red-shouldered Hawks (2022) and 136 Peregrine Falcons (2011). Stiles assisted on September 28, 2011 when 98 Peregrines set a daily State Line record. In 1958, when Stiles first manned the lookout atop Mount Peter, Peregrines teetered on the brink of extinction in the Northeast.

In 2014, Stiles Thomas was presented the Maurice Broun Award for his long-term contributions to organized hawk watching by the Hawk Migration Association of North America or HMANA that he helped organize in 1974. HMANA currently collects data from almost 200 different raptor monitoring sites throughout the USA, Canada and Mexico and preserves 65 years of fall data from Mount Peter and both spring and fall tallies for almost two dozen years from Hook. That data is available to researchers and the general public. Of the three hawk sites he founded, State Line may accomplish the most of what Stiles intended to do when he purchased that pair of binoculars in 1950. State Line is located along the Hudson River with easy access and parking. It is a magnet for photographers and the curious public because the hawks often come in at eye level and sometimes put on impressive aerial displays. It's the perfect site to introduce all to Stiles Thomas' magnificent creatures.

Judith Cinquina is Coordinator of the Mount Peter Hawk Watch.

Quotes From You!

"Glorious early season day! Streams and loose kettles began forming after the fog dissipated. (10-11 hr EST). Several groups of over 100 Broadies with the occasional Osprey, Sharpie and Bald Eagle mixed in."

Terri Armata. Putney Mountain, 9/8/22

"A close Merlin came in close and disappeared to the NW only to come screaming back ..., diving on something in the trees ... Swing and a miss, the bird vanished into the understory then shot straight into the air only to make a few lazy circles over our heads before moving on."

Zane Baker. Bradbury Mountain, 4/16/22

"We had four Northern Goshawks today, though only three were migrating. One adult was observed flying north but then was followed by three immatures flying south."

Levi Burford, Mark Timmerman. Pack Monandnock, 10/29/22

"What a remarkable showing of broad wings today. ... There were so many birds streaming and kettles in different directions ... Breathtaking show ..., nearly 15,000!"

Gary Palmer, Harry Wales. Quaker Ridge, 9/16/22

"A young Cooper's Hawk flew low around the park terrorizing the abundant small birds. Two American Kestrels crossed the field on a glide as they ate dragonflies midair."

Dana Campbell. Lighthouse Point, 10/7/22

"Greeted on summit by silent enveloping cloud, visibility two hundred feet or less. ...When the sun's heat could be felt and an ectoplasmic TZ bridge materialized far below, a group of three Sharpies flapped past, in and out of cloud, followed a minute later by two more, escorted by a Raven. Following in quick succession were a solo bird, then a pair, then two more solo Sharp-shins flew past ..."

John Phillips. Hook Mountain, 10/25/22

"Sharp-shins led the way, often passing through in pairs. A couple of high-flying migrant Red-tails were a surprise."

John Weeks. Blueberry Hill, 9/29/22

"The second one [Golden] was a juv. seen very close flying with a SY BAEA. It headed north up the highway past the platform ... and perched in a pine! ... [It] had an out-of-place feather sticking up from the base of its tail which Harry Wales noted on a juv. GOEA ... at Quaker Ridge today."

Richard Aracil. Chestnut Ridge, 11/16/22

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