NorthEast Hawk Watch
2019 Hawk Migration Report

Osprey by Brian Rusnica

2019 NorthEast Hawk Watch Sites

47°
46°
45°
44°
43°
42°
41°
40°
39°

ME
NH
VT
NY
MA
RI
CT
NJ

Greenlaw Mtn.
Cooper
Cadillac Mtn.
Clarry Hill
Bradbury Mtn.
Harpswell
Mt. Philo SP
Interlakes School
Carter Hill
Concord School
Plum Island
Putney Mtn.
Pack Monadnock
Mt. Watatic
Pinnacle Rock
Pilgrim Heights
Wachusett Mtn.
Barre Falls
Helderberg
Shatterack Mtn.
Blueberry Hill
Munn Brook
Poquonock
Middle School
Johnnycake Mtn.
Chestnut Hill
White Memorial
Mohonk
Botsford Hill
Lighthouse Point
Hook Mtn.
Bear Mtn.
Chestnut Ridge
Mt. Peter
Quaker Ridge
Purple Chickadee
Lenoir Wildlife Preserve
State Line
Alley Creek
Wildcat Ridge
Montclair
Fire Island
Fort Tilden
Scott's Mtn.
Washington Valley

2019 Report Contents:

NorthEast Hawk Watch

The *NorthEast Hawk Watch* 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 Hawk Watch* 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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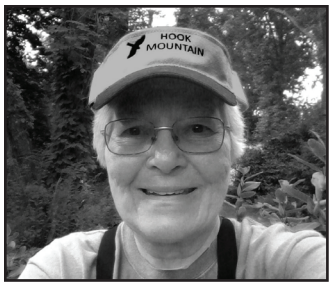
From the President:

This pandemic has impacted every one of us in profound ways. As I write this, the 2020 fall hawk watch season is well underway and you are all learning how to manage your count sites under Covid conditions. Thankfully the hawks are oblivious to this human condition. They have their own perils to face as they follow their instinctive urges to migrate. That, as ever, is the focus of our report. The following fifty pages are packed with Trudy's insightful and meticulous analysis of your painstakingly gathered data. I hope you enjoy reading it as much as I did. It's thought-provoking, worrying in places and inspiring in others. Throughout, there are reminders of how important your data gathering is and how much you have all contributed to raptor conservation since NEHW began fifty years ago.

This past winter NEHW lost one of its founders; a pioneer who helped shape this organization and whose legacy lives on in every hawk that we count. The passing of Neil W. Currie on February 17, 2020 at the age of 97, marked the end of an era for many hawk watchers. Paul Roberts, another hugely consequential figure in NEHW's history has written a wonderful tribute to Neil and I share a few highlights below. I urge you all to read the whole piece at http://www.battaly.com/nehw/history/Neil_Currie.pdf.

"When Neil began hawk watching in Watertown, Bald Eagles, Ospreys and Peregrine Falcons were disappearing from North America. Many hawk species were in precipitous decline but it was not exactly clear why. Neil knew the best time to see the most hawks was during fall migration, but relatively little was known about the timing, structure, and nature of hawk migration" . . . *continued on page 52*



From the Editor:

Once again you counted hawks at your local hawk watch, submitted your data to hawkcount.org, and thereby provided the substance of this 2019 Report. For many of you, the data you collected represented fewer hawks than in other years. If this was your experience, please understand that your lower numbers are just as important as the higher numbers in your 2018 count. These year-to-year comparisons are why we count hawks—to recognize the differences over time, look for trends, hope to understand what we find, and possibly inform changes that benefit raptor conservation. This Report includes tables, graphs, and comparisons of your data, and multiple efforts to understand what the data shows us.

There is a page of graphs showing trends for Spring migrants, a new addition to complement our Fall centerfold. There is a puzzling question about why fall Harriers are declining while spring Harriers have increased. There is the slow and sad recognition that Sharpies are still in serious decline. There is yet another look at Broadwings and temperature, this time relative to regions. And, there is evidence in the data that the loss of a watch site of long standing can be meaningful to our analyses.

Then we have a compelling question that Drew addresses in his column.

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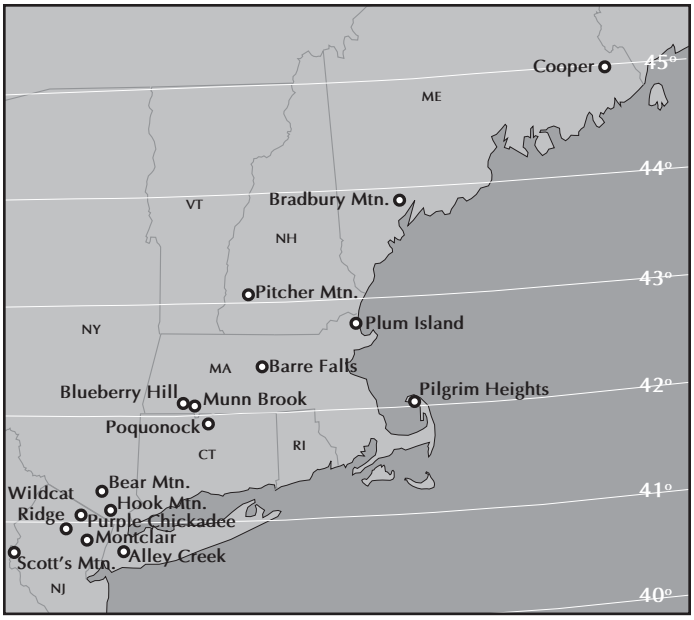


2019 Northeast Spring Season

Sites

Hawk watchers at 16 sites in the Northeast counted 13,127 total hawks in the spring season of 2019. This is an increase of three sites over 2018 and 7 sites over 2017. How wonderful that our enthusiasm for hawks continues to grow!

Compared to 2018, we added four sites and dropped one. Two of the four additions this year, Pitcher Mountain in New Hampshire and Blueberry Hill in Massachusetts, resumed spring counts after a hiatus of several years. For the other two sites, Munn Brook Meadow in Massachusetts and Purple Chickadee in New Jersey, this was their first spring count.

The 16 sites are organized on the table by latitude. Cooper, with latitude 45.0°N, is furthest north and is included in Region 43, along with Bradbury Mountain and Pitcher Mountain, both at latitudes between 43°N and 44°N. Region 42 includes five sites, listed from north to south: Plum Island, Barre Falls, Blueberry Hill, Munn Brook Meadow, and Pilgrim Heights. Region 41 has four sites: Poquonock, Bear Mountain, Hook Mountain, and Purple Chickadee. Region 40, our southernmost region, also has four sites: Wildcat Ridge, Montclair, Alley Creek, and Scott's Mountain.

Two sites, Bradbury Mountain and Montclair, stand out with the most coverage, each with almost 60 days and approximately 400 hours, consistent with recent years. In 2019, these two sites accounted for 47% of the hours of coverage and 58% of the total hawks. This extended effort resulted in most of the highest counts for the season. Bradbury had the highest count for total hawks, and for 11 species, including Osprey, Bald Eagle, Northern Harrier, Sharp-shinned Hawk, Northern Goshawk, Red-shouldered Hawk, Broad-winged Hawk, Red-tailed Hawk, Rough-legged Hawk, American Kestrel, and Merlin. Montclair had the highest counts for Black Vultures, Cooper's Hawk, and Peregrine Falcons.

Three sites had more than 100 hours: Pilgrim Heights with 222 hrs, Plum Island with 186 hrs, and Alley Creek with 124 hrs. Wildcat Ridge came close with 96 hrs. Together these four sites account for 36% of the hours of coverage and 25% of the total hawks. Pilgrim Heights had high counts for two species, Turkey Vulture and Mississippi Kite, and was the only site to report the kites. Plum Island had one of the Roughlegs, and the 2nd highest counts for Harriers, Kestrels, and Merlin. Alley Creek had the 2nd highest Peregrine count, and Wildcat Ridge had the 2nd highest Redtails.

The remaining 10 sites account for 17% of the 2019 total hawks. Sites with more than 50 hours include Pitcher Mountain with 88 hrs, Purple Chickadee with 81 hrs, and Poquonock with 52 hrs. Pitcher Mountain had one of the two Golden Eagles, and a Goshawk. Both Purple Chickadee and Poquonock counted 11 species. The remaining seven sites—Cooper, Barre Falls, Blueberry Hill, Munn Brook Meadow, Bear Mountain, Hook Mountain, and Scott's Mountain—had a total of 76 hrs, collectively. Barre Falls had our 2nd Golden Eagle. Barre Falls, Blueberry Hill, Munn Brook, and Bear Mountain all counted more than 10 hawks per hour; Hook Mountain, Purple Chickadee, and Scott's Mountain counted more than 5 hawks per hour; and Cooper counted 11 species, including one of our four Rough-legged Hawks. Although these sites tallied fewer days and hours of coverage, the counters

NorthEast Spring 2019 Seasonal Totals

	Site	Days	Hrs	BV	TV	OS	BE	NH	SS	CH	NG	RS	BW	RT	RL	GE	AK	ML	PG	UR	MK	TOT	HK/DY	MAX	DATES
43	Cooper	5	33.3	0	22	2	8	3	4	2	0	0	23	3	1	0	3	1	0	0	0	**72**	14.4	33	4/12-4/28
	Bradbury Mountain	57	409	0	573	433	78	152	621	70	3	98	3041	192	2	0	494	88	3	21	0	**5890**	103.3	1550	3/15-5/15
	Pitcher Mountain	21	88.3	0	32	45	3	7	70	14	1	9	541	16	0	1	36	3	1	4	0	**801**	38.14	227	3/7-5/13
42	Plum Island	41	186	0	28	16	2	139	53	16	0	1	2	4	1	0	375	76	4	9	0	**726**	17.71	86	5/15-5/18
	Barre Falls	3	16.5	0	3	5	8	1	18	1	0	0	144	10	0	1	5	1	1	0	0	**198**	66	149	3/30-4/24
	Blueberry Hill	1	1	0	0	0	0	1	1	0	0	0	18	0	0	0	0	0	0	0	0	**20**	20	20	4/23
	Munn Brook	2	4	0	0	4	4	4	6	0	0	0	79	0	0	0	0	0	0	0	0	**97**	48.5	71	4/13-4/19
	Pilgrim Heights	49	222	5	1128	123	15	14	79	38	0	8	369	42	0	0	89	34	5	8	12	**1969**	40.18	143	4/4-6/30
41	Poquonock	19	52	6	21	18	12	0	8	8	0	4	23	11	0	0	8	0	1	3	0	**123**	6.474	28	3/8-4/28
	Bear Mountain	2	6	0	0	1	0	0	1	2	0	0	53	0	0	0	2	1	1	0	0	**61**	30.5	56	4/25-4/29
	Hook Mountain	2	8	0	0	1	3	0	2	1	0	1	36	2	0	0	1	0	1	0	0	**48**	24	34	4/17-4/24
	Purple Chickadee	18	81	7	56	15	13	0	18	26	0	10	501	20	0	0	2	0	2	13	0	**683**	37.94	378	3/11-5/17
40	Wildcat Ridge	22	95.8	17	0	11	3	0	20	6	0	2	147	50	0	0	1	3	0	5	0	**265**	12.05	82	2/26-5/15
	Montclair	59	395	33	518	149	38	8	118	71	0	37	603	47	0	0	85	27	13	3	0	**1750**	29.66	332	3/16-5/15
	Alley Creek	35	124	7	123	120	22	13	31	21	0	2	3	2	0	0	17	18	6	0	0	**385**	11	40	3/14-5/20
	Scott's Mountain	1	7	0	0	4	8	3	4	3	0	1	2	5	0	0	4	0	1	4	0	**39**	39	39	4/13
	Total	**337**	**1728**	**75**	**2504**	**947**	**217**	**345**	**1054**	**279**	**4**	**173**	**5585**	**404**	**4**	**2**	**1122**	**252**	**39**	**70**	**12**	**13127**	**38.95**		**2/26-6/30**
	Average,1989-2018	253	1681	46	1289	833	106	294	2379	324	13	227	5572	711	4.4	2.6	1717	270	35	192	4	**14017**			

definitely selected good days for hawks and contributed significantly to our spring totals.

During spring hawk watching we are counting the adults returning to our region to breed. Your data is important to understanding populations of these species. Thanks to all who counted!

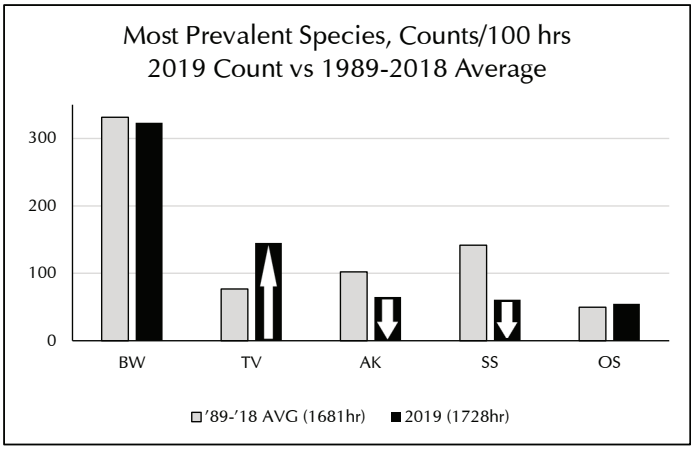
The Count

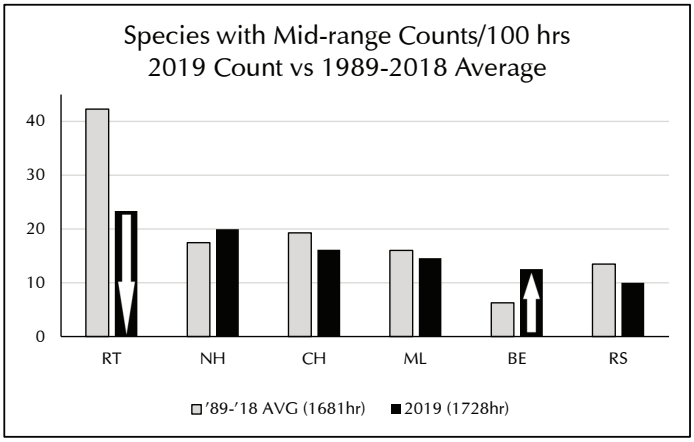
The Spring 2019 Season brought 17 raptor species, with a total of 13,127 hawks. This is our best count since 2012 when we counted 14,536 total hawks, and is close to our 30 year average of 14,034. With more hawks counted in Spring 2019 than in 2018, we once again consider the question: "Did you actually see more hawks at your site, or is this the result of greater effort across the region?" There were three more sites in 2019, adding 58 days and 110 hours, an increase in hours of 6.8%. Total hawks increased 6.2%. So it appears that the increase in hawks in 2019 can be attributed to an increase in effort. Looking at the twelve sites with coverage in both years, six saw an increase in numbers, and six saw a decrease. So, the 1,111 more hawks in 2019 than in 2018 is a result of increased effort. That means that, while our 2019 spring migration was about the same as 2018, we have a larger sample to evaluate, thanks to our dedicated hawk watchers!

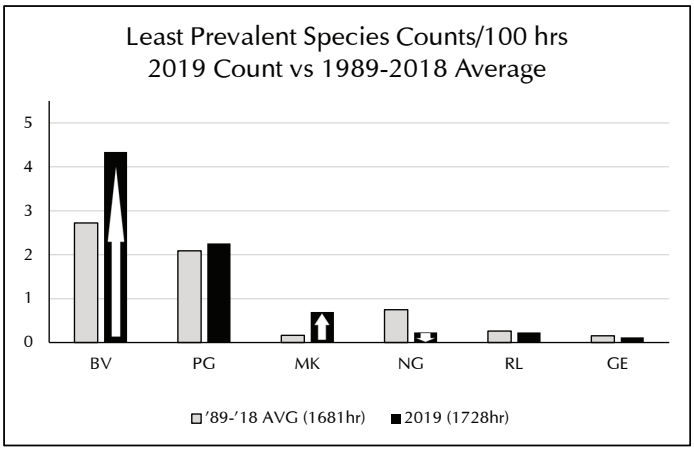
There are four species with counts above 1000: Broad-winged Hawk (5585), Turkey Vulture (2,504), American Kestrel (1,122), and Sharp-shinned Hawk (1,054). While Kestrels dropped 110, Turkey Vultures and Sharpshins remained about the same. The only species with a substantially higher count was Broadwings, with coincidentally 1,111 more, in 2019 than in 2018, a 24.8% increase. This supports the recognition that the 2019 increase is a consequence of increased effort—most watchers with limited time select days when Broadwings are expected.

Species Prevalence

To compare our 2019 hawks to other years with varying effort and number of sites covered, we use hawks per 100 hours. In ranking our 2019 hawks, the most prevalent species retained their relative positions, being the same as in 2018 and 2017—Broadwings 1st, Turkey Vultures 2nd, Kestrels 3rd and Sharpies 4th—so, no surprises this year. This supports our conclusion last year that Sharpies have lost their historic rankings, having placed 2nd for more than 20 of the last 30 years. From 2012 to 2016 Sharpies alternated between 2nd and 3rd place. Then they moved to 4th place in 2017, and have remained in 4th since then. It appears that Sharpies have been outranked by Kestrels. However, this year there were only 68 more Kestrels than Sharpies, compared to 313 in 2018 and 321 in 2017. So, perhaps this rank is tentative. While reviewing the Kestrel ranking in these years, it's worth noting that Kestrels actually ranked 1st back in 1996, the only year since 1989 that Broadwings were not in 1st place. Osprey, our 5th ranked species with a count of 947 (55/100h), is the only species with a mid-range count between 500 and 1,000.







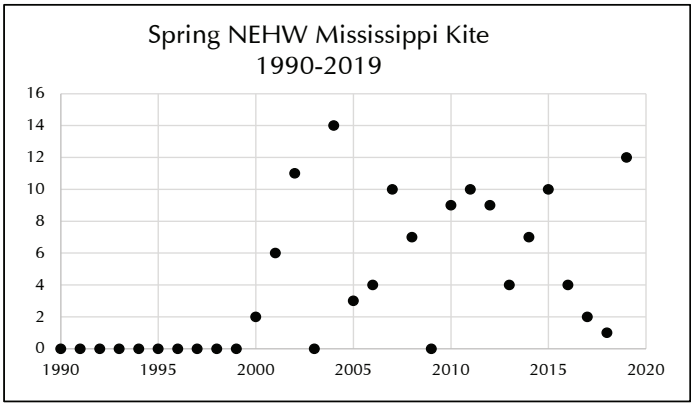
Six species had counts between 100 and 500, including Red-tailed Hawk (404), Northern Harrier (294), Cooper's Hawk (279), Merlin (252), Bald Eagle (217), and Red-shouldered Hawk (173). The Shoulders dropped from 241 in 2018, and exchanged ranks with Bald Eagles, switching from 10th place to 11th. All other mid-range species kept their relative ranks.

Our least prevalent species, with counts under 100, include Black Vulture (75), Peregrine Falcon (39), Mississippi Kite (12), Northern Goshawk (4), Rough-legged Hawk (4), and Golden Eagle (2). This year Mississippi Kite jumped up three places. Swallow-tailed Kite, however, was missed again this year, leaving our grand total of four Swallow-tails unchanged.

Species with Above Average Counts

2019 brought higher than average counts for four species—Black Vulture, Turkey Vulture, Bald Eagle, and Mississippi Kite. When we standardized the data to counts per 100 hours, all four species are substantially more than 30% above average. Black Vultures were 60% above average, and Turkey Vultures were 89% above. The biggest gains were for Bald Eagles, at double average (+100%) and Mississippi Kite at triple average (+222%). There were no record high counts in 2019.

The Mississippi Kite count of 12 this year is our 2nd highest count, behind the 14 counted in 2004. This species arrived in the Northeast in 2000 and has continued in all but two years. In 2018 there was only one, so 12 this year is welcome indeed! Since they are southern breeders, it is tempting to think their spring arrival here in the Northeast is a consequence of global warming. Yet, we would expect a more or less gradual increase in numbers. Instead, we see a random distribution across the two decades. Perhaps it is taking this long to get established. We look forward to what lies ahead.



Species Near Average

Northern Harrier (+14%) and Peregrine Falcon (+8.1%) dropped to average this year from above average last year. Other species within 20% of average included Osprey (+10.5%), Cooper's Hawk (-16.3%), Broad-winged Hawk (-2.5%), Rough-legged Hawk (-12.2%), and Merlin (-9.1%).

Species with Below Average Counts

The Red-shouldered Hawk count was 26% below the 30 year average (per 100 hours). Species with counts more than 30% below average include Sharp-shinned Hawk (-57%), Northern Goshawk (-69%), Red-tailed Hawk (-45%), and American Kestrel (-36%). The counts for Sharpies and Redtails were both record lows. Sharpies and Kestrels are among our most prevalent species. Yet, they are both below average. Unfortunately, this is a multiple year trend. Sharpies have been below average for four of the last five years, and Kestrels below average for eight years.

Spring Season Trends—An Overview

We begin with an overview of trends for 15 of the 17 NEHW species seen during the 2019 Spring NEHW Season. Of course, the best way to get that overview is with graphs because they provide a visual display of the trends or lack of trends for the species. We can also see if there is a pattern and how closely the data fits the pattern. Check out the graphs before you read my comments to see what the graphs tell you. Then read the comments and let me know what you think. Do you disagree? Do the graphs remind you of any experiences you had with a species? Send me your thoughts and stories: merlin@pipeline.com. Note that the two species not included here are Rough-legged Hawk and Mississippi Kite. Both are among our least prevalent species. Like the Mississippi (graph above) and the Golden Eagle (graph on next page), Roughleg counts are generally low, very variable, and show no trend.

Vultures and Osprey

Black Vultures are more variable in the last decade than in earlier decades, and show a general increase across the three decades.

While **Turkey Vultures** appear to show a slow linear growth from 1990 to 2016, in the last three years their numbers have jumped up substantially. Their average of 151.4 for the last three years is significantly higher than the average of 71.5 for the previous years ($p < 0.001$).

Osprey seem to have a steady slowly increasing trend. However, counts in the last three years are about the same as they were from 1990 to 1997.

Eagles and Harriers

Bald Eagles have increased exponentially. The last three years are high, but lower than the prior three years. Are Bald Eagle numbers beginning to level off?

Northern Harrier counts in the last decade are higher than in the previous two decades.

Golden Eagles were more variable in the 1st decade, and show no apparent trends for the 30 years.

Accipiters

Sharp-shinned Hawks have seen a fairly steady decline over the three decades, culminating in a steep decline in the last three years and a record low in 2019.

With the lowest counts in the 1st decade and the highest counts in the 2nd decade, **Cooper's Hawks** have had moderate counts since 2012.

More **Northern Goshawks** were seen in the early years, from 1990 to 1994. Since then they show no obvious trends.

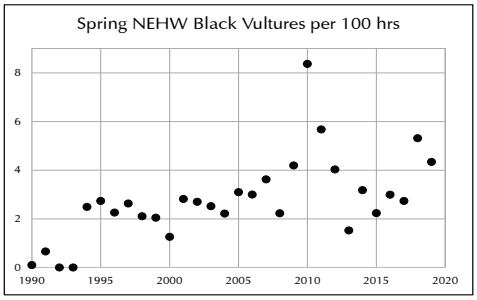
Buteos

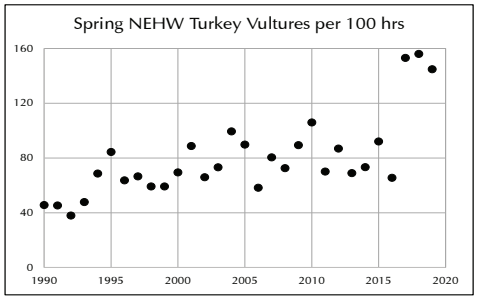
Red-shouldered Hawks had higher counts with higher variation in the 1st and 3rd decades. From 2000 to 2008 counts were lower and had little variation.

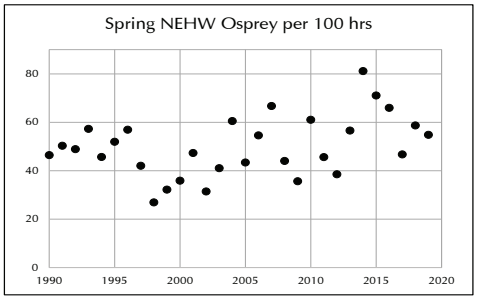
Broad-winged Hawks show larger counts with greater variation in the 1st decade. For the 2nd and 3rd decades, the high counts dropped substantially, while the low counts

Spring Season Graphs, NEHW Species, 1990-2019
(1,681 Hours/Year Average)

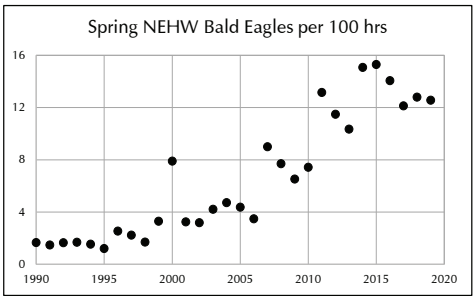
Vultures and Osprey

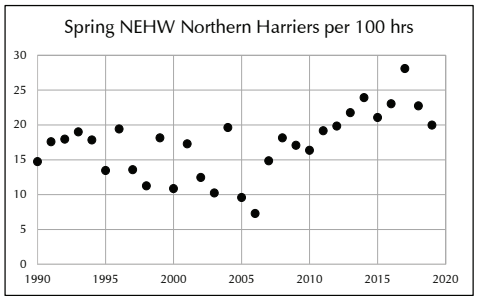


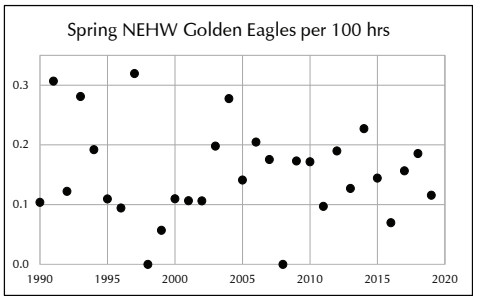




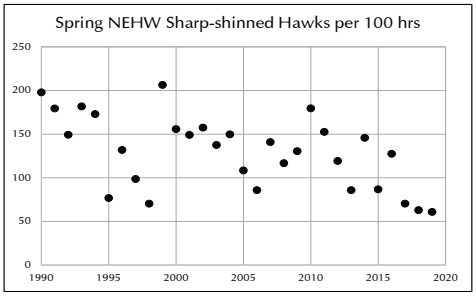
Eagles and Harrier

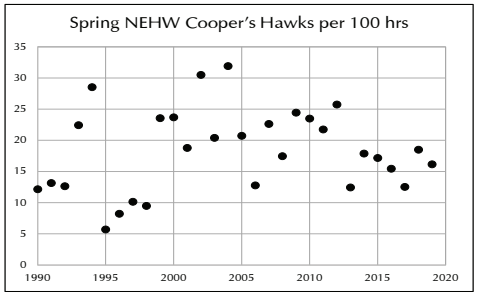


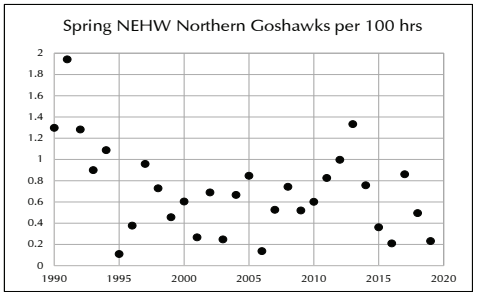




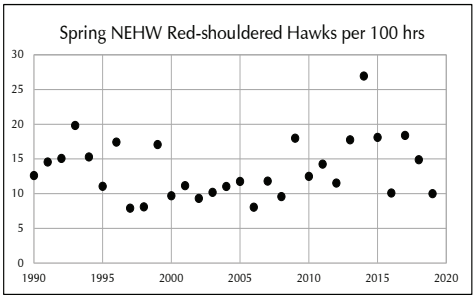
Accipiters

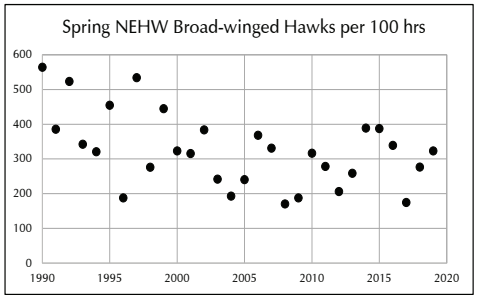


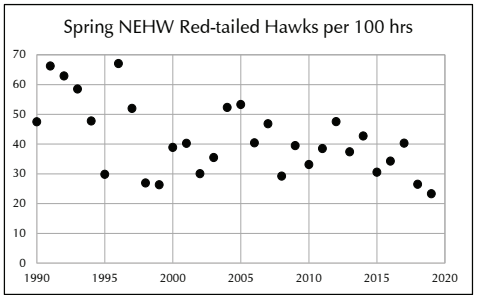




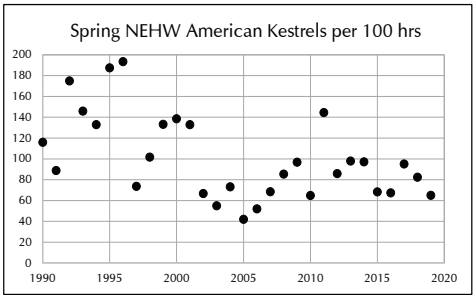
Buteos

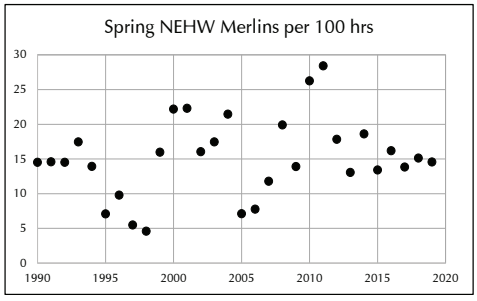


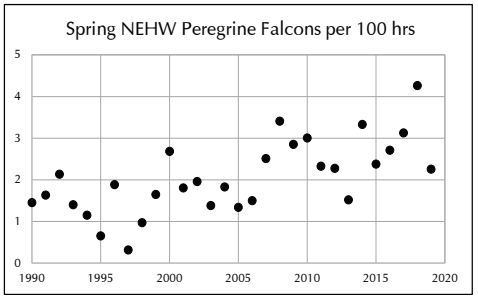




Falcons







remained about the same. Since 2000 there does not appear to be a trend, though there is an increase in the last two years.

Red-tailed Hawk counts have generally declined, even though from 2000 to 2017 the counts were relatively steady. The decline is most prominent before 2000 and after 2017. The 2019 count is a record low.

Falcons

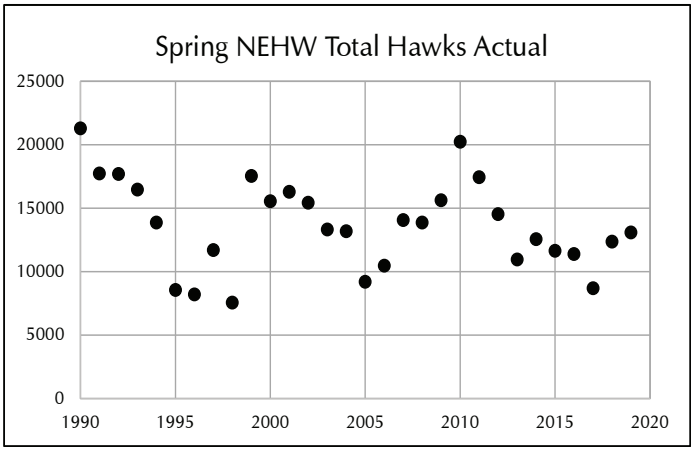
American Kestrel has declined over the 30 year period, with a hint of a bounce back from a record low in 2005. Since 2005, the bounce has fluctuated just above the low count, with one escape in 2011 that gives us hope that it could happen again.

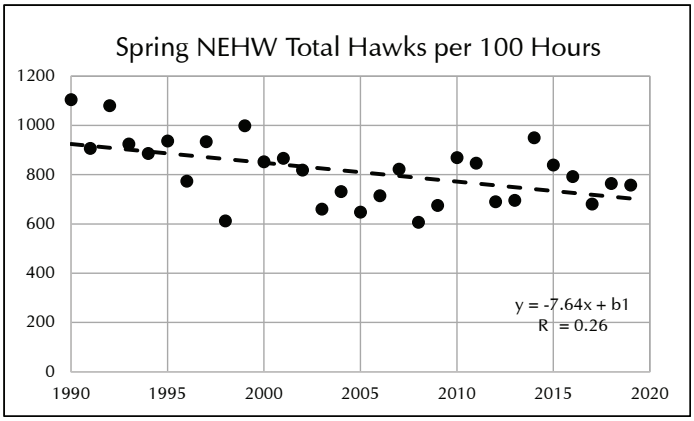
In the last five years, the **Merlin** counts have been about the same as the counts in the first five years. From 1995 to 2015, the counts were more variable, with some counts substantially higher and some substantially lower. Thus, we see no general trend for Merlins.

After a drop in the 1st five years, **Peregrine Falcons** have shown a steady increase from 1995 to the present.

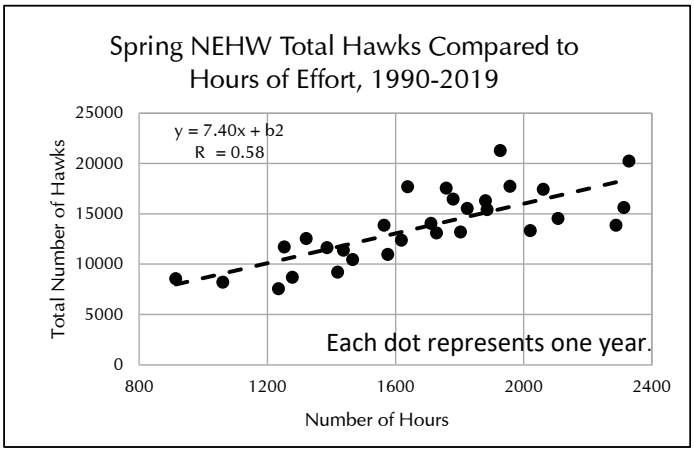
Overview

Our overview shows that we have five species that are increasing: Black Vulture, Turkey Vulture, Bald Eagle, Northern Harrier, and Peregrine Falcon. We have four species that are decreasing: Sharp-shinned Hawk, Broad-winged Hawk, Red-tailed Hawk, and American Kestrel. The remaining species either do not show a trend or only show trends for periods shorter than the 30 years. So, if there are five species that are increasing and four that are decreasing, does that mean that there are more hawks out there now than in 1990? Unfortunately, no. Three of the four species in decline are among our most prevalent species: Broadwings rank 1st, Kestrels 3rd, and Sharpies 4th. Only one of the increasing species has a high prevalence: Turkey Vultures rank 2nd. So, we need to look at Total Hawks to see if the increase in Turkey Vultures compensates for the other decreases. We consider two graphs for Total Hawks, a graph of actual counts and a graph adjusted for effort.





The actual counts show no significant trend, though the average of the last three years, 11,381, is lower than the average of the first three years, 18,901. That suggests that recent counts are about 7,500 hawks fewer than the counts in the early 1990s. But we know that there have been different numbers of sites and different hours of effort over those years. A comparison of number of hours per year to Total Hawks shows a very strong and very significant trend (p=0.0000). As we would expect, more hours of coverage result in more hawks. So, it is more meaningful to consider the graph of Total Hawks per 100 hours. That graph shows a significant decline (p<0.01), which suggests a change, from 1990 to 2019, from 915 to 695 per 100 hours. For an average of 1,681 hours/year, that's a decrease of 3,725 hawks. So, it appears that we are counting about 3,700 fewer hawks now than in the early 1990s. For our average of 12.2 sites in the last five years, that suggests an average loss of about 300 hawks per site. So, to answer our question about balancing increases and decreases: No, the increase in Turkey Vultures, along with the increase in Black Vultures, Bald Eagles, Harriers and Peregrines does not make up in numbers for the loss in Broadwings, Sharpies, and Kestrels.



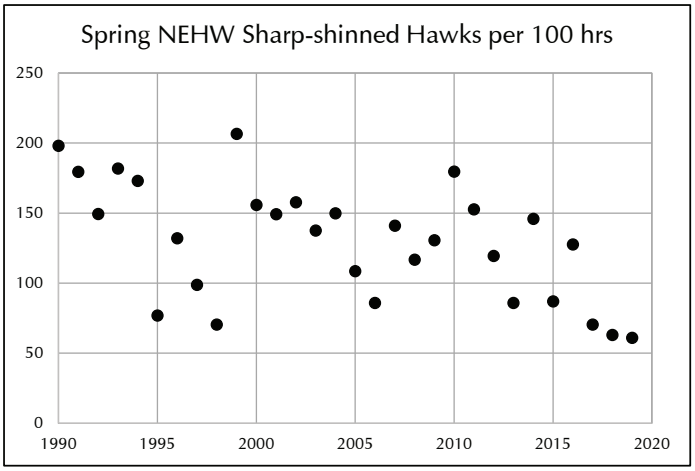
Species with Record Lows

For our four declining species, none recorded a record low in actual counts. That is a credit to our dedicated watchers who have put forth the effort to get as many hawks counted as possible. When we look at the numbers per 100 hours,

however, we find two record lows: Sharp-shinned Hawks and Red-tailed Hawks. We explored **declining Redtails** in 2018, and compared the decline of migrants to a rise in Redtails reported on Christmas Bird Counts in Connecticut, Massachusetts, Rhode Island, and New Hampshire. The record low this season supports the likelihood that fewer Redtails are migrating and more are overwintering in the Northeast. See NEHW 2018 Hawk Migration Report, p. 5, http://www.battaly.com/nehw/reports/NEHW2018.pdf

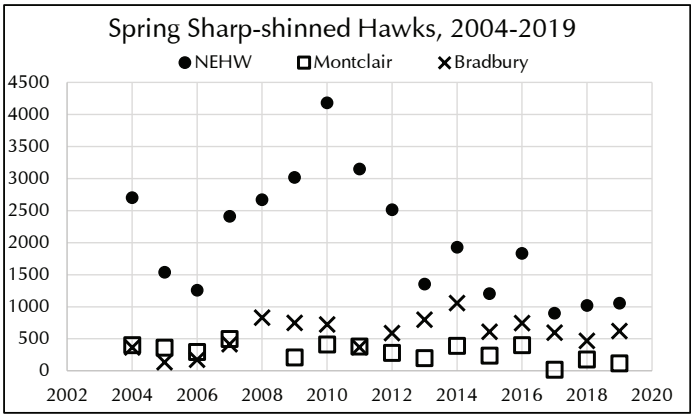
Sharp-shinned Hawks: Missing-In-Action, Shifting Flyways, or Overwintering?

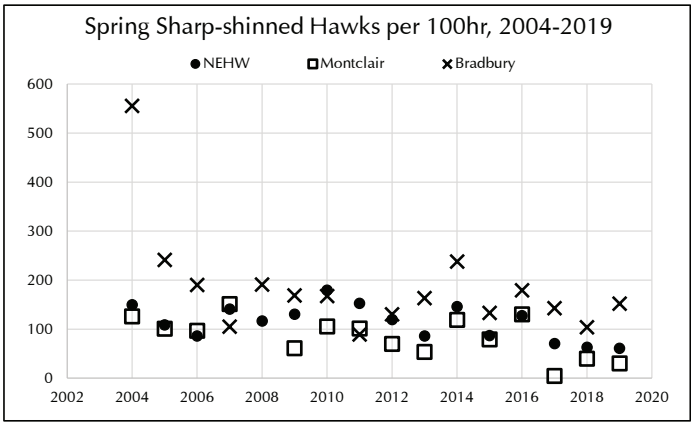
2019 was another record low year for Sharp-shinned Hawks. We see from the 30 year graph that Sharpie counts for the last three years are consistently our lowest since 1990. This is alarming! What is happening? Why is there so little variation compared to the other 27 years? Is the spring migrant population really evaporating before us, or is there some factor that we are missing? To explore this, we focus on our two watch sites with the most coverage, **Montclair** and **Bradbury Mountain**. These sites are situated at almost opposite ends of our region, so their comparison informs our understanding of the distribution of Sharpies across the region. We have data for both sites from 2004 to 2019, with an exception of one year, 2008, missing from Montclair. Our question: Are both of these sites losing Sharpies? If not, has the distribution of Sharpies at these two sites changed in the last three years?



So, we start with two graphs of Sharpies at each of these sites, together with the total Sharpies. The first graph is the actual counts; the second graph is standardized to Sharpies per 100 hours. The actual graph appears as we expect, with the total NEHW count larger than either of the others because it is the sum of those two sites plus the counts of all other sites.

The standardized graph is different. Sharpie counts are higher at Bradbury Mountain than at Montclair, and also higher than the total NEHW Sharpies.





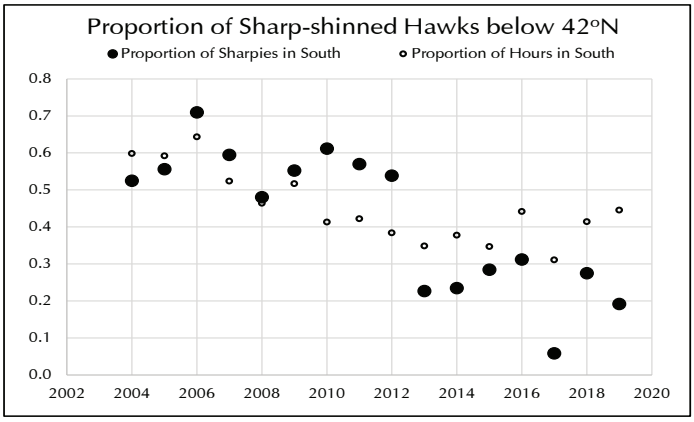
A careful look at the standardized graph reveals that the NEHW totals are closer to the Montclair count for 10 years, while closer to the Bradbury Mountain count for 4 years. [The two years not included are 2008 (no Montclair) and 2017 (equidistant).] Also, the Montclair counts increase and decrease from year to year in sync with the ups and downs of the NEHW count for 12 years, while the Bradbury Mountain direction synced with the NEHW count for nine years, mostly since 2014. Furthermore, the NEHW Sharpies are very strongly correlated with the Montclair data ($r = 0.746$, $p=0.0005$) and not correlated with Bradbury data, transformed to achieve normality ($r=-0.198$, $p=0.231$). This is strong evidence that the total Sharpie count is well represented by the Montclair counts, even though Bradbury Mountain has higher annual counts than Montclair. What about the last three years? We can see that Sharpie counts are the lowest at Montclair for this time frame. But the Bradbury counts are about the same as in other years. So, it appears that Sharpies have been declining at Montclair, and that contributes significantly to the NEHW decline. Now the question becomes: Is this a regional issue? Are Sharpies declining in the Metro region but not in the northern region? Could this be similar to what happened in 2017, when Broadwings leap-frogged unseen over the Metro region and got counted at our Northern sites?

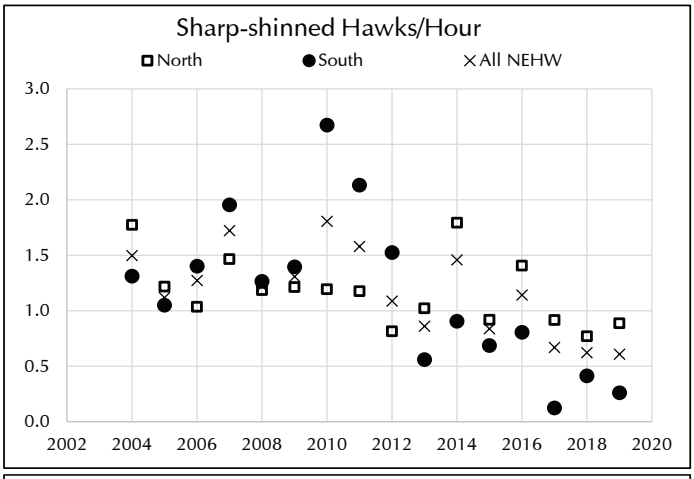
To answer these questions, we separate the NEHW Spring sites into a Northern component, north of latitude 42 degrees, and a Southern component, south of latitude 42 degrees. Using the same time frame, 2004 to 2019, there have been 13 different Northern sites, with the number in any one year

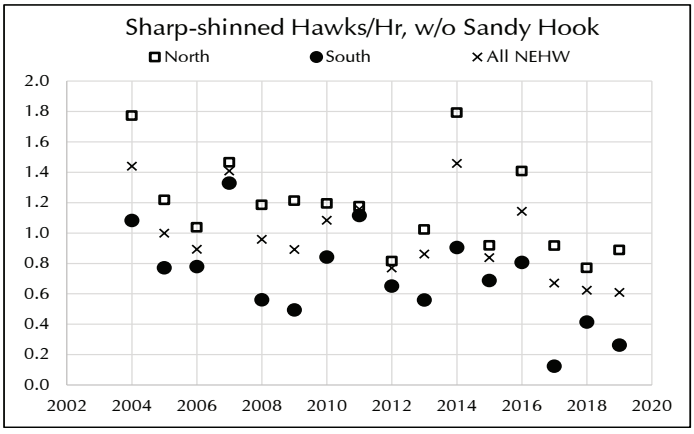
Spring NEHW Sites, 2004-2019
Number of Years in Operation

	NORTH	YEARS
43	Greenlaw Mt NB	3
	New Horton	3
	Cooper	9
	Bradbury Mountain	16
	Pitcher Mountain	5
42	Plum Island	14
	Barre Falls	16
	Shatterack	5
	Blueberry Hill	5
	Munn Brook	1
	Pilgrim Heights	16
	Suffield WMA	2
	Congamond Plains	2

	SOUTH	YEARS
41	Poquonock	4
	Talcott Mt	2
	Peak Mountain	5
	Johnnycake	6
	Bear Mountain	2
	Hook Mountain	12
	Quaker Ridge	2
	Purple Chickadee	1
40	Wildcat Ridge	16
	Montclair	15
	Alley Creek	2
	Scott's Mountain	4
	Sandy Hook	9







varying from 4 to 8, with a median of 6 sites and a mode of 5. There have also been 13 different Southern sites, with the number in any one year also varying from 4 to 8, but with a median of 5 and a mode of 4 sites.

A first look at the data is a simple proportion of the total count attributed to the Southern component, along with the proportion of hours to show comparisons to effort. Glaringly obvious in this graph is a sudden drop in yearly proportions from 0.5 and above until 2012, to 0.3 and below beginning in 2013. Why? This is the consequence of losing the Sandy Hook Hawk Watch to Hurricane Sandy in fall of 2012. Wow! That's a hawk watch we would like to see back in operation!

Something else stands out—in 2017 Sharpies did leap-frog over the Southern region! Only 6% of all the Sharpies seen that year were counted in the Southern region.

The next step was to examine the standardized data, Sharpies/hour, in the South, and compare that to Sharpies/hour in the North and to the total. We see the South still has higher values until 2012, and then much lower values after 2012. So, the impact of Sandy Hook on the standardized data is reduced, but not eliminated. After all, during those years, Sandy Hook contributed 30% to 80% of the Southern total and 20% to 49% of the NEHW total. We reluctantly remove Sandy Hook to provide a valid comparison across the years and determine if the last three years are indeed cause for concern.

The version without Sandy Hook provides a clearer view of how Sharpies have varied. There is a decline in the Southern region ($r = -0.618$, $p=0.005$). There is a decline, though not as strong, in the Northern region ($r = -0.471$, $p=0.033$). And, there is a decline in total Sharpies ($r = -0.678$, $p=0.002$). For the Southern region, there is still a separation of the last three years from the other years, and that difference is significant ($t=5.090$, $p=0.002$). While the Northern region has contributed to the general decline, the last three years are among the lowest, but not substantially different from three of the previous five years.

So, we have an answer to one of our questions. The record low counts of Sharpies in the last three years are a result of abnormally low counts in the Southern region. But, notably the Northern region also experienced counts among their lowest. This suggests that either the migrant Sharpie population is actually declining, or there are factors that are shifting their flight to the west of our coverage, or perhaps they are overwintering in our region.

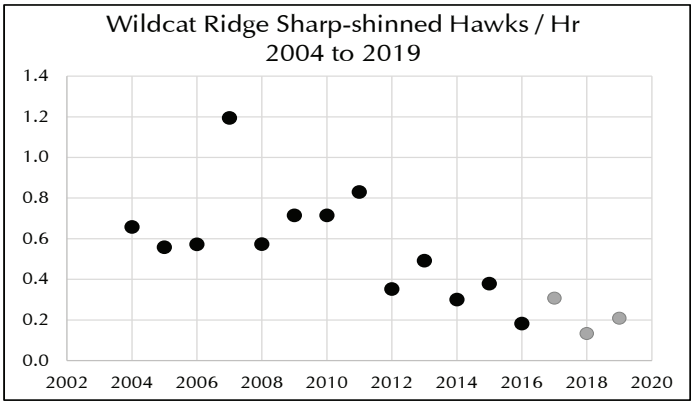
Wildcat Ridge is our western-most spring site with adequate coverage up to 2016. A look at the Sharpies/ hour at Wildcat Ridge shows a decline from 2004 to 2016 ($r = -0.595$, $p=0.008$). So, even our western-most site has declining counts, a sign that our Sharpies have not shifted westward.

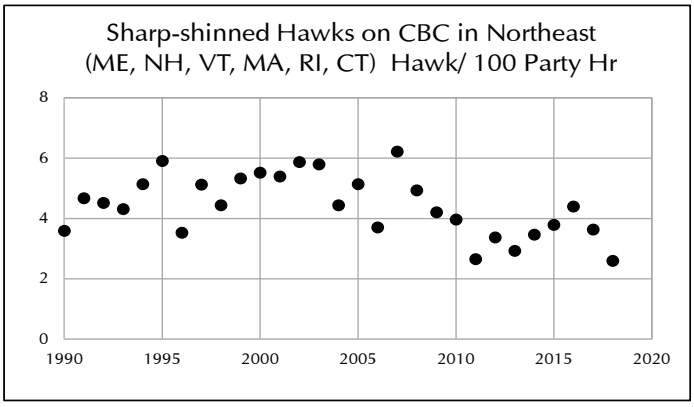
Is it possible that our Sharpies are beginning to overwinter like the Redtails? To explore this possibility, we once again look at **Christmas Bird Counts** (CBC). CBC data for Maine, New Hampshire, Vermont, Massachusetts, Rhode Island, and Connecticut are available online. (See references below.) For

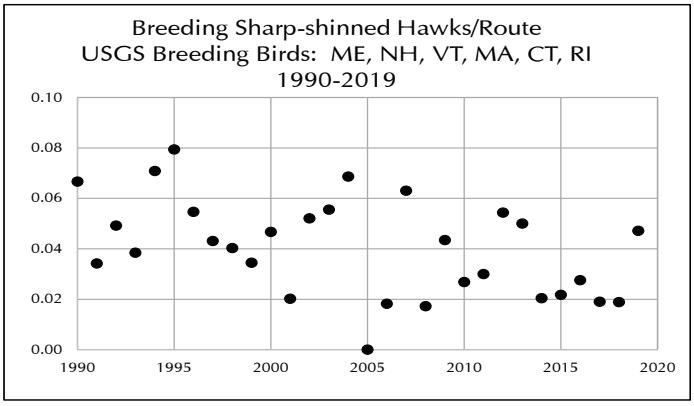
each year from 1990 to 2018, the counts for these states were summed and then standardized by Party Hour. The graph reveals fewer Sharpies on Christmas counts after 2010 than before, indicating no increase in winter birds throughout the region.

One final check came when Drew sent me a copy of the **USGS Breeding Bird Survey** (BBS) graph of Sharp-shinned Hawk trends in the U.S. and Canada. It showed an increase in breeding populations! Could breeding populations here in the Northeast actually be increasing, even with declining migrants and declining winter birds? Annual breeding bird data was accessed for each of our Northeast states (see references), and the Sharpie information was summarized. This was then standardized by Survey Route. Unlike the North American graph, this graph shows no increase in breeding Sharpies, and even suggests a decline.

So, what does our Sharpie data tell us? We are losing Sharpies, and at a rapid rate! Our three years of record lows are definitely cause for concern. **Our Sharpies are missing-in-action!**







References

1. Northeast Hawk Watch. 2018 Hawk Migration Report. http://www.battaly.com/nehw/reports/NEHW2018.pdf

2. National Audubon Society (2020). The Christmas Bird Count Historical Results [Online]. Available http://www.christmasbirdcount.org [7/23/2020] Direct link to species by year: https://netapp.audubon.org/CBCObservation/Historical/ResultsBySpecies.aspx?1

3. Pardieck, K.L., Ziolkowski Jr., D.J., Lutmerding, M., Aponte, V.I., and Hudson, M-A.R., 2020, North American Breeding Bird Survey Dataset 1966-2019: U.S. Geological Survey data release, https://doi.org/10.5066/P9J6QUF6. Direct link to state data: https://www.pwrc.usgs.gov/BBS/PublicDataInterface/index.cfm

Daily Counts at the 16 Northeastern Watch Sites, Spring 2019

COOPER, ME
Karen E. Holmes

2019	HRS	BV	TV	OS	BE	NH	SS	CH	NG	RS	BW	RT	RL	GE	AK	ML	PG	UR	TOTAL
4/12	11	0	8	0	4	0	0	0	0	0	0	3	0	0	0	0	0	0	**15**
4/13	5	0	8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**8**
4/14	6	0	4	1	1	0	0	0	0	0	0	0	1	0	2	0	0	0	**9**
4/25	5.3	0	1	1	1	3	3	2	0	0	21	0	0	0	0	1	0	0	**33**
4/28	6	0	1	0	2	0	1	0	0	0	2	0	0	0	1	0	0	0	**7**
TOTAL	**33**	**0**	**22**	**2**	**8**	**3**	**4**	**2**	**0**	**0**	**23**	**3**	**1**	**0**	**3**	**1**	**0**	**0**	**72**
9YrAv	52	0.4	15	3	10	2	4	1	0	0	7	1	0	0	3	1	0	3	51

BARRE FALLS, BARRE, MA
Donna Schilling, Jim Emerton, David Grant

2019	HRS	BV	TV	OS	BE	NH	SS	CH	NG	RS	BW	RT	RL	GE	AK	ML	PG	UR	TOTAL
3/30	3.5	0	3	0	0	0	5	0	0	0	0	1	0	0	1	0	1	0	**11**
4/23	7.5	0	0	3	5	1	9	1	0	0	116	8	0	1	4	1	0	0	**149**
4/24	5.5	0	0	2	3	0	4	0	0	0	28	1	0	0	0	0	0	0	**38**
TOTAL	**17**	**0**	**3**	**5**	**8**	**1**	**18**	**1**	**0**	**0**	**144**	**10**	**0**	**1**	**5**	**1**	**1**	**0**	**198**
18YrAv	112	0	51	86	15	11	103	12	1	13	571	79	0	1	40	5	1	12	1001

BLUEBERRY HILL, GRANVILLE, MA
Seth Kellogg

2019	HRS	BV	TV	OS	BE	NH	SS	CH	NG	RS	BW	RT	RL	GE	AK	ML	PG	UR	TOTAL
4/23	1	0	0	0	0	1	1	0	0	0	18	0	0	0	0	0	0	0	**20**
TOTAL	**1**	**0**	**0**	**0**	**0**	**1**	**1**	**0**	**0**	**0**	**18**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**20**
6YrAv	94	1	48	54	6	11	84	9	0	4	286	50	0	1	45	1	0	8	607.2

MUNN BROOK MEADOW, SOUTHWICK, MA
Seth Kellogg

2019	HRS	BV	TV	OS	BE	NH	SS	CH	NG	RS	BW	RT	RL	GE	AK	ML	PG	UR	TOTAL
4/13	2	0	0	1	2	1	0	0	0	0	22	0	0	0	0	0	0	0	**26**
4/19	2	0	0	3	2	3	6	0	0	0	57	0	0	0	0	0	0	0	**71**
TOTAL	**4**	**0**	**0**	**4**	**4**	**4**	**6**	**0**	**0**	**0**	**79**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**97**

BEAR MOUNTAIN, BEAR MOUNTAIN, NY
Gerhard Patsch, Tracy Patsch, Doris Metraux

2019	HRS	BV	TV	OS	BE	NH	SS	CH	NG	RS	BW	RT	RL	GE	AK	ML	PG	UR	TOTAL
4/25	2.5	0	0	0	0	0	1	2	0	0	51	0	0	0	1	0	1	0	**56**
4/29	3.5	0	0	1	0	0	0	0	0	0	2	0	0	0	1	1	0	0	**5**
TOTAL	**6**	**0**	**0**	**1**	**0**	**0**	**1**	**2**	**0**	**0**	**53**	**0**	**0**	**0**	**2**	**1**	**1**	**0**	**61**
2YrAv	7	0	0	1	2	1	1	3	0	0	30	9	0	0	2	1	2	0	49.5

HOOK MOUNTAIN, ROCKLAND LAKE, NY
Steve Sachs

2019	HRS	BV	TV	OS	BE	NH	SS	CH	NG	RS	BW	RT	RL	GE	AK	ML	PG	UR	TOTAL
4/17	4	0	0	1	2	0	2	0	0	1	25	2	0	0	0	0	1	0	**34**
4/24	4	0	0	0	1	0	0	1	0	0	11	0	0	0	1	0	0	0	**14**
TOTAL	**8**	**0**	**0**	**1**	**3**	**0**	**2**	**1**	**0**	**1**	**36**	**2**	**0**	**0**	**1**	**0**	**1**	**0**	**48**
14YrAv	26	2	15	22	7	7	56	11	0	15	636	18	0	0	29	4	3	4	828

BRADBURY MOUNTAIN, POWNAL, ME

Zane Baker, Derek Lovitch, Jeannette Lovitch, Dave Fensore, Matthew Gilbert, others

2019	HRS	BV	TV	OS	BE	NH	SS	CH	NG	RS	BW	RT	RL	GE	AK	ML	PG	UR	TOTAL
3/15	5	0	18	0	1	0	0	1	0	8	0	3	1	0	0	2	0	0	**34**
3/16	8	0	32	0	12	0	1	2	1	10	0	23	0	0	0	0	0	2	**83**
3/17	8	0	33	0	5	0	1	2	0	0	0	1	0	0	0	0	0	0	**42**
3/18	8	0	8	0	3	0	0	0	0	0	0	2	0	0	0	1	0	0	**14**
3/19	8	0	11	0	4	0	0	1	0	5	0	4	0	0	0	0	0	0	**25**
3/20	8	0	9	0	5	0	0	1	0	6	0	7	0	0	0	1	0	1	**30**
3/21	8	0	14	0	4	0	0	4	0	6	0	12	1	0	0	0	0	0	**41**
3/23	8	0	3	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	**4**
3/24	8	0	4	0	5	1	0	1	0	0	0	10	0	0	0	0	0	0	**21**
3/25	8	0	1	0	1	0	0	1	0	2	0	1	0	0	0	0	0	0	**6**
3/26	8	0	8	0	1	0	1	1	0	2	0	1	0	0	0	0	0	0	**14**
3/27	8	0	60	0	1	1	0	0	0	1	0	5	0	0	0	1	0	0	**69**
3/28	8	0	15	0	1	0	3	2	0	6	0	17	0	0	3	0	0	1	**48**
3/29	4	0	19	0	0	0	2	0	0	0	0	0	0	0	3	0	0	0	**24**
3/30	7	0	84	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	**86**
3/31	7.3	0	21	1	1	3	6	3	0	7	0	8	0	0	20	0	1	2	**73**
4/1	8	0	4	0	1	2	0	0	0	1	0	5	0	0	0	0	0	0	**13**
4/2	8	0	29	1	1	1	3	0	0	0	0	5	0	0	5	0	0	0	**45**
4/3	7	0	32	2	2	2	2	2	0	1	0	0	0	0	3	0	0	1	**47**
4/4	8	0	2	2	0	2	1	0	0	0	0	0	0	0	0	0	0	0	**7**
4/5	8	0	20	0	3	2	4	4	0	0	0	2	0	0	2	0	0	2	**39**
4/6	8	0	8	3	2	0	5	2	0	3	0	5	0	0	1	0	0	0	**29**
4/7	8	0	9	6	2	4	16	6	0	5	0	6	0	0	5	2	1	1	**63**
4/9	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
4/10	8	0	0	4	1	2	2	0	0	0	0	0	0	0	0	0	0	0	**9**
4/11	8	0	28	30	4	15	26	3	1	2	1	4	0	0	13	5	0	2	**134**
4/12	8	0	10	6	0	15	31	1	0	1	2	2	0	0	7	3	0	0	**78**
4/13	6	0	12	47	1	11	40	4	0	10	5	14	0	0	46	3	0	3	**196**
4/14	8	0	55	25	1	17	14	2	0	5	11	8	0	0	50	1	0	1	**190**
4/15	7	0	4	22	3	4	12	2	0	2	4	3	0	0	11	0	0	0	**67**
4/16	8	0	0	16	1	1	4	0	0	0	0	2	0	0	3	1	0	1	**29**
4/17	8	0	20	23	0	3	8	0	1	3	42	7	0	0	5	1	0	2	**115**
4/18	8	0	0	10	0	3	22	0	0	3	68	2	0	0	10	3	0	0	**121**
4/19	8	0	0	84	2	22	121	3	0	2	1117	9	0	0	175	12	0	3	**1550**
4/21	3	0	0	2	0	0	0	0	0	0	10	0	0	0	0	0	0	0	**12**
4/22	8	0	0	15	0	2	11	1	0	1	210	1	0	0	3	1	0	1	**246**
4/23	5.5	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	**1**
4/24	5	0	0	47	1	12	19	1	0	1	979	0	0	0	3	3	0	0	**1066**
4/25	8	0	0	18	2	11	128	5	0	2	227	12	0	0	61	17	0	3	**486**
4/26	3	0	0	0	0	0	3	0	0	0	0	0	0	0	0	0	0	0	**3**
4/27	5	0	0	1	0	0	6	1	0	0	50	1	0	0	2	1	0	0	**62**
4/28	8	0	0	14	0	2	23	5	0	1	140	2	0	0	7	2	0	3	**199**
4/29	8	0	0	2	0	0	2	0	0	1	8	0	0	0	0	1	0	0	**14**
4/30	6	0	0	3	0	0	0	1	0	0	9	1	0	0	0	0	0	0	**14**
5/1	8	0	0	3	3	2	11	2	0	0	38	2	0	0	3	2	0	2	**68**
5/2	3	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**1**
5/3	5	0	0	2	0	0	3	0	0	0	0	0	0	0	0	0	0	0	**5**
5/4	8	0	0	7	0	2	11	0	0	0	5	0	0	0	4	7	1	0	**37**
5/5	8	0	0	3	0	0	8	2	0	0	14	1	0	0	2	2	0	3	**35**
5/6	8	0	0	3	0	0	6	0	0	1	10	0	0	0	5	1	0	0	**26**
5/7	7	0	0	6	0	1	30	3	0	0	39	0	0	0	15	5	0	1	**100**
5/8	8	0	0	10	3	1	20	0	0	0	31	0	0	0	11	1	0	4	**81**
5/9	8	0	0	6	0	3	7	1	0	0	15	4	0	0	9	2	0	2	**49**
5/11	8	0	0	5	0	2	4	0	0	0	0	0	0	0	1	1	0	1	**14**
5/12	8	0	0	2	0	1	0	0	0	0	2	0	0	0	3	2	0	0	**10**
5/13	8	0	0	1	0	1	2	0	0	0	3	0	0	0	3	4	0	0	**14**
5/15	8	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	**1**
TOTAL	**409**	**0**	**573**	**433**	**78**	**152**	**621**	**70**	**3**	**98**	**3041**	**192**	**2**	**0**	**494**	**88**	**3**	**42**	**5890**
16YrAv	367	1	262	363	61	89	578	58	6	72	1461	200	1	0	320	56	4	38	3569

PLUM ISLAND, NEWBURYPORT, MA

Mark Schoene, Ted Mara, Paul Roberts, Brian Rusnica, Judd Nathan, Bob Secatore, others

2019	HRS	BV	TV	OS	BE	NH	SS	CH	NG	RS	BW	RT	RL	GE	AK	ML	PG	UR	TOTAL
3/15	2.3	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	**1**
3/16	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
3/18	2	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	**2**
3/19	1.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
3/21	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
3/23	1	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	**1**
3/24	4	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	**2**
3/25	2	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	**1**
3/26	2.0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	**1**
3/28	3.5	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	**1**
3/29	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
3/31	4	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0	0	0	**3**
4/1	6.5	0	0	0	0	9	0	0	0	0	0	0	0	0	3	0	0	0	**12**
4/2	1.0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	**1**
4/3	3	0	0	0	1	2	0	0	0	0	0	0	0	0	5	0	0	0	**8**
4/4	8.3	0	2	0	0	14	0	0	0	0	0	0	0	0	7	1	0	0	**24**
4/5	5.8	0	0	4	0	6	0	0	0	0	0	0	0	0	0	0	0	0	**10**
4/6	5	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	**2**
4/7	6	0	0	1	0	3	0	1	0	0	0	2	0	0	0	0	2	0	**9**
4/10	6.3	0	0	0	0	9	0	0	0	0	0	0	0	0	25	8	1	0	**43**
4/11	7.3	0	17	1	0	40	0	0	0	0	0	0	0	0	25	2	0	1	**86**
4/12	4	0	0	0	0	1	0	0	0	0	0	0	0	0	0	1	0	0	**2**
4/13	7.8	0	0	0	0	12	6	1	0	0	0	0	0	0	15	1	0	1	**36**
4/14	8	0	0	0	0	3	2	0	0	0	0	0	0	0	36	5	0	0	**46**
4/15	3.3	0	0	0	0	0	0	0	0	0	0	0	0	0	10	1	0	0	**11**
4/16	8.3	0	0	0	0	7	1	0	0	0	0	0	0	0	29	3	0	0	**40**
4/17	5	0	0	0	0	6	1	2	0	0	0	0	0	0	22	0	0	0	**31**
4/19	7.8	0	3	0	0	2	4	3	0	0	0	0	1	0	61	1	0	1	**76**
4/21	3.5	0	0	0	0	0	0	0	0	0	0	0	0	0	2	2	0	0	**4**
4/24	7	0	5	2	0	6	2	2	0	0	1	2	0	0	45	8	0	3	**76**
4/25	6.8	0	0	1	0	5	8	1	0	0	0	0	0	0	16	6	0	0	**37**
4/27	7.5	0	0	3	1	0	0	0	0	0	0	0	0	0	3	9	0	0	**16**
4/28	4.5	0	0	1	0	2	16	1	0	0	1	0	0	0	7	2	1	3	**34**
4/29	9.8	0	0	3	0	3	8	1	0	0	0	0	0	0	30	10	0	0	**55**
5/4	7	0	0	0	0	1	1	1	0	0	0	0	0	0	0	5	0	0	**8**
5/7	3.3	0	0	0	0	2	0	0	0	0	0	0	0	0	1	1	0	0	**4**
5/8	3.0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	**2**
5/11	6	0	0	0	0	0	1	1	0	0	0	0	0	0	6	4	0	0	**12**
5/13	3.0	0	0	0	0	0	0	0	0	0	0	0	0	0	4	0	0	0	**4**
5/15	3.3	0	0	0	0	0	1	0	0	0	0	0	0	0	1	0	0	0	**2**
5/18	3	0	0	0	0	0	2	0	0	0	0	0	0	0	16	5	0	0	**23**
TOTAL	**186**	**0**	**28**	**16**	**2**	**139**	**53**	**16**	**0**	**1**	**2**	**4**	**1**	**0**	**375**	**76**	**4**	**9**	**726**
14YrAve	137	0	58	36	4	108	135	16	0	0	1	7	1	0	521	67	8	15	977

PITCHER MOUNTAIN, STODDARD, NH

Levi Burford, Katrina Fenton

2019	HRS	BV	TV	OS	BE	NH	SS	CH	NG	RS	BW	RT	RL	GE	AK	ML	PG	UR	TOTAL
3/7	1.8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
3/20	4.3	0	4	0	1	0	0	0	0	1	0	2	0	0	0	0	0	1	**9**
3/24	1.8	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	**2**
3/27	3.5	0	4	0	0	0	1	0	0	3	0	1	0	0	0	0	0	0	**9**
3/28	1.8	0	2	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	**4**
4/2	5	0	5	0	0	0	3	2	0	1	0	1	0	0	1	1	0	1	**15**
4/3	2	0	1	0	0	0	1	1	0	1	0	0	0	0	0	0	0	1	**5**
4/5	5	0	2	0	0	0	0	0	0	1	0	5	0	0	1	0	0	1	**10**
4/7	4.3	0	0	0	0	1	1	1	0	0	0	1	0	0	1	0	0	0	**5**
4/10	3.8	0	2	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	**4**
4/13	5.3	0	6	0	0	1	7	1	0	1	0	2	0	0	13	0	0	4	**35**
4/14	6	0	0	2	0	3	9	1	0	0	5	1	0	0	7	0	0	1	**29**
4/17	5.3	0	5	2	0	0	3	0	1	0	27	1	0	0	0	0	1	3	**43**
4/19	5	0	0	4	0	0	5	2	0	0	91	0	0	0	5	0	0	3	**110**
4/21	5.3	0	0	9	1	1	12	2	0	0	195	0	0	0	5	0	0	2	**227**
4/24	3.8	0	0	1	0	0	0	0	0	0	10	0	0	0	0	0	0	1	**12**
4/25	8	0	0	10	0	0	8	1	0	0	103	0	0	1	1	0	0	1	**125**
5/1	2	0	0	3	1	0	1	0	0	0	4	0	0	0	0	0	0	0	**9**
5/6	8.5	0	0	12	0	0	15	1	0	0	97	1	0	0	1	2	0	3	**132**
5/9	4.3	0	0	1	0	0	2	1	0	0	9	1	0	0	0	0	0	0	**14**
5/13	2	0	0	1	0	0	0	0	0	0	0	0	0	0	1	0	0	0	**2**
TOTAL	**88**	**0**	**32**	**45**	**3**	**7**	**70**	**14**	**1**	**9**	**541**	**16**	**0**	**1**	**36**	**3**	**1**	**22**	**801**
5YrAv	27	0	19	10	3	2	17	4	1	3	126	9	0	1	10	1	0	7	212

ALLEY CREEK, QUEENS, NY

Steve Walter

2019	HRS	BV	TV	OS	BE	NH	SS	CH	NG	RS	BW	RT	RL	GE	AK	ML	PG	UR	TOTAL
3/14	3	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**1**
3/15	4.5	0	6	8	0	0	0	0	0	0	0	0	0	0	0	1	0	0	**15**
3/16	3	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**1**
3/17	2	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	**2**
3/18	4	0	2	2	3	0	1	1	0	0	0	0	0	0	0	0	0	0	**9**
3/19	4.5	0	10	1	2	0	0	1	0	0	0	0	0	0	0	1	0	0	**15**
3/20	4	0	1	1	3	0	0	1	0	0	0	0	0	0	0	0	0	0	**6**
3/24	5	0	3	3	1	0	1	1	0	2	0	0	0	0	0	0	1	0	**12**
3/25	1.5	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**1**
3/26	2.5	0	0	1	0	1	1	0	0	0	0	0	0	0	0	0	0	0	**3**
3/28	3.5	0	8	3	1	0	2	1	0	0	0	0	0	0	0	0	0	0	**15**
3/29	3	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1	0	0	**2**
3/30	3.5	0	9	4	1	0	2	2	0	0	0	1	0	0	0	0	0	0	**19**
4/1	4	0	6	1	1	0	1	0	0	0	0	0	0	0	0	0	0	0	**9**
4/2	3	0	7	5	0	0	1	1	0	0	0	0	0	0	2	0	0	0	**16**
4/3	4	0	3	3	1	0	0	1	0	0	0	0	0	0	0	0	0	0	**8**
4/4	4.5	0	9	6	1	1	3	0	0	0	0	0	0	0	1	2	0	0	**23**
4/6	3.5	0	2	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	**4**
4/7	2.5	0	1	3	0	0	1	1	0	0	0	0	0	0	0	1	0	0	**7**
4/8	6	1	3	18	0	7	2	3	0	0	0	0	0	0	3	3	0	0	**40**
4/10	4.5	0	5	7	0	0	1	1	0	0	0	0	0	0	1	0	0	0	**15**
4/12	4	0	1	9	0	0	2	2	0	0	0	0	0	0	2	3	1	0	**20**
4/13	6	1	0	9	0	0	5	0	0	0	0	0	0	0	5	2	1	0	**23**
4/14	3.5	0	2	2	0	0	1	1	0	0	0	0	0	0	0	0	0	0	**6**
4/15	3.5	0	3	5	0	1	0	0	0	0	0	0	0	0	0	1	0	0	**10**
4/16	5.5	0	7	3	2	0	1	0	0	0	1	0	0	0	0	0	1	0	**15**
4/17	4	0	9	8	0	1	2	2	0	0	0	1	0	0	2	1	1	0	**27**
4/19	4.5	0	1	6	1	0	0	1	0	0	0	0	0	0	1	0	0	0	**10**
4/22	1.5	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**2**
4/23	2.5	0	4	3	1	1	1	0	0	0	1	0	0	0	0	0	0	0	**11**
4/24	3.5	3	1	2	0	0	0	0	0	0	0	0	0	0	0	0	2	1	**9**
4/25	3.5	0	15	0	1	1	1	1	0	0	0	0	0	0	0	0	0	0	**19**
4/27	3	2	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	**5**
4/29	1.5	0	2	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	**4**
5/20	1.5	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	**1**
TOTAL	**124**	**7**	**123**	**120**	**22**	**13**	**31**	**21**	**0**	**2**	**3**	**2**	**0**	**0**	**17**	**18**	**6**	**0**	**385**
2YrAv	100	4	186	99	16	16	25	13	0	2	3	2	0	0	19	14	6	1	402

PILGRIM HEIGHTS, TRURO, MA
Donald Manchester, Michael Brokenshire, Bob & Maryellen Stone, others

2019	HRS	BV	TV	OS	BE	NH	SS	CH	NG	RS	BW	RT	RL	GE	AK	ML	PG	UR	TOTAL
4/4	4	0	26	0	0	0	0	0	0	1	0	2	0	0	0	0	0	0	**29**
4/10	3	0	4	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	**6**
4/11	5	0	15	1	0	4	1	0	0	0	0	0	0	0	2	1	0	0	**24**
4/14	5	0	3	0	0	0	2	0	0	0	0	0	0	0	0	1	0	0	**6**
4/16	8	0	55	8	1	1	1	2	0	0	0	2	0	0	9	3	0	0	**82**
4/17	7	0	61	3	0	3	5	6	0	4	1	6	0	0	19	4	0	0	**112**
4/19	4	1	30	2	0	0	8	1	0	0	0	5	0	0	9	0	0	0	**56**
4/24	5	0	17	9	0	1	2	2	0	0	0	2	0	0	1	1	0	0	**35**
4/25	5	0	62	7	0	1	5	9	0	1	0	3	0	0	3	2	0	0	**93**
4/27	5	0	23	1	0	0	1	0	0	0	0	2	0	0	7	0	1	1	**36**
4/28	4	0	26	6	1	1	5	2	0	0	13	1	0	0	3	1	0	0	**59**
4/29	5	0	21	1	0	0	0	1	0	0	0	0	0	0	3	0	0	0	**26**
5/1	3	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1	0	**2**
5/6	3	0	3	1	0	0	0	0	0	0	0	1	0	0	0	1	0	0	**6**
5/7	7	0	35	10	1	1	25	3	0	0	1	1	0	0	10	3	1	0	**91**
5/8	3	0	8	3	1	0	0	0	0	0	0	0	0	0	0	1	0	0	**13**
5/9	6	0	31	2	1	0	1	1	0	0	0	3	0	0	0	2	1	0	**42**
5/11	5	0	41	2	0	0	3	2	0	0	0	2	0	0	2	1	0	0	**53**
5/13	3	0	3	1	0	0	2	0	0	0	0	0	0	0	2	1	0	0	**9**
5/15	4	0	10	2	0	0	2	0	0	0	0	0	0	0	3	1	0	0	**18**
5/16	6	0	40	5	1	0	2	2	0	0	18	3	0	0	2	5	1	1	**80**
5/18	8	0	62	12	0	0	7	0	0	1	3	1	0	0	5	3	0	0	**95**
5/19	4	0	12	0	1	0	0	1	0	0	12	2	0	0	0	0	0	1	**29**
5/20	5	0	20	1	0	0	1	1	0	0	14	0	0	0	2	0	0	0	**39**
5/21	7	0	61	9	1	0	0	0	0	0	40	0	0	0	1	2	0	2	**121**
5/22	6	0	54	5	0	0	1	0	0	1	33	2	0	0	0	0	0	0	**96**
5/23	3	0	18	1	1	0	0	0	0	0	12	0	0	0	0	0	0	0	**32**
5/25	7	1	39	9	1	0	1	1	0	0	4	0	0	0	2	0	0	1	**59**
5/27	4	0	7	0	1	0	0	0	0	0	9	0	0	0	1	0	0	0	**18**
5/28	4	1	12	0	0	0	0	0	0	0	1	0	0	0	2	0	0	0	**16**
5/30	4	0	0	0	0	0	0	0	0	0	3	0	0	0	0	1	0	0	**4**
5/31	2.5	1	5	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	**8**
6/1	4	0	22	1	0	0	1	0	0	0	5	0	0	0	0	0	0	0	**29**
6/3	8	1	66	7	2	0	1	0	0	0	61	1	0	0	0	0	0	1	**143**
6/4	5	0	24	4	1	0	0	0	0	0	35	3	0	0	0	0	0	0	**69**
6/7	3	0	22	3	0	0	0	0	0	0	2	0	0	0	0	0	0	0	**27**
6/8	4	0	12	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	**14**
6/9	4	0	31	1	0	0	1	1	0	0	9	0	0	0	0	0	0	0	**43**
6/10	4	0	10	0	1	0	0	0	0	0	17	0	0	0	0	0	0	0	**28**
6/12	2	0	10	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	**11**
6/14	2	0	4	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	**5**
6/15	5	0	17	1	0	0	0	0	0	0	7	0	0	0	0	0	0	0	**25**
6/22	3	0	6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**6**
6/23	4	0	28	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	**31**
6/24	5	0	47	0	0	1	0	0	0	0	24	0	0	0	0	0	0	0	**72**
6/25	3	0	3	1	0	0	0	0	0	0	18	0	0	0	0	0	0	0	**22**
6/27	3	0	4	0	0	0	0	0	0	0	11	0	0	0	0	0	0	0	**15**
6/28	4	0	6	1	0	0	0	0	0	0	10	0	0	0	0	0	0	0	**17**
6/30	4	0	12	1	0	0	0	0	0	0	4	0	0	0	0	0	0	0	**17**
TOTAL	**222**	**5**	**1128**	**123**	**15**	**14**	**79**	**38**	**0**	**8**	**369**	**42**	**0**	**0**	**89**	**34**	**5**	**8**	**1969**
22YrAv	251	2	592	128	15	24	288	48	2	10	259	88	1	0	172	45	11	21	1711

*12 Mississippi Kites: 1 on 5/18, 5 on 5/21, 3 on 6/3, 2 on 6/4, and 1 on 6/23; Average: 4.5

PURPLE CHICKADEE, RINGWOOD, NJ
Stephanie Seymour

2019	HRS	BV	TV	OS	BE	NH	SS	CH	NG	RS	BW	RT	RL	GE	AK	ML	PG	UR	TOTAL
3/11	1.5	0	0	0	0	0	0	0	0	0	0	4	0	0	0	0	0	0	**4**
3/14	0.8	0	1	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	**2**
3/15	3.3	0	8	0	0	0	0	0	0	5	0	1	0	0	0	0	0	0	**14**
3/30	3.3	0	3	1	0	0	0	1	0	0	0	2	0	0	0	0	0	0	**7**
4/15	3	1	6	1	0	0	0	0	0	1	2	4	0	0	0	0	0	0	**15**
4/16	6.5	2	1	3	2	0	0	1	0	0	2	3	0	0	0	0	0	0	**14**
4/17	7.5	0	4	5	0	0	5	3	0	1	356	1	0	0	0	0	0	3	**378**
4/19	2.3	0	6	1	1	0	11	8	0	0	97	0	0	0	1	0	0	4	**129**
4/21	2	0	1	1	0	0	0	1	0	0	3	0	0	0	0	0	0	0	**6**
4/24	8.5	1	2	0	1	0	1	5	0	2	25	1	0	0	1	0	0	1	**40**
4/27	1.8	0	0	0	3	0	0	0	0	0	7	0	0	0	0	0	0	1	**11**
4/29	3.5	0	1	0	0	0	0	6	0	0	6	0	0	0	0	0	0	0	**13**
5/2	7.8	0	9	0	0	0	0	0	0	0	3	1	0	0	0	0	0	0	**13**
5/4	8.5	0	6	2	1	0	0	0	0	0	0	0	0	0	0	0	1	1	**11**
5/6	5.5	2	2	1	0	0	1	0	0	0	0	2	0	0	0	0	1	0	**9**
5/7	8.5	1	5	0	1	0	0	1	0	0	0	1	0	0	0	0	0	3	**12**
5/16	3.3	0	1	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	**4**
5/17	3.8	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	**1**
TOTAL	**81**	**7**	**56**	**15**	**13**	**0**	**18**	**26**	**0**	**10**	**501**	**20**	**0**	**0**	**2**	**0**	**2**	**13**	**683**

SCOTT'S MOUNTAIN, MCR HARMONY TWP. NJ
Paul Murray, Henry F. Kielblock, Mark Burton, Scott Singer

2019	HRS	BV	TV	OS	BE	NH	SS	CH	NG	RS	BW	RT	RL	GE	AK	ML	PG	UR	TOTAL
4/13	7	0	0	4	8	3	4	3	0	1	2	5	0	0	4	0	1	4	**39**
TOTAL	**7**	**0**	**0**	**4**	**8**	**3**	**4**	**3**	**0**	**1**	**2**	**5**	**0**	**0**	**4**	**0**	**1**	**4**	**39**
4YrAv	7	0	0	7	10	2	7	5	0	0	51	11	0	0	4	0	0	3	99

WILDCAT RIDGE, HIBERNIA, NJ
Frank Budney

2019	HRS	BV	TV	OS	BE	NH	SS	CH	NG	RS	BW	RT	RL	GE	AK	ML	PG	UR	TOTAL
2/26	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
3/18	4	0	0	0	0	0	2	0	0	0	0	2	0	0	0	0	0	0	**4**
3/20	4	4	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	**5**
3/26	4.5	2	0	0	0	0	3	0	0	0	0	3	0	0	0	0	0	1	**9**
3/30	5.5	4	0	1	1	0	5	1	0	0	0	7	0	0	0	0	0	0	**19**
4/1	5	0	0	1	0	0	0	0	0	0	0	1	0	0	0	0	0	0	**2**
4/4	4.5	0	0	0	0	0	0	0	0	0	0	4	0	0	0	0	0	1	**5**
4/6	5.5	0	0	0	1	0	0	0	0	0	0	2	0	0	0	0	0	1	**4**
4/10	4.5	0	0	0	0	0	2	0	0	0	0	6	0	0	0	0	0	0	**8**
4/13	5.3	0	0	1	0	0	1	1	0	0	0	4	0	0	0	0	0	0	**7**
4/16	5	0	0	1	0	0	0	0	0	0	0	2	4	0	0	0	0	0	**7**
4/17	6.5	0	0	0	0	0	1	2	0	0	76	2	0	0	0	1	0	0	**82**
4/19	3	1	0	1	0	0	0	0	0	0	26	0	0	0	0	0	0	0	**28**
4/22	4	0	0	0	0	0	0	0	0	1	20	0	0	0	0	0	0	0	**21**
4/23	1.5	0	0	0	0	0	0	0	0	0	6	0	0	0	0	0	0	0	**6**
4/24	5	4	0	0	0	0	0	0	0	0	10	2	0	0	0	0	0	0	**16**
4/27	4.5	0	0	1	0	0	1	0	0	1	5	0	0	0	1	0	0	0	**9**
4/29	5	0	0	0	1	0	2	1	0	0	0	5	0	0	0	2	0	1	**12**
5/1	2	0	0	2	0	0	1	0	0	0	2	6	0	0	0	0	0	0	**11**
5/6	4	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	**2**
5/9	5	2	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	**4**
5/15	5.5	0	0	2	0	0	0	1	0	0	0	0	0	0	0	0	0	1	**4**
TOTAL	**96**	**17**	**0**	**11**	**3**	**0**	**20**	**6**	**0**	**2**	**147**	**50**	**0**	**0**	**1**	**3**	**0**	**5**	**265**
18YrAv	181	8	13	36	8	6	86	21	0	9	382	55	0	0	22	1	1	11	660

MONTCLAIR, NJ
David Weber, Alex Bernzweig, Evan Cutler

2019	HRS	BV	TV	OS	BE	NH	SS	CH	NG	RS	BW	RT	RL	GE	AK	ML	PG	UR	TOTAL
3/16	8	0	9	0	0	0	4	4	0	1	0	1	0	0	3	0	0	0	**22**
3/17	8	0	1	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	**3**
3/18	8	0	3	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	**4**
3/19	8	0	9	0	1	0	1	1	0	1	0	1	0	0	0	0	0	0	**14**
3/20	8	0	15	0	0	0	1	1	0	2	0	0	0	0	0	0	0	0	**19**
3/21	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
3/22	8	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**2**
3/23	3.9	0	0	0	0	0	1	1	0	1	0	1	0	0	0	0	0	0	**4**
3/24	8	15	54	1	1	0	7	3	0	1	0	5	0	0	0	1	0	0	**88**
3/25	8	1	10	2	0	0	0	2	0	0	0	0	0	0	0	0	0	0	**15**
3/26	8	4	35	4	1	0	4	1	0	1	0	2	0	0	1	1	0	0	**54**
3/27	8	2	20	5	0	0	0	1	0	0	0	2	0	0	0	0	0	0	**30**
3/28	8	4	53	3	2	0	3	1	0	4	0	1	0	0	1	0	0	0	**72**
3/29	7	0	3	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	**4**
3/30	6	0	21	8	1	1	2	9	0	3	0	5	0	0	5	0	2	0	**57**
3/31	6	1	15	2	0	0	1	0	0	1	0	0	0	0	0	1	0	0	**21**
4/1	8	0	20	1	0	0	2	2	0	2	0	1	0	0	0	0	1	0	**29**
4/2	8	0	43	2	1	0	1	4	0	1	0	1	0	0	1	1	2	0	**57**
4/3	8	0	11	0	0	0	2	1	0	1	0	0	0	0	0	1	0	0	**16**
4/4	8	0	4	2	0	0	3	0	0	1	0	0	0	0	1	0	0	0	**11**
4/5	3	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**1**
4/6	7	0	7	2	0	0	0	4	0	0	0	1	0	0	1	0	0	1	**16**
4/7	8	0	8	7	1	0	3	5	0	0	0	3	0	0	1	2	0	0	**30**
4/8	9	0	20	10	0	0	2	3	0	3	0	2	0	0	7	0	0	0	**47**
4/9	7	0	3	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**4**
4/10	8	0	6	3	0	0	2	0	0	1	0	0	0	0	3	0	1	0	**16**
4/11	8	0	6	2	0	0	0	0	0	0	0	0	0	0	0	2	0	0	**10**
4/12	8	0	6	5	0	0	2	0	0	0	0	0	0	0	14	3	2	0	**32**
4/13	5	0	0	4	2	0	0	2	0	2	1	0	0	0	2	0	0	0	**13**
4/14	7	0	3	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	**4**
4/15	8	2	8	12	0	1	4	0	0	0	39	1	0	0	1	2	0	0	**70**
4/16	8	1	9	12	1	2	15	5	0	1	50	1	0	0	4	2	2	0	**105**
4/17	8	2	18	2	3	1	4	2	0	2	291	2	0	0	4	1	0	0	**332**
4/18	8	0	1	1	1	0	0	3	0	0	2	0	0	0	10	3	0	0	**21**
4/19	8	0	9	8	1	0	6	3	0	0	7	0	0	0	5	0	0	0	**39**
4/20	5.5	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	**2**
4/21	6	0	0	2	0	0	1	0	0	0	0	1	0	0	2	1	0	0	**7**
4/22	5	0	0	3	1	0	2	0	0	0	12	1	0	0	0	0	1	0	**20**
4/23	8	1	34	4	0	0	7	2	0	0	15	1	0	0	0	1	0	0	**65**
4/24	8	0	11	4	4	0	4	0	0	2	52	1	0	0	6	1	0	0	**85**
4/25	7.3	0	11	2	0	1	4	0	0	0	31	2	0	0	0	0	0	1	**52**
4/26	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
4/27	6	0	0	5	1	1	8	3	0	0	48	0	0	0	1	0	0	0	**67**
4/28	5.5	0	3	0	0	0	1	0	0	0	4	0	0	0	0	0	0	0	**8**
4/29	8	0	1	0	2	0	1	0	0	0	4	1	0	0	0	0	0	0	**9**
4/30	8	0	0	3	0	0	3	1	0	0	2	2	0	0	1	0	0	0	**12**
5/1	7	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	**1**
5/2	8	0	19	3	0	0	6	2	0	0	9	0	0	0	3	2	0	0	**44**
5/3	5	0	4	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**5**
5/5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
5/6	7	0	0	8	2	1	7	0	0	3	10	6	0	0	2	1	0	1	**41**
5/7	8	0	2	4	1	0	0	1	0	1	8	1	0	0	2	0	0	0	**20**
5/8	8	0	0	6	1	0	1	1	0	0	11	1	0	0	2	0	0	0	**23**
5/9	7	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**1**
5/10	8	0	1	1	5	0	0	1	0	0	4	0	0	0	2	1	1	0	**16**
5/12	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
5/13	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
5/14	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
5/15	9	0	0	1	4	0	0	1	0	0	3	0	0	0	0	0	1	0	**10**
TOTAL	**395**	**33**	**518**	**149**	**38**	**8**	**118**	**71**	**0**	**37**	**603**	**47**	**0**	**0**	**85**	**27**	**13**	**3**	**1750**
31YrAv	337	24	360	182	16	39	398	59	0	61	1499	130	0	0	254	25	5	35	3090

POQUONOCK, POQUONOCK, CT

Joseph Wojtanowski

2019	HRS	BV	TV	OS	BE	NH	SS	CH	NG	RS	BW	RT	RL	GE	AK	ML	PG	UR	TOTAL
3/8	2.8	0	1	0	0	0	0	0	0	2	0	2	0	0	0	0	0	0	**5**
3/16	3	0	3	0	1	0	0	2	0	0	0	0	0	0	0	0	0	0	**6**
3/17	1	0	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	**2**
3/31	0.6	0	4	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**6**
4/6	4	0	2	0	2	0	0	0	0	0	0	1	0	0	0	0	0	0	**5**
4/7	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
4/9	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**1**
4/10	3	0	0	1	8	0	0	0	0	0	0	1	0	0	0	0	0	1	**11**
4/11	5	0	0	2	0	0	0	1	0	0	0	4	0	0	1	0	0	1	**9**
4/13	7	6	6	5	0	0	3	0	0	1	3	1	0	0	2	0	0	1	**28**
4/14	8	0	0	1	0	0	1	1	0	0	3	0	0	0	3	0	0	0	**9**
4/15	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
4/16	3.3	0	1	3	0	0	2	0	0	1	7	0	0	0	0	0	0	0	**14**
4/17	1.3	0	0	0	1	0	0	0	0	0	2	0	0	0	0	0	0	0	**3**
4/19	1	0	3	0	0	0	0	0	0	0	3	0	0	0	0	0	0	0	**6**
4/22	2.3	0	1	2	0	0	0	1	0	0	1	0	0	0	0	0	0	0	**5**
4/23	1.8	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	**2**
4/24	2.5	0	0	1	0	0	1	1	0	0	4	1	0	0	2	0	0	0	**10**
4/28	0.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	**1**
TOTAL	52	6	21	18	12	0	8	8	0	4	23	11	0	0	8	0	1	3	**123**
5YrAv	94	7	54	20	8	3	25	9	0	9	146	36	0	0	8	1	1	6	**336.2**

PURPLE CHICKADEE, RINGWOOD, NJ

Stephanie Seymour

2019	HRS	BV	TV	OS	BE	NH	SS	CH	NG	RS	BW	RT	RL	GE	AK	ML	PG	UR	TOTAL
3/11	1.5	0	0	0	0	0	0	0	0	0	0	4	0	0	0	0	0	0	**4**
3/14	0.8	0	1	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	**2**
3/15	3.3	0	8	0	0	0	0	0	0	5	0	1	0	0	0	0	0	0	**14**
3/30	3.3	0	3	1	0	0	0	1	0	0	0	2	0	0	0	0	0	0	**7**
4/15	3	1	6	1	0	0	0	0	0	1	2	4	0	0	0	0	0	0	**15**
4/16	6.5	2	1	3	2	0	0	1	0	0	2	3	0	0	0	0	0	0	**14**
4/17	7.5	0	4	5	0	0	5	3	0	1	356	1	0	0	0	0	0	3	**378**
4/19	2.3	0	6	1	1	0	11	8	0	0	97	0	0	0	1	0	0	4	**129**
4/21	2	0	1	1	0	0	0	1	0	0	3	0	0	0	0	0	0	0	**6**
4/24	8.5	1	2	0	1	0	1	5	0	2	25	1	0	0	1	0	0	1	**40**
4/27	1.8	0	0	0	3	0	0	0	0	0	7	0	0	0	0	0	0	1	**11**
4/29	3.5	0	1	0	0	0	0	6	0	0	6	0	0	0	0	0	0	0	**13**
5/2	7.8	0	9	0	0	0	0	0	0	0	3	1	0	0	0	0	0	0	**13**
5/4	8.5	0	6	2	1	0	0	0	0	0	0	0	0	0	0	0	1	1	**11**
5/6	5.5	2	2	1	0	0	1	0	0	0	0	2	0	0	0	0	1	0	**9**
5/7	8.5	1	5	0	1	0	0	1	0	0	0	1	0	0	0	0	0	3	**12**
5/16	3.3	0	1	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	**4**
5/17	3.8	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	**1**
TOTAL	81	7	56	15	13	0	18	26	0	10	501	20	0	0	2	0	2	13	**683**

NEHW Spring Historical Summary Per 100 Hours: 1990-2019

Year	Sites	HRS	BV	TV	OS	BE	NH	SS	CH	NG	RS	BW	RT	RL	GE	AK	M	PF	UR	MK	SK	TOT
1990	20	1927	0.1	46	46	1.7	15	198	12	1.3	13	564	48	0.3	0.1	116	15	1.5	27	0.0	0.0	**1097**
1991	21	1957	0.7	45	50	1.5	18	179	13	1.9	15	386	66	0.7	0.3	89	15	1.6	24	0.0	0.0	**892**
1992	21	1638	0.0	38	49	1.6	18	149	13	1.3	15	523	63	0.7	0.1	175	15	2.1	16	0.0	0.0	**1080**
1993	22	1780	0.0	48	57	1.7	19	182	22	0.9	20	342	59	0.1	0.3	146	17	1.4	8	0.0	0.0	**980**
1994	33	1564	2.5	69	46	1.5	18	173	29	1.1	15	321	48	0.4	0.2	133	14	1.2	14	0.0	0.0	**904**
1995	26	914	2.7	84	52	1.2	13	77	6	0.1	11	455	30	0.0	0.1	187	7	0.7	9	0.0	0.0	**936**
1996	20	1061	2.3	64	57	2.5	19	132	8	0.4	17	188	67	0.4	0.1	193	10	1.9	10	0.0	0.0	**773**
1997	25	1253	2.6	67	42	2.2	14	99	10	1.0	8	534	52	0.1	0.3	74	6	0.3	23	0.0	0.0	**934**
1998	21	1235	2.1	59	27	1.7	11	70	9	0.7	8	276	27	0.0	0.0	102	5	1.0	11	0.0	0.0	**611**
1999	8	1758	2.0	59	32	3.3	18	206	24	0.5	17	445	26	0.0	0.1	133	16	1.6	13	0.0	0.0	**998**
2000	14	1824	1.3	69	36	7.9	11	156	24	0.6	10	323	39	0.1	0.1	138	22	2.7	11	0.1	0.0	**851**
2001	10	1881	2.8	89	47	3.2	17	149	19	0.3	11	316	40	0.0	0.1	133	22	1.8	13	0.0	0.0	**866**
2002	9	1886	2.7	66	31	3.2	12	158	30	0.7	9	384	30	0.0	0.1	67	16	2.0	4	0.6	0.0	**820**
2003	7	2021	2.5	73	41	4.2	10	138	20	0.2	10	242	36	0.2	0.2	55	17	1.4	8	0.0	0.0	**658**
2004	8	1803	2.2	99	61	4.7	20	150	32	0.7	11	193	52	0.4	0.3	73	21	1.8	8	0.3	0.0	**731**
2005	7	1419	3.1	90	43	4.4	10	108	21	0.8	12	241	53	0.2	0.1	42	7	1.3	11	0.1	0.0	**647**
2006	8	1466	3.0	58	55	3.5	7	86	13	0.1	8	368	40	0.1	0.2	52	8	1.5	10	0.1	0.0	**714**
2007	12	1711	3.6	81	67	9.0	15	141	23	0.5	12	331	47	0.6	0.2	68	12	2.5	9	0.6	0.0	**821**
2008	11	2288	2.2	73	44	7.7	18	117	17	0.7	10	170	29	0.7	0.0	85	20	3.4	7	0.2	0.0	**612**
2009	9	2313	4.2	89	36	6.5	17	131	24	0.5	18	188	40	0.3	0.2	97	14	2.9	7	0.0	0.0	**675**
2010	14	2329	8.4	106	61	7.4	16	180	23	0.6	12	317	33	0.0	0.2	65	26	3.0	9	0.4	0.0	**869**
2011	13	2061	5.7	70	46	13.1	19	153	22	0.8	14	279	39	0.2	0.1	144	28	2.3	10	0.5	0.0	**846**
2012	11	2107	4.0	87	39	11.5	20	119	26	1.0	12	206	48	0.0	0.2	86	18	2.3	11	0.0	0.0	**690**
2013	11	1576	1.5	69	57	10.3	22	86	12	1.3	18	259	37	0.4	0.1	98	13	1.5	9	0.3	0.0	**695**
2014	8	1321	3.2	73	81	15.1	24	146	18	0.8	27	389	43	0.3	0.2	97	19	3.3	10	0.5	0.2	**950**
2015	11	1386	2.2	92	71	15.3	21	87	17	0.4	18	388	31	0.6	0.1	68	13	2.4	11	0.7	0.1	**839**
2016	11	1430	3.0	66	66	14.1	23	128	15	0.2	10	339	34	0.1	0.1	67	16	2.7	7	0.3	0.0	**792**
2017	10	1272	2.7	153	47	12.1	28	70	13	0.9	18	175	40	0.7	0.2	95	14	3.1	7	0.2	0.1	**680**
2018	13	1618	5.3	156	59	12.8	23	63	18	0.5	15	276	27	0.1	0.2	82	15	4.3	7	0.1	0.0	**764**
2019	16	1728	4.3	145	55	12.6	20	61	16	0.2	10	323	23	0.2	0.1	65	15	2.3	4	0.7	0.0	**757**
Ave	**14.3**	**1684**	**2.8**	**79**	**50**	**6.6**	**17**	**130**	**18**	**0.7**	**13**	**325**	**42**	**0.3**	**0.2**	**101**	**15**	**2.1**	**11**	**0.2**	**0.0**	**814**

2019 Northeast Fall Season

In Fall of 2019, hawk watchers counted hawks at 39 sites in the Northeast from New Brunswick CAN in the Northeast to Warren County NJ in the southwest. Our watchers counted 133,352 hawks during a total of 9,825 hours. This effort is more than the 9,511 hours in 2018 and 9,457 in 2017, and above our average of 9,505. On average our counters tallied 81 hawks/day, similar to the 87 hawks/day in 2016, but only about 2/3 of our recent high in 2018 of 121 hawks/day. On balance, we have two fewer sites reporting in 2019. Three sites that counted in 2018 did not count in 2019, but Boothe Memorial returned after two years without counts. Boothe Memorial is located in Stratford, CT along the Housatonic River.

The watch sites are organized into six regions, named for their southern-most latitudes. Region 44 includes sites north of latitude N 44, Region 43 north of latitude N 43, Region 42 north of latitude N 42, etc. Region CO is the southern Coastal Region. Region 44 has five sites, Region 43 has five sites, Region 42 has eight sites, Region 41 has 11 sites, and Region 40 has six sites. Region CO has four sites along the southern coastline, overlapping Regions 40 and 41.

The summary table for Seasonal Totals is arranged by Region with the sites listed from north to south.

Northeast Fall 2019 Seasonal Totals

Reg	Site	Days	HRS	BV	TV	OS	BE	NH	SS	CH	NG	RS	BW	RT	RL	GE	AK	ML	PG	UR	Othr	Total	XBV
44	Greenlaw Mt NB	40	271	0	293	173	133	34	456	10	6	1	3040	112	0	0	134	24	21	**72**	1SW	**4510**	1177
	Cooper ME	12	55	0	26	0	5	0	0	2	0	0	9	0	0	0	0	0	0	0	0	**42**	7
	Cadillac Mt ME	51	274	0	193	155	150	67	1112	22	2	0	363	19	0	0	542	53	22	138	0	**2838**	2282
	Mt. Philo SP VT	16	87	3	44	39	118	20	67	14	0	1	3213	8	0	0	54	6	8	24	0	**3619**	359
	Clarry Hill ME	36	304	1	1271	299	449	64	735	38	4	36	6782	201	0	2	288	44	17	33	1SW	**10265**	2211
43	Harpswell Pen ME	47	114	0	23	55	19	11	194	17	1	0	35	6	0	0	66	77	14	7	0	**525**	467
	Interlakes School NH	2	10	0	14	5	7	1	2	0	0	0	476	1	0	0	0	0	0	3	0	**509**	19
	Concord School NH	6	28	0	17	2	3	0	1	0	0	0	86	7	0	0	0	0	0	4	0	**120**	17
	Carter Hill NH	27	173	0	2	37	29	12	121	43	0	9	2051	6	0	2	51	13	1	48	0	**2425**	372
	Putney Mt VT	71	583	2	331	95	83	59	1075	57	8	27	5721	393	0	6	164	48	22	0	0	**8091**	2037
42	Pack Monadnock NH	79	557	0	268	171	180	54	1027	105	9	181	7840	223	0	4	185	64	64	128	0	**10503**	2395
	Mount Watatic MA	14	95	0	9	33	64	6	201	23	1	8	2069	2	0	0	46	13	1	10	0	**2486**	408
	Helderberg NY	16	102	98	201	16	52	3	30	33	0	3	1181	112	0	1	16	9	23	137	0	**1915**	435
	Wachusett Mt MA	64	391	7	404	133	148	10	359	114	0	12	2832	85	0	0	141	52	34	152	1MK	**4484**	1241
	Pinnacle Rock MA	18	96	0	5	5	18	1	22	9	0	1	0	25	0	0	3	3	3	10	0	**105**	100
	Barre Falls MA	31	160	0	88	31	22	4	120	22	0	2	295	23	0	2	18	8	4	19	0	**658**	275
	Shatterack Mt MA	33	150	0	194	32	62	16	210	36	0	13	2565	6	0	2	61	13	4	9	0	**3223**	464
	Blueberry Hill MA	1	7	0	0	1	3	0	14	2	0	0	485	0	0	0	2	0	0	2	0	**509**	24
41	Poquonock CT	47	183	7	51	14	13	2	13	3	0	9	90	12	0	1	8	7	1	7	0	**238**	90
	Middle School CT	11	37	0	0	1	2	0	4	3	0	0	247	1	0	0	3	0	1	3	0	**265**	18
	Mohonk NY	44	208	2	174	50	151	28	357	101	1	38	1030	92	0	1	104	22	23	13	0	**2187**	981
	Chestnut Hill CT	18	66	0	0	14	9	1	38	7	0	0	1792	0	0	0	7	1	0	3	0	**1872**	80
	Botsford Hill CT	14	49	0	0	13	29	0	55	2	0	0	2240	1	0	1	8	1	0	14	0	**2364**	124
	Bear Mountain NY	48	186	1	0	43	79	5	116	30	0	38	4051	63	0	0	28	5	14	13	0	**4486**	434
	Mount Peter NY	74	479	136	426	123	163	27	693	82	0	203	7360	443	0	9	85	8	14	28	0	**9800**	1878
	Chestnut Ridge NY	89	632	29	2589	233	137	59	1414	248	1	439	3363	168	0	9	240	101	25	151	0	**9206**	3225
	Hook Mountain NY	64	362	36	232	133	119	35	799	132	0	54	873	22	0	1	139	21	24	8	0	**2628**	1487
	Quaker Ridge CT	96	695.5	53	1332	431	215	75	1535	306	0	370	4599	228	0	3	268	66	25	49	MK,SE	**9557**	3573
	Purple Chickadee NJ	26	127.3	19	133	13	22	4	146	58	1	35	628	75	0	3	43	9	7	30	0	**1226**	446
40	State Line NJ	75	446	65	2290	420	186	53	834	261	2	186	1368	491	0	1	359	56	46	43	0	**6661**	2938
	Lenoir Wildlife NY	24	92	58	210	95	76	2	59	16	0	9	45	32	0	0	40	3	5	2	0	**652**	339
	Wildcat Ridge NJ	47	252	27	0	40	30	5	284	114	1	16	840	104	0	2	32	8	10	37	0	**1550**	683
	Montclair NJ	84	619	99	491	125	102	13	362	185	1	103	1208	133	0	0	119	52	34	9	0	**3036**	1238
	Scott's Mountain NJ	91	599	0	0	182	244	72	967	177	8	257	4966	467	0	14	121	50	43	91	0	**7659**	2693
	Washington Val NJ	43	205	107	125	92	155	23	302	143	0	163	933	90	0	2	161	62	1	1	0	**2360**	1195
CO	Lighthouse Pt CT	96	614	0	337	1035	232	183	1658	1509	4	159	208	291	0	2	657	229	99	295	1SW	**6899**	6354
	Boothe Memorial CT	3	11	0	7	53	43	4	96	20	0	0	293	0	0	0	26	1	1	3	0	**547**	247
	Fire Island NY	71	414	0	0	418	8	118	130	71	0	0	0	3	0	0	423	884	103	4	0	**2162**	2162
	Fort Tilden NY	15	95	0	10	232	8	33	149	51	0	3	7	14	0	0	401	242	20	0	0	**1170**	1153
	Totals	**1644**	**9825**	**750**	**11790**	**5042**	**3568**	**1104**	**15757**	**4066**	**50**	**2376**	**75184**	**3959**	**0**	**68**	**5043**	**2255**	**734**	**1600**	**3,2,1***	**133352**	45628

*3 Swainson's Hawks, 2 Mississippi Kites, 1 Short-eared Owl; *'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, XBWV Total without Broad-winged Hawks and Vultures*

Region 44

16% of hawks, 13% of XBV, 137 hawks/day, 39 XBV/day, 21 hawks/hour

[Note: XBV=Total Hawks minus Broad-winged Hawks and both vultures]

Region 44 includes Greenlaw Mountain in New Brunswick; Cooper, Cadillac Mountain, and Clarry Hill, in Maine; and Mount Philo in Vermont. This region counted 16% of the hawks in the Northeast, averaging 137 hawks/day, both double those values in 2018. It counted 13% of Hawks without Broadwings and vultures (XBV), which is higher than last year, but averaged the same number of XBV, 32 XBV/day. At 21 hawks/hour, it doubled last year's rate, and topped all the Northeast regions this season.

Greenlaw Mountain had one of the two Swainson's Hawks seen this season, a neat addition for a year with its record low number of days (40). It also had record low counts for four species—Northern Harrier (34), Sharp-shinned Hawk (456), Northern Goshawk (6), and Merlin (24). The Goshawk low was a bounce back from a record high in 2018 of 28. In spite of these lows, Total Hawks (4,510) was about average, and considerably higher than the previous two years. Also, both Bald Eagle (133) and Turkey Vulture (293) were well above average. **Cooper** counted for the ninth year, documenting mostly Turkey Vultures (26). For the second year in a row there were no Sharpies. **Cadillac Mountain** had record high counts for Turkey Vulture (193) and Bald Eagle (150). They were below average for Northern Harrier (67), Northern Goshawk (2), Broadwing (363), and Redtail (19). Their record low Sharpie count of 544 in 2018 rebounded nicely to 1,112, which is just above average. **Mt. Philo** was new to the NEHW count in 2018, making 2019 their second year. At 87 hours this season, it had four times the coverage as 2018 and more than ten times the Total Hawks (3,619), averaging 42 hawks/ hour. **Clarry Hill** counted its first Black Vulture and one of the three Swainson's Hawks counted across the Northeast this season. It had record highs for three species: Turkey Vulture (1,271), American Kestrel (288) and Merlin (44). Their Bald Eagle (449) count, though not a site record, was the Northeast high for this season. It also had an above average count for Osprey (299). Species with lower than average counts include Northern Harrier (64), Cooper's Hawk (38), Broad-winged Hawks (6782), Golden Eagle (2), and Peregrine Falcon (17).

Region 43

9% of hawks, 6% of XBV, 76 hawks/day, 19 XBV/day, 13 hawks/hour

Region 43 includes Harpswell Peninsula in Maine, Interlakes School, Concord School, and Carter Hill in New Hampshire; and Putney Mt. in Vermont. This region counted 9% of the hawks of the Northeast, averaging 76 hawks/day, substantially fewer hawks/day than 2018. The region also counted 6% of XBV, averaging 19 XBV/day, and 13 hawks/hour, also lower than 2018.

Harpswell Peninsula had a record low Total Hawks (535), and record lows for three species: Northern Harrier (11), Sharp-shinned Hawk (194), and American Kestrel (66). Although Bald Eagle (19) came close to their average 23, all other species were also below average. While much of this is likely due to reduced coverage, their 5 hawks/hour in this season is considerably less than their average 15 hawks/hour. **Interlakes School** documented seven species on their two days of counting, and had a Broadwing (476) count that is three times their average. They also had Total Hawks (509) that are more than twice average. **Concord School** set new records for two species: Bald Eagle (3) and Redtail (7). They also had above average Broadwings (86) and about average Total Hawks (120). **Carter Hill** put in more effort this year (173 hours) than last year but were still well below their average of 381. As a consequence, their counts were below average. Their bright lights came in the form of two Golden Eagles among the 13 species they counted. They counted 14 hawks/hour, close to their average of 16. **Putney Mountain** put in a record number of hours (583), and counted 15 species, including eight Northern Goshawks. Six species were at average, including Turkey Vultures (331), Bald Eagle (83), Northern Harrier (59), Broad-winged Hawk (5,721), American Kestrel (164) and Merlin (48). Golden Eagles (6) were near average. All other species were below average.

Region 42

18% of hawks, 12% of XBV, 93 hawks/day, 21 XBV/day, 15 hawks/hour

Region 42 includes Pack Monadnock in New Hampshire, Helderberg in New York and six sites in Massachussetts—Mount Watatic, Wachusett Mountain, Pinnacle Rock, Barre Falls, Shatterack Mountain, and Blueberry Hill. This region counted 18% of the hawks of the Northeast, averaging 93 hawks/day and 12% of XBV, averaging 21 XBV/day, and 15 hawks/hour. These averages are down from 110 hawks/day and 21 hawks/ hour in 2018.

Pack Monadnock had counts for two species that were high counts for the Northeast: Northern Goshawk (9) and Broad-winged Hawk (7,840), as well as the Northeast high for Total Hawks (10,503). It had a new site record for Bald Eagle (180), and tied the site record for Peregrine Falcon (64). The Total Hawks were about average but Osprey (171), Harriers (54), Coops (105), Redtails (223), and Merlins (64), as well as the Goshawk, were below average.

Mount Watatic had a record high for Bald Eagles (64) and counted their first Goshawk since 2010. They had above average counts for Red-shouldered Hawk (8) and American Kestrel (46), and average counts for Sharp-shinned Hawk (201) and Cooper's Hawk (23). They had below average counts for Osprey (33) and Broadwings (2,069). **Helderberg** had its first Golden Eagle since 2008 and record high counts for six species—Black Vulture (98), Turkey Vulture (201), Bald Eagle (52), Red-tailed Hawk (112), Merlin (9), and Peregrine Falcon

(23). Their Broadwing (1,181) count was below average. **Wachusett** counted one of the two Mississippi Kites this season. It had record high counts for three species—Black Vulture (7), Turkey Vulture (404), and Merlin (52), and above average counts for five others—Bald Eagle (148), Cooper's Hawk (114), Red-shouldered Hawk (12), American Kestrel (141), and Peregrine Falcon (34). They had below average counts for Northern Harrier (10) and Broad-winged Hawk (2,832). **Pinnacle Rock** had above average counts for two species: Bald Eagle (18) and Red-tailed Hawk (25). Their Peregrines (3) were average, but all other species were below average. **Barre Falls** had the lowest coverage since 2000, and this is reflected in below average counts for all species. Nevertheless, they counted 13 species, including two Golden Eagles. Their most prevalent species are Sharpshins (120) and Broadwings (295). **Shatterack Mountain** had a record high count for Bald Eagle (62), two Golden Eagles, and above average counts for both American Kestrel (61) and Merlin (13). Species with average counts include Turkey Vulture (194), Northern Harrier (16), Cooper's Hawk (36), and Broad-winged Hawks (2,565). Total hawks (3,223) were also average. **Blueberry Hill** had only one day of coverage this season, with a day count of 509 hawks, mostly Broadwings (485).

Region 41

33% of hawks, 27% of XBV, 83 hawks/day, 23 XBV/day, 14 hawks/hour

Region 41 has 11 sites, five in Connecticut, five in New York, and one in New Jersey. The Connecticut sites include Poquonock, Middle School, Chestnut Hill, Botsford Hill, 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 the same percentage of hawks as in 2018, 33% of the hawks of the Northeast and 27% of XBV. These percentages are the largest for the Northeast, consistent with the number of sites reporting. But, with a lower overall count, the averages dropped substantially from 130 to 83 hawks/day, and from 41 to 23 XBV/day. Likewise, the average hawks/hour dropped from 22 to 14.

Poquonock had more hours of effort (183) than in 2018, but that is still well less than average. Nevertheless, they recorded 14 species of hawks, including one Golden Eagle, above average Merlins (7), and average counts for Turkey Vulture (51) and Osprey (14). **Middle School** counted eight species, including their first Peregrine since 2013. They continued reduced coverage and had record low counts for Osprey (1) and Broadwings (247). **Mohonk** had another good season with a record high for Bald Eagle (151), a Northern Goshawk, and above average counts for nine species. Species with counts more than double average include Cooper's Hawk (101), Red-shouldered Hawk (38), American Kestrel (104), Merlin (22), and Peregrine (23). Only two species were below average, Black Vulture (2) and Broad-winged Hawk (1,030). **Chestnut Hill** counted eight species, and had average counts for Sharp-shinned Hawks (38). The counts for other species were below average, including Broad-winged Hawks (1,792), which were down by 50%. **Botsford Hill** had a record high count for Bald Eagle (29) and their first Golden Eagle since 2007. Their most prevalent species were Sharp-shinned Hawk (55) and Broad-winged Hawk (2,240), both of which were at least 30% below average. **Bear Mountain** had a record high count for Peregrine Falcons (15) and above average counts for both Red-shouldered Hawk (38) and Broad-winged Hawks (4,051). Their Total Hawks (4,486) was twice average, and their Hawks/Hr (24) was four times average. Unfortunately, they also had two record low counts, for Northern Harrier (5) and Sharp-shinned Hawk (116), and a below average count for Osprey (43). **Mount Peter** had the highest count in the Northeast for Black Vultures (136) and also had a site record for Bald Eagles (163). They had above average counts for three other species, Turkey Vulture (426), Red-shouldered Hawk (203), and Golden Eagle (9). Osprey (123), Broad-winged Hawk (7,360), Red-tailed Hawk (443), and Peregrine Falcon (14) were at average, as was the Total Hawks (9,800). All other species were below average. **Chestnut Ridge** had two of the highest counts in the Northeast: Turkey Vulture (2,589) and Red-shouldered Hawk (439). Their counts for Bald Eagle (137) and Merlin (101) were above average, and their counts for Golden Eagle (9) and Peregrine Falcon (25) were average. All other species, including the one Goshawk, were below average. **Hook Mountain** had five site records this year. Unfortunately, they were all record lows: Osprey (133), Northern Harrier (35), Sharp-shinned Hawk (799), Red-tailed Hawk (22) and American Kestrel (139). One Golden Eagle was a highlight, among the 14 species counted. **Quaker Ridge** had the highest Northeast count for hours of coverage (695). They had one of the two Mississippi Kites and the only Short-eared Owl in the 2019 season. They had above average counts for two species, Black Vulture (53) and Turkey Vulture (1,332), and average counts for Osprey (431), Bald Eagle (215), Red-tailed Hawk (228), and Peregrine Falcon (25). All other species, and their Total Hawks, were below average. This was the 3rd year for **Purple Chickadee**. They documented 15 species of hawks, mostly Broad-winged Hawks (628) and Sharp-shinned Hawks (146). They also had one Goshawk and three Golden Eagles.

Region 40

16% of hawks, 20% of XBV, 60 hawks/day, 25 XBV/day, 10 hawks/hour

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 16% of the hawks of the Northeast, averaging 60 hawks/day, and 20% of XBV, averaging 25 XBV/day, and 10 hawks/hour. This is less than half the 142 hawks/day and 23 hawks/hour counted in 2018.

State Line had the highest 2019 count in the Northeast for Red-tailed Hawk (491) for the third year in a row! They had above average counts for Turkey Vulture (2,290) and Bald Eagle (186), and below average counts for Sharp-shinned Hawk (834) and Broad-winged Hawk (1,368). All other species counts were at average, including Northern Goshawk (2) and Golden Eagle (1). **Lenoir** had about the same coverage as in 2018 but with quite different results. They had above average Black Vultures (58), and average Osprey (95) and Bald Eagle (76), but unlike 2018, all other species counts were below average. Also well below average were Total Hawks (652) and Hawks/Hr (7). **Wildcat Ridge** returned to average coverage and doubled their Red-tailed Hawks (104) with their best count since 2007. They also tied their site record for Peregrine (10) and had above average Red-shouldered Hawks (16). But, they recorded a record low for Osprey (40), and were below average for Bald Eagle (30), Northern Harrier (5), Sharp-shinned Hawk (284), Broad-winged Hawk (840) and American Kestrel (32). They also counted 1 Northern Goshawk and 2 Golden Eagles. **Montclair** had above average Black Vultures (99) and a Northern Goshawk. However, all other species were below average, with record lows for four species—Osprey (125), Northern Harrier (13), Sharp-shinned Hawk (362), and American Kestrel (119), as well as a record low for Total Hawks (3,036). **Scott's Mountain** had the highest Northeast count for Golden Eagles (14) and a site record for Red-shouldered Hawks (257). They had average counts for five species—Osprey (182), Bald Eagle (244), Cooper's Hawk (177), Northern Goshawk (8), and Peregrine Falcon (43). All other species were below average, with a record low count for Red-tailed Hawk (467). This was the 3rd year for **Washington Valley**, which replaces Chimney Rock in our lineup. They increased coverage by a few days and increased counts for Black Vultures (107), Turkey Vultures (125), and Osprey (92). They also recorded 2 Golden Eagles. They had lower counts of Sharp-shinned Hawks (302) and Broad-winged Hawks (933) than in the previous two years.

Region CO

8% of hawks, 22% of XBV, 58 hawks/day, 54 XBV/day, 10 hawks/hour

Region CO includes four coastal sites, Lighthouse Point and Boothe Memorial in Connecticut, and Fire Island and Fort Tilden in New York. These four sites counted 8% of the hawks of the Northeast, averaging 58 hawks/day, and 22% of XBV, averaging 54 XBV/day, and 10 hawks/hour. While the percentage noted are about the same as in 2018, the hawks/day and hawks/hour are only about half of the 2018 values, indicating that significantly fewer hawks in 2019.

Lighthouse Point had one of the three Swainson's Hawk, and the highest counts in the Northeast for five species—Osprey (1,035), Northern Harrier (183), Sharp-shinned Hawk (1,658), Cooper's Hawk (1,509), and American Kestrel (657). To understand just what kind of season 2019 was, consider that the Harrier and Sharpie counts were actually record lows for the site! Furthermore, there were no species with above average counts. The two species with average counts were the Cooper's Hawk and Bald Eagle (232). All other species were below average. **Boothe Memorial** counted hawks for a few days this season after a couple of years hiatus. They added to our count with 10 species, including mostly Broad-winged Hawks (293) and Sharp-shinned Hawks (96). **Fire Island** had the highest counts in the Northeast for two species, Merlin (884) and Peregrine Falcon (103), both of which are below average for the site. Two species were above average—Bald Eagle (8) and Cooper's Hawk (71); and they counted three Red-tailed Hawks, rare on the barrier beach. Osprey (418) were average and American Kestrels (423) were below average. **Fort Tilden** doubled their effort this season, recording 12 species. The most prevalent species were American Kestrel (401), Merlin (242), and Osprey (232).

Recent Year Counts for Major Sites

With previous year averages and % change in 2019

REGION 44

Greenlaw Mountain - St. Andrews, New Brunswick (ave for 2009-2018, % change in 2019)

YR	DYS	HRS	BV	TV	OS	BE	NH	SS	CH	NG	RS	BW	RT	RL	GE	AK	M	PF	UR	TOT	XTOT	PH	XPH
2014	40	258	0	197	130	42	63	496	6	12	2	1704	148	0	1	155	44	24	70	3094	1193	12	4.6
2015	42	265	0	218	132	58	76	524	7	11	1	3791	106	0	1	158	35	24	83	5225	1216	20	4.6
2016	46	324	0	249	110	92	120	514	16	22	3	6990	211	1	2	147	34	11	87	8609	1370	27	4.2
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
ave10	*46.3*	*281*	*0.1*	*228*	*148*	*71*	*71*	*590*	*11*	*15*	*4.7*	*3211*	*197*	*0.3*	*1.1*	*168*	*39.6*	*21*	*83*	*4861*	*1421.9*	*17*	*5.1*
%chg	*-14*	*-4*		*29*	*17*	*86*	*-52*	*-23*	*-9*	*-61*	*-79*	*-5*	*-43*			*-20*	*-39*	*-1*	*-13*	*-7*	*-17*	*-5*	*-15*

REGION 44

Cooper - Cooper, Maine (ave for 2012-2018, % change in 2019)

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	18	0	10	0	4	0	4	0	0	0	5	0	0	0	10	0	0	8	41	26	2.3	1.4
2015	7	40	0	8	0	2	8	1	1	0	0	0	0	0	0	4	0	0	0	24	16	0.6	0.4
2016	12	57	0	31	3	15	4	6	6	0	0	20	0	0	1	6	3	0	0	95	44	1.7	0.8
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	88.5	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	0.76	0.1
ave 8	*8.38*	*47.3*	*0*	*22.9*	*1*	*5.8*	*1.8*	*2*	*1.0*	*0*	*0*	*10.3*	*0*	*0*	*0.1*	*4.0*	*0.875*	*0.1*	*1.13*	*50.13*	*17.0*	*1.6*	*0.5*
%chg	*43*	*16*		*14*		*-13*			*100*			*-12*								*-16*	*-59*	*-53*	*-74*

Cadillac Mountain - Acadia National Park, Maine (ave for 2009 - 2018, % change in 2019)

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	63	315	0	148	143	73	94	762	16	8	1	646	40	1	0	481	62	31	99	2605	1811	8.3	5.8
2015	67	281	0	79	150	27	137	1127	25	5	3	360	15	0	0	613	96	18	100	2755	2316	9.8	8.2
2016	42	192	0	49	126	57	80	582	25	3	1	1490	37	0	1	330	54	17	55	2907	1368	15.1	7.1
2017	60	255	0	92	109	113	75	683	18	2	3	585	63	0	0	395	55	37	130	2360	1683	9.3	6.6
2018	60	270	0	133	102	75	79	544	18	7	2	429	20	0	0	495	24	33	139	2100	1538	7.8	5.7
2019	51	274	0	193	155	150	67	1112	22	2	0	363	19	0	0	**542**	53	22	138	2838	2282	10.3	8.3
ave	*55*	*248*	*0*	*83*	*141*	*58*	*109*	*955*	*20*	*9*	*1*	*994*	*57*	*1*	*1*	*500*	*64*	*26*	*95*	*3113*	*2036*	*13*	*8*
%chg	*-7*	*10*		*132*	*10*	*158*	*-39*	*16*	*11*	*-77*	*-100*	*-63*	*-66*	*-100*	*-100*	*8*	*-18*	*-15*	*46*	*-9*	*12*	*-21*	*0*

Clarry Hill - Union, Maine (ave for 2011-2018, % change in 2019)

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	27	227	0	422	245	192	113	749	84	4	40	8650	254	0	2	155	37	39	39	11025	1953	48.6	8.6
2015	35	248	0	569	215	334	126	792	59	7	47	17369	369	0	9	113	27	20	20	20076	2138	81.0	8.6
2016	39	296	0	594	310	313	89	597	67	4	27	12526	280	1	8	178	38	30	26	15089	1969	51.0	6.7
2017	44	328	0	716	228	315	102	760	49	7	34	3969	370	1	6	211	31	25	31	6855	2170	20.9	6.6
2018	36	286	0	884	231	468	95	1014	71	6	27	2358	316	3	8	216	33	34	28	5792	2550	20.3	8.9
2019	36	304	1	1271	299	449	64	735	38	4	36	6782	201	0	2	288	44	17	33	10265	2211	33.8	7.3
ave8	*33*	*247*	*0*	*512*	*239*	*252*	*88*	*697*	*59*	*5*	*33*	*9382*	*254*	*1*	*5*	*141*	*29*	*25*	*23*	*11744*	*1850*	*50*	*8*
%chg	*10*	*23*		*148*	*25*	*78*	*-27*	*6*	*-35*	*-16*	*9*	*-28*	*-21*		*-59*	*104*	*50*	*-32*	*43*	*-13*	*20*	*-33*	*-4*

Harpswell Peninsula - Casco Bay, Maine (ave for 2006, 2009-2017, % change in 2018)

YR	DYS	HRS	BV	TV	OS	BE	NH	SS	CH	NG	RS	BW	RT	RL	GE	AK	M	PF	UR	TOT	XBWV	PH	XPH
2014	59	107	0	36	40	8	35	504	11	0	5	43	17	0	0	77	59	15	53	903	824	8.5	7.7
2015	66	130	0	63	16	7	37	464	7	0	8	10	20	0	0	81	41	12	27	793	720	6.1	5.6
2016	42	98	0	32	44	17	51	351	14	1	3	1695	12	0	0	83	73	15	32	2423	696	24.8	7.1
2017	50	350	0	6	55	9	12	262	15	0	3	250	9	0	0	88	62	13	18	802	546	2.3	1.6
2018	57	288	0	112	79	14	61	744	25	6	14	71	33	1	1	124	166	43	29	1523	1340	5.3	4.6
2019	47	114	0	23	55	19	11	194	17	1	0	35	6	0	0	66	77	14	7	525	467	4.6	4.1
ave10	*56*	*168*	*0*	*50*	*108*	*23*	*58*	*765*	*30*	*4*	*10*	*548*	*36*	*0*	*1*	*188*	*111*	*37*	*35*	*2004*	*1406*	*15*	*9*
%chg	*-17*	*-32*		*-54*	*-49*	*-18*	*-81*	*-75*	*-44*	*-74*	*-100*	*-94*	*-83*			*-65*	*-30*	*-62*	*-80*	*-74*	*-67*	*-68*	*-56*

REGION 43

Interlakes School - Meredith, New Hampshire (ave for 2008-2017, % change in 2018)

YR	DYS	HRS	BV	TV	OS	BE	NH	SS	CH	NG	RS	BW	RT	RL	GE	AK	M	PF	UR	TOT	XBWV	PH	XPH
2014	2	6	0	2	1	1	0	2	2	0	0	49	0	0	0	0	0	0	1	58	7	9.7	1.17
2015	2	11	0	15	3	1	0	13	2	0	1	68	1	0	0	0	0	0	4	108	25	9.8	2.3
2016	2	6	0	10	2	5	0	5	0	0	0	163	0	0	0	0	0	0	7	192	19	32.0	3.2
2017	2	10	0	12	1	4	0	12	0	0	0	123	1	0	0	0	1	2	2	158	23	15.8	2.3
2018	2	10	0	28	1	5	0	1	1	0	0	76	8	0	0	0	1	0	5	126	22	13.3	2.3
2019	2	10	0	14	5	7	1	2	0	0	0	476	1	0	0	0	0	0	3	509	19	50.9	1.9
ave10	*2*	*9*	*0*	*19*	*3*	*3*	*0*	*12*	*2*	*0*	*0*	*159*	*2*	*0*	*0*	*1*	*1*	*0*	*5*	*206*	*28*	*22*	*3*
%chg	*-9*	*9*		*-26*	*79*	*133*	*400*	*-83*	*-100*		*-100*	*200*	*-44*						*-38*	*147*	*-33*	*133*	*-37*

REGION 43

Concord School - Concord, New Hampshire (ave for 2008-2017, % change in 2018)

YR	DYS	HRS	BV	TV	OS	BE	NH	SS	CH	NG	RS	BW	RT	RL	GE	AK	M	PF	UR	TOT	XBWV	PH	XPH
2014	7	10.5	0	9	0	1	0	1	0	0	0	39	2	0	0	0	0	0	7	59	11	5.6	1.05
2015	6	19	0	22	2	1	0	4	0	0	0	31	5	0	0	2	0	0	23	90	37	4.7	1.9
2016	6	26	0	32	0	1	0	5	2	0	0	215	2	0	0	2	0	0	8	267	20	10.2	0.8
2017	6	24	0	41	2	0	0	1	0	0	0	19	1	0	0	2	0	0	6	72	12	3.0	0.5
2018	5	20	0	16	0	3	1	7	0	0	0	63	4	0	0	1	0	1	6	102	23	5.0	1.1
2019	6	28	0	17	2	3	0	1	0	0	0	86	7	0	0	0	0	0	4	120	17	4.4	0.6
ave9	*7*	*21*	*0*	*25*	*1*	*1*	*0*	*3*	*1*	*0*	*0*	*58*	*4*	*0*	*0*	*1*	*0*	*0*	*13*	*108*	*25*	*5*	*1*
%chg	*-8*	*31*		*-31*	*167*	*243*		*-68*				*47*	*70*						*-70*	*11*	*-31*	*-14*	*-49*

Carter Hill - Concord, New Hampshire (ave for 2009 - 2018, % change in 2019)

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	73	471	0	170	202	82	87	1151	124	14	25	4237	221	0	0	243	64	36	222	6878	2471	14.6	5.2
2015	71	554	0	299	134	91	81	1164	140	21	45	6274	345	0	3	171	41	23	55	8887	2314	16.0	4.2
2016	71	527	0	244	90	98	71	551	130	12	28	5045	169	1	3	172	62	22	130	6828	1539	13.0	2.9
2017	71	513	0	429	131	96	53	868	108	6	87	3842	224	1	5	242	51	21	114	6278	2007	12.2	3.9
2018	2	9.5	0	10	1	0	0	15	3	0	0	0	2	0	0	5	4	0	0	40	30	4.2	3.2
2019	27	173	0	2	37	29	12	121	43	0	9	2051	6	0	2	51	13	1	48	2425	372	14.0	2.2
ave10	*57*	*381*	*0*	*222*	*122*	*76*	*53*	*722*	*134*	*14*	*37*	*4587*	*180*	*1*	*2*	*176*	*51*	*21*	*220*	*6618*	*1808*	*16*	*5*
%chg	*-53*	*-55*	*-100*	*-99*	*-70*	*-62*	*-77*	*-83*	*-68*	*-100*	*-76*	*-55*	*-97*	*-100*	*33*	*-71*	*-75*	*-95*	*-78*	*-63*	*-79*	*-14*	*-54*

Putney Mountain - Putney, Vermont (ave for 2009-2018, % change in 2019)

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	68	477	0	357	131	74	76	1560	176	28	31	2297	580	1	6	219	44	43	0	5623	2969	12	6
2015	73	554	0	603	149	109	81	1624	129	19	28	5831	482	5	10	122	36	22	0	9250	2816	17	5
2016	69	554	4	425	120	132	73	1385	101	46	30	6434	590	3	7	146	36	25	0	9557	2694	17	5
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
ave10	*65*	*477*	*1*	*330*	*159*	*93*	*65*	*1440*	*135*	*25*	*38*	*5973*	*494*	*3*	*8*	*189*	*43*	*32*	*1*	*9026*	*2723*	*19*	*6*
%chg	*9*	*22*	*233*	*0*	*-40*	*-10*	*-9*	*-25*	*-58*	*-68*	*-28*	*-4*	*-20*		*-24*	*-13*	*12*	*-31*		*-10*	*-25*	*-26*	*-39*

REGION 42

Pack Monadnock - Peterborough, New Hampshire (ave for 2009-2018, % change in 2019)

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	71	497	0	99	213	120	85	1094	126	22	123	11043	348	1	7	112	80	39	53	13565	2423	27.3	4.88
2015	78	587	0	137	201	132	125	1443	115	48	141	16593	546	1	13	118	120	54	58	19845	3115	33.8	5.31
2016	70	527	0	322	242	136	92	1126	163	48	117	10530	294	1	5	167	96	49	78	13466	2614	25.6	4.96
2017	72	515	0	324	219	163	82	1179	142	16	181	8744	341	2	7	166	106	64	68	11804	2736	22.9	5.31
2018	66	455	0	98	181	176	64	668	124	11	126	6756	246	2	22	171	58	31	108	8842	1988	19.4	4.37
2019	79	557	0	268	171	180	54	1027	105	9	181	7840	223	0	4	185	64	64	128	10503	2395	18.9	4.3
ave10	*69*	*517*	*0*	*164*	*231*	*112*	*90*	*1172*	*144*	*35*	*130*	*9449*	*371*	*1*	*10*	*162*	*93*	*46*	*78*	*12288*	*2675*	*24*	*5*
%chg	*14*	*8*		*64*	*-26*	*60*	*-40*	*-12*	*-27*	*-74*	*40*	*-17*	*-40*		*-59*	*14*	*-31*	*39*	*63*	*-15*	*-10*	*-22*	*-18*

Mount Watatic - Ashby, Massachusetts (ave for 2009-2018, % change in 2019)

YR	DYS	HRS	BV	TV	OS	BE	NH	SS	CH	NG	RS	BW	RT	RL	GE	AK	M	PF	UR	TOT	XBWV	PH	XPH
2014	4	23	0	0	8	12	3	32	0	0	8	3388	17	0	0	13	0	1	4	3486	98	153.2	4.3
2015	16	107	0	11	72	60	8	282	79	0	2	5723	4	0	0	38	45	8	28	6360	626	59.4	5.9
2016	14	92	0	168	75	51	7	157	24	0	1	3040	2	0	0	30	6	2	30	3593	385	39.2	4.2
2017	11	85	0	1	51	41	14	178	33	0	0	5039	0	0	0	68	22	1	33	5481	441	64.9	5.2
2018	12	84	1	11	52	52	8	176	33	0	4	3874	3	0	0	39	9	4	25	4291	405	50.9	4.8
2019	14	94.8	0	9	33	64	6	201	23	1	8	2069	2	0	0	46	13	1	10	2486	408	26.2	4.3
ave10	*10*	*69*	*0*	*23*	*52*	*32*	*8*	*172*	*28*	*0*	*5*	*4241*	*16*	*0*	*0*	*33*	*11*	*3*	*19*	*4642*	*378*	*77*	*5*
%chg	*40*	*37*		*-61*	*-36*	*100*	*-22*	*17*	*-18*		*78*	*-51*	*-88*			*41*	*21*	*-60*	*-47*	*-46*	*8*	*-66*	*-16*

REGION 42

Helderberg Escarpment - Voorheesville, New York (ave for 2007-09, 2011-2017, % change in 2018)

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	15	109	7	0	21	29	5	30	2	2	0	2600	4	0	0	4	1	4	65	2774	167	25.4	1.5
2015	15	104	0	0	16	35	7	27	10	0	0	1714	20	0	0	9	2	1	49	1890	176	18.2	1.7
2016	13	115	0	0	15	12	2	7	4	0	0	652	5	0	0	8	0	0	38	743	91	6.46	0.8
2017	12	75	26	40	8	17	6	12	7	0	1	907	21	0	0	5	3	4	40	1097	124	14.6	1.7
2018	12	78	42	110	15	33	9	24	41	0	0	951	59	0	0	18	7	11	35	1357	254	17.5	3.3
2019	16	102	98	201	16	52	3	30	33	0	3	1181	112	0	1	16	9	23	137	1915	435	17.5	3.3
ave10	*13*	*97*	*13*	*35*	*19*	*20*	*5*	*22*	*8*	*1*	*1*	*1625*	*14*	*0*	*0*	*11*	*3*	*3*	*35*	*1816*	*142*	*20*	*1.57*
%chg	*24*	*5*	*648*	*468*	*-18*	*155*	*-36*	*35*	*307*		*500*	*-27*	*689*			*45*	*181*	*619*	*295*	*24*	*24*	*24*	*24*

Wachusett - Princeton, Massachusetts (ave for 2009-2018, % change in 2019)

YR	DYS	HRS	BV	TV	OS	BE	NH	SS	CH	NG	RS	BW	RT	RL	GE	AK	M	PF	UR	TOT	XBWV	PH	XPH
2014	48	324	5	157	239	189	29	573	115	8	12	16750	50	1	3	157	35	39	113	18475	1563	57	4.82
2015	49	319	2	62	205	159	23	406	86	0	18	11205	52	0	5	121	30	34	81	12489	1220	39.2	3.82
2016	42	261	3	215	166	163	17	451	106	0	18	6962	64	0	0	107	32	35	125	8465	1285	32.5	4.93
2017	57	328	1	293	144	117	23	322	121	1	14	10348	99	0	0	132	19	37	118	11789	1147	36	3.5
2018	47	258	6	267	100	135	17	281	132	0	13	5042	65	0	1	121	44	21	82	6327	1012	24.5	3.92
2019	64	391	7	404	133	148	10	359	114	0	12	2832	85	0	0	141	52	34	152	4484	1241	11.5	3.18
ave10	*37*	*224*	*2*	*109*	*145*	*100*	*18*	*310*	*83*	*1*	*8*	*10134*	*38*	*0*	*1*	*92*	*23*	*21*	*112*	*11197*	*951*	*47*	*4*
%chg	*73*	*75*	*218*	*269*	*-8*	*49*	*-44*	*16*	*37*		*43*	*-72*	*123*			*53*	*128*	*64*	*36*	*-60*	*30*	*-75*	*-26*

Pinnacle Rock - Medford, Massachusetts (ave for 2009-2018, % change in 2019)

YR	DYS	HRS	BV	TV	OS	BE	NH	SS	CH	NG	RS	BW	RT	RL	GE	AK	M	PF	UR	TOT	XBWV	PH	XPH
2014	22	99.3	0	8	9	5	4	146	28	0	3	0	11	0	0	8	5	4	20	251	243	2.5	2.4
2015	14	41.3	0	5	4	1	1	40	10	0	0	14	9	0	1	3	3	0	2	93	74	2.3	1.8
2016	18	71.5	0	6	6	10	5	103	42	0	1	9	0	0	0	6	6	1	10	205	190	2.9	2.7
2017	20	96.8	0	2	9	7	9	95	29	0	1	0	2	0	0	6	1	4	19	184	182	1.9	1.9
2018	24	136	0	19	13	22	15	276	69	0	4	9	20	0	0	17	12	5	66	547	519	4.0	3.8
2019	18	95.8	0	5	5	18	1	22	9	0	1	0	25	0	0	3	3	3	10	105	100	1.1	1.0
ave10	*19*	*89*	*0*	*7*	*13*	*7*	*7*	*129*	*31*	*1*	*2*	*5*	*13*	*0*	*0*	*10*	*7*	*3*	*24*	*258*	*246*	*3*	*3*
%chg	*-6*	*8*		*-29*	*-62*	*169*	*-86*	*-83*	*-71*		*-50*	*-100*	*89*			*-69*	*-55*	*-12*	*-58*	*-59*	*-59*	*-60*	*-60*

Barre Falls - Barre, Massachusetts (ave for 2009-2018, % change in 2019)

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	51	239	0	141	75	73	20	484	84	6	25	6839	151	0	1	82	17	11	46	8055	1075	33.8	4.5
2015	53	235	0	94	62	48	20	273	55	3	4	3131	113	0	3	38	11	9	23	3887	662	16.6	2.8
2016	55	243	0	290	45	43	27	267	60	1	10	1123	145	0	0	36	22	8	49	2126	713	8.7	2.9
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
ave10	*50*	*245*	*0*	*240*	*110*	*60*	*27*	*650*	*108*	*4*	*27*	*4864*	*205*	*0*	*2*	*106*	*26*	*11*	*39*	*6481*	*1377*	*28*	*5*
%chg	*-38*	*-35*	*-100*	*-63*	*-72*	*-63*	*-85*	*-82*	*-80*		*-93*	*-94*	*-89*		*-5*	*-83*	*-70*	*-63*	*-52*	*-90*	*-80*	*-85*	*-69*

Shatterack Mountain - Russell, Massachusetts (ave for 2009-2018, % change in 2019)

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	32	169	0	170	63	15	27	517	47	2	20	8942	78	0	0	58	13	16	21	9989	877	59	5.18
2015	43	203	0	176	32	40	19	467	34	2	23	3009	110	0	3	47	19	5	19	4005	820	19.7	4.04
2016	39	190	0	491	46	15	8	299	38	3	33	1755	132	0	1	32	11	5	12	2882	636	15.1	3.34
2017	25	132	0	100	17	20	12	189	28	1	21	1904	58	0	0	34	11	2	5	2402	398	18.3	3.03
2018	33	175	0	336	38	54	15	321	51	0	38	3080	116	0	4	44	10	5	14	4126	710	23.6	4.06
2019	33	150	0	194	32	62	16	210	36	0	13	2565	6	0	2	61	13	4	9	3223	464	21.5	3.1
ave10	*28*	*145*	*0*	*189*	*53*	*24*	*16*	*357*	*32*	*1*	*17*	*2747*	*71*	*0*	*1*	*44*	*10*	*7*	*14*	*3583*	*648*	*26*	*4*
%chg	*20*	*3*		*3*	*-40*	*157*	*2*	*-41*	*14*		*-24*	*-7*	*-92*		*100*	*39*	*31*	*-39*	*-37*	*-10*	*-28*	*-16*	*-30*

REGION 42

Blueberry Hill - Granville, Massachusetts (ave for 2007-2016, % change in 2018)

YR	DYS	HRS	BV	TV	OS	BE	NH	SS	CH	NG	RS	BW	RT	RL	GE	AK	ML	PF	UR	TOT	XBWV	PH	XPH
2013	70	277	1	226	94	39	34	357	51	5	31	6346	124	0	1	142	21	6	25	7503	930	27.1	3.36
2014	44	212	0	128	49	32	49	373	77	1	40	4658	224	0	2	128	10	5	30	5804	1018	27.4	4.8
2015	47	205	0	190	46	32	28	327	39	1	24	1694	87	0	5	111	13	4	7	2608	724	12.7	3.53
2016	9	44.3	0	59	3	5	2	12	8	0	3	3	17	0	1	8	0	0	2	123	61	2.78	1.38
2018	13	51.5	0	104	5	5	8	107	27	1	11	1108	58	0	0	28	8	2	14	1486	274	28.9	5.32
2019	1	7	0	0	1	3	0	14	2	0	0	485	0	0	0	2	0	0	2	509	24	72.7	3.43
ave10	*53*	*285*	*0*	*209*	*99*	*34*	*43*	*495*	*67*	*4*	*29*	*3284*	*189*	*1*	*3*	*184*	*19*	*7*	*27*	*4695*	*1201*	*17*	*4*
%chg	*-98*	*-98*	*-100*	*-100*	*-99*	*-91*	*-100*	*-97*	*-97*	*-100*	*-100*	*-85*	*-100*	*-100*	*-100*	*-99*	*-100*	*-100*	*-93*	*-89*	*-98*	*330*	*-15*

REGION 41

Poquonock - Poquonock, Connecticut (ave for 5 years from 2009 to 2018, % change in 2019)

YR	DYS	HRS	BV	TV	OS	BE	NH	SS	CH	NG	RS	BW	RT	RL	GE	AK	ML	PF	UR	TOT	XBWV	PH	XPH
2009	126	900.0	48	203	36	65	27	135	36	8	40	951	158	3	8	43	21	22	45	1849	647	2.1	0.7
2011	71	162.8	2	39	16	15	8	30	17	0	3	20	69	0	4	8	4	4	10	249	188	1.5	1.2
2012	8	18.5	0	0	2	0	0	0	0	0	0	107	0	0	0	1	1	0	0	111	4	6.0	0.2
2017	13	30.0	6	10	6	1	0	1	1	0	3	732	1	0	0	2	2	1	0	766	18	25.5	0.6
2018	33	133.2	7	25	11	7	2	9	9	0	2	51	32	0	3	7	3	3	5	176	93	1.3	0.7
2019	47	182.6	7	51	14	13	2	13	3	0	9	90	12	0	1	8	7	1	7	238	90	1.3	0.5
ave5	*58*	*265*	*11*	*58*	*15*	*18*	*9*	*39*	*15*	*2*	*13*	*523*	*62*	*1*	*3*	*14*	*6*	*7*	*13*	*809*	*217*	*7*	*1*
%chg	*-19*	*-31*	*-34*	*-12*	*-9*	*-28*	*-79*	*-66*	*-80*	*-100*	*-31*	*-83*	*-81*	*-100*	*-63*	*-41*	*20*	*-85*	*-47*	*-71*	*-59*	*-81*	*-33*

Middle School - Torrington, Connecticut (ave for 2009-2018, % change in 2019)

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	17	53.8	4	0	4	7	0	13	10	0	2	2185	1	0	0	4	2	0	10	2242	53	41.7	1.0
2015	15	49.8	2	7	9	7	0	4	2	0	1	1409	1	0	0	2	0	0	7	1451	33	29.2	0.7
2016	18	77.5	1	0	9	1	1	7	7	0	0	277	0	0	0	3	3	0	17	326	48	4.2	0.6
2017	13	51.5	6	0	6	7	1	5	6	0	0	890	0	0	0	6	0	0	5	932	36	18.1	0.7
2018	9	43.0	0	0	7	3	1	3	9	0	1	1419	0	0	0	6	1	0	12	1462	43	34.0	1.0
2019	11	37.3	0	0	1	2	0	4	3	0	0	247	1	0	0	3	0	1	3	265	18	7.1	0.5
ave10	*16*	*65*	*3*	*1*	*14*	*7*	*2*	*19*	*10*	*0*	*2*	*2311*	*2*	*0*	*0*	*7*	*3*	*0*	*16*	*2396*	*82*	*37*	*1*
%chg	*-29*	*-42*	*-100*	*-100*	*-93*	*-73*	*-100*	*-79*	*-68*	*-100*	*-100*	*-89*	*-47*		*-100*	*-58*	*-100*	*400*	*-81*	*-89*	*-78*	*-81*	*-60*

Mohonk Preserve - New Paltz, New York (ave for 2008-2012, 2015-2018, % change in 2019)

YR	DYS	HRS	BV	TV	OS	BE	NH	SS	CH	NG	RS	BW	RT	RL	GE	AK	ML	PF	UR	TOT	XBWV	PH	XPH
2012	3	11.3	0	0	6	1	2	12	3	0	0	353	3	0	0	3	0	0	0	383	30	34.0	2.7
2015	39	150.0	0	0	46	36	12	221	20	0	10	2307	47	0	2	46	16	2	43	2808	501	18.7	3.3
2016	67	302.9	17	236	94	106	48	740	137	3	35	3776	250	0	1	74	32	33	16	5598	1569	18.5	5.2
2017	59	314	11	471	79	105	43	645	115	2	52	4059	305	1	7	50	28	20	19	6012	1471	19.2	4.7
2018	32	161	3	108	81	100	30	751	108	1	34	4453	170	0	3	78	29	15	6	5970	1406	37.1	8.7
2019	44	208	2	174	50	151	28	357	101	1	38	1030	92	0	1	104	22	23	13	2187	981	10.5	4.7
ave10	27	122	4	100	39	36	19	283	43	1	14	1662	87	0	1	33	11	9	15	2357	591	18	5
%chg	64	71	-43	74	28	316	51	26	136	43	179	-38	5	-100	-29	217	106	164	-15	-7	66	-42	4

Chestnut Hill - Litchfield, Connecticut (ave for 2009-2018, % change in 2019)

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	14	64	0	0	34	12	7	49	9	2	0	7712	12	0	1	8	1	0	10	7857	145	122.8	2.3
2015	19	89	0	2	20	39	5	39	8	0	0	4011	6	0	1	9	1	0	15	4156	143	46.7	1.6
2016	19	83.3	0	0	18	36	2	59	5	0	0	1509	1	0	0	24	0	1	16	1671	162	20.1	1.9
2017	16	74	0	0	10	17	1	27	0	0	0	1631	0	0	0	14	1	0	3	1704	73	23.0	1.0
2018	9	39.8	0	0	6	17	1	47	6	0	0	2818	0	0	0	16	0	2	4	2917	99	73.4	2.5
2019	18	65.9	0	0	14	9	1	38	7	0	0	1792	0	0	0	7	1	0	3	1872	80	28.4	1.2
ave10	*14*	*62*	*0*	*0*	*22*	*19*	*2*	*45*	*6*	*0*	*0*	*3594*	*3*	*0*	*0*	*12*	*1*	*0*	*9*	*3715*	*120*	*63*	*2*
%chg	*29*	*6*		*-100*	*-36*	*-54*	*-55*	*-16*	*27*	*-100*		*-50*	*-100*		*-100*	*-43*	*100*	*-100*	*-66*	*-50*	*-33*	*-55*	*-39*

REGION 41

Boothe Memorial - Stratford Connecticut (ave for 2007-2016, % change in 2019)

YR	DYS	HRS	BV	TV	OS	BE	NH	SS	CH	NG	RS	BW	RT	RL	GE	AK	ML	PF	UR	TOT	XBWV	PH	XPH
2012	35	141	16	135	372	134	25	839	177	0	95	4545	203	0	0	120	23	11	68	6763	2067	48.1	14.7
2013	41	130	19	200	173	92	16	334	70	0	22	2339	55	0	0	41	14	14	37	3426	868	26.4	6.7
2014	22	86.4	2	333	97	89	14	527	45	0	13	182	73	0	0	61	17	6	21	1480	963	17.1	11.1
2015	20	82	2	37	413	105	8	278	28	0	0	351	7	0	0	57	17	5	14	1322	932	16.1	11.4
2016	4	12.5	0	0	27	2	0	2	0	0	0	1	0	0	0	0	1	0	2	35	34	2.8	2.7
2019	3	11.3	0	7	53	43	4	96	20	0	0	293	0	0	0	26	1	1	3	547	247	49	22
ave 6	*25*	*91*	*8*	*265*	*199*	*66*	*22*	*635*	*105*	*1*	*33*	*2713*	*146*	*0*	*1*	*89*	*18*	*10*	*38*	*4013*	*1329*	*40*	*15*
%chg	*-88*	*-88*	*-100*	*-97*	*-73*	*-35*	*-82*	*-85*	*-81*		*-100*	*-89*				*-71*	*-94*	*-90*	*-92*	*-86*	*-81*	*21*	*45*

Botsford Hill - Bridgewater, Connecticut (ave for 2009-2018, % change in 2019)

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	16	68	0	0	28	21	7	74	12	0	0	3993	0	0	0	7	4	0	22	4168	175	61.1	2.6
2015	14	66	0	0	20	16	5	101	1	0	0	2778	0	0	0	4	5	1	7	2938	160	44.5	2.4
2016	13	54	0	0	14	9	3	51	4	0	0	885	0	0	0	7	5	0	11	989	104	18.5	1.9
2017	11	44	0	0	19	12	2	60	4	0	0	1264	1	0	0	15	6	0	10	1393	129	32.0	3.0
2018	11	53	0	0	17	12	4	63	4	0	0	2571	0	0	0	10	1	0	9	2691	120	50.5	2.3
2019	14	49	0	0	13	29	0	55	2	0	0	2240	1	0	1	8	1	0	14	2364	124	48	2.52
ave10	*15*	*66*	*0*	*0*	*35*	*16*	*4*	*104*	*9*	*0*	*0*	*3290*	*0*	*0*	*0*	*15*	*3*	*0*	*15*	*3491*	*201*	*50*	*3*
%chg	*-7*	*-25*			*-63*	*82*	*-100*	*-47*	*-78*		*-100*	*-32*	*150*			*-47*	*-70*		*-5*	*-32*	*-38*	*-5*	*-16*

Bear Mountain - Fort Montgomery, New York (ave for 2009-2018, % change in 2019)

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	62	335	0	0	29	76	7	287	25	0	9	727	69	2	7	40	12	1	8	1299	572	3.9	1.7
2015	70	400	0	0	56	81	10	262	27	3	9	421	102	0	7	29	5	7	17	1036	615	2.6	1.5
2016	63	338	0	0	46	142	5	141	27	1	6	333	40	0	4	35	7	11	11	809	476	2.4	1.4
2017	40	215	0	0	42	108	6	117	28	2	0	1828	9	0	0	23	2	11	13	2189	361	10.2	1.7
2018	45	238	0	0	55	66	8	374	56	0	16	1217	86	0	5	48	11	12	28	1982	765	8.3	3.2
2019	48	186	1	0	43	79	5	116	30	0	38	4051	63	0	0	28	5	14	13	4486	434	24.2	2.3
ave10	*59*	*326*	*0*	*0*	*72*	*87*	*10*	*294*	*33*	*1*	*12*	*1280*	*114*	*0*	*4*	*36*	*8*	*7*	*15*	*1974*	*694*	*6*	*2*
%chg	*-18*	*-43*			*-40*	*-10*	*-51*	*-61*	*-9*	*-100*	*214*	*217*	*-45*			*-21*	*-33*	*100*	*-14*	*127*	*-38*	*284*	*9*

Mount Peter - Warwick, New York (ave for 2009-2018, % change in 2019)

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	72	468	232	570	111	79	46	1119	122	1	136	5685	658	0	10	139	23	12	69	9012	2525	19.3	5.4
2015	71	465	107	292	114	70	28	1017	74	0	85	11256	289	0	5	75	24	11	34	13481	1826	29.0	3.9
2016	69	488	84	337	98	95	35	1104	94	0	104	5894	478	0	3	52	15	13	42	8448	2133	17.3	4.4
2017	74	480	96	320	111	85	26	841	121	1	122	6874	232	0	4	83	18	26	36	8996	1706	18.8	3.6
2018	66	419	79	504	134	112	35	1469	176	2	213	5071	508	0	6	159	15	23	24	8530	2876	20.4	6.9
2019	74	479	136	426	123	163	27	693	82	0	203	7360	443	0	9	85	8	14	28	9800	1878	20.5	3.9
ave10	*70*	*449*	*86*	*284*	*145*	*89*	*41*	*1265*	*118*	*1*	*114*	*6892*	*448*	*0*	*5*	*140*	*20*	*16*	*48*	*9711*	*2449*	*22*	*6*
%chg	*6*	*7*	*58*	*50*	*-15*	*82*	*-34*	*-45*	*-30*		*79*	*7*	*-1*		*73*	*-39*	*-60*	*-14*	*-41*	*1*	*-23*	*-6*	*-29*

Chestnut Ridge - Bedford, New York (ave for 2009-2018, % change in 2019)

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	93	628	102	2804	289	96	156	2216	276	6	341	6100	434	0	13	260	24	31	105	13253	4247	21.1	6.8
2015	103	703	119	2717	362	100	82	1532	290	4	319	6138	216	0	8	225	26	28	103	12269	3295	17.5	4.7
2016	100	670	64	1308	104	47	39	473	148	7	78	945	129	0	2	85	22	14	90	3555	1238	5.3	1.8
2017	84	589	29	3098	263	149	90	1270	373	1	494	2133	265	0	13	334	120	32	343	9007	3747	15.3	6.4
2018	84	578	86	3414	314	159	103	1932	346	2	272	4278	454	0	3	446	84	27	151	12071	4293	20.9	7.4
2019	89	632	29	2589	233	137	59	1414	248	1	439	3363	168	0	9	240	101	25	151	9206	3225	14.6	5.1
ave10	*97*	*670*	*68*	*2427*	*319*	*103*	*101*	*1864*	*341*	*6*	*254*	*6096*	*316*	*0*	*8*	*320*	*52*	*26*	*175*	*12473*	*3883*	*19*	*6*
%chg	*-8*	*-6*	*-57*	*7*	*-27*	*34*	*-41*	*-24*	*-27*	*-84*	*73*	*-45*	*-47*	*-100*	*10*	*-25*	*95*	*-3*	*-13*	*-26*	*-17*	*-22*	*-13*

REGION 41

Hook Mountain - Nyack, New York (ave for 2009-2018, % change in 2019)

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	77	448	69	288	213	170	131	1910	185	3	308	5428	148	0	6	239	73	32	8	9211	3426	20.6	7.6
2015	76	432	32	416	319	197	97	1433	161	3	130	2296	79	0	10	210	82	28	12	5505	2761	12.7	6.4
2016	77	461	46	245	353	194	91	1424	207	19	165	2777	159	0	5	156	81	30	22	5974	2906	13.0	6.3
2017	72	412	55	124	236	190	69	1161	149	1	94	4952	55	0	3	196	65	59	6	7415	2284	18.0	5.6
2018	69	415	127	780	166	159	112	2337	204	5	439	3279	200	0	8	217	94	37	3	8167	3981	19.7	9.6
2019	64	362	36	232	133	119	35	799	132	0	54	873	22	0	1	139	21	24	8	2628	1487	7.3	4.1
ave10	*74*	*435*	*59*	*330*	*288*	*156*	*108*	*1808*	*201*	*5*	*184*	*5247*	*146*	*0*	*5*	*215*	*68*	*38*	*17*	*8875*	*3239*	*21*	*7*
%chg	*-13*	*-17*	*-39*	*-30*	*-54*	*-24*	*-67*	*-56*	*-34*	*-100*	*-71*	*-83*	*-85*	*-100*	*-81*	*-35*	*-69*	*-36*	*-52*	*-70*	*-54*	*-65*	*-45*

Quaker Ridge - Greenwich, Connecticut (ave for 2009-2018, % change in 2019)

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	98	812	61	1661	586	210	202	3319	564	7	1046	7046	528	1	14	536	103	36	219	16139	7371	19.9	9.1
2015	102	821	47	1469	594	191	156	2160	403	4	406	5745	228	0	17	374	101	40	141	12076	4815	14.7	5.9
2016	98	733	24	673	461	159	104	1600	343	8	566	3484	197	0	7	284	75	28	62	8075	3894	11.0	5.3
2017	97	720	24	1743	321	172	86	1532	378	2	1006	3008	304	0	8	418	93	21	74	9191	4416	12.8	6.1
2018	96	674	62	1344	592	317	142	2456	489	4	648	9342	271	0	8	628	133	32	73	16541	5793	24.5	8.6
2019	96	695	53	1332	431	215	75	1535	306	0	370	4599	228	0	3	268	66	25	49	9557	3573	13.7	5.1
ave10	*91*	*699*	*30*	*1109*	*535*	*203*	*155*	*2696*	*436*	*6*	*544*	*9243*	*266*	*0*	*10*	*469*	*104*	*30*	*95*	*15932*	*5549*	*23*	*8*
%chg	*6*	*-1*	*76*	*20*	*-19*	*6*	*-51*	*-43*	*-30*	*-100*	*-32*	*-50*	*-14*	*-100*	*-71*	*-43*	*-37*	*-16*	*-49*	*-40*	*-36*	*-41*	*-36*

REGION 40

State Line - Alpine, New Jersey (ave for 2009-2018, % change in 2019)

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	73	452	15	2428	447	78	126	2221	299	5	512	2654	634	0	1	468	59	56	185	10188	5091	22.6	11.3
2015	77	478	127	2278	857	151	86	1433	284	0	144	1613	395	0	1	333	49	52	128	7931	3913	16.6	8.2
2016	82	450	60	1311	856	160	74	1258	239	5	353	1010	539	1	1	227	61	61	106	6322	3941	14.0	8.8
2017	76	445	45	1628	448	219	71	818	266	2	286	1216	431	0	0	288	70	57	97	5942	3053	13.4	6.9
2018	76	467	26	3388	956	373	98	1794	572	1	388	3210	634	0	1	685	124	86	73	12409	5785	26.6	12.4
2019	75	446	65	2290	420	186	53	834	261	2	186	1368	491	0	1	359	56	46	43	6661	2938	14.9	6.6
ave10	*61*	*369*	*56*	*1331*	*504*	*126*	*66*	*1376*	*243*	*2*	*211*	*2355*	*361*	*0*	*1*	*326*	*52*	*53*	*118*	*7181*	*3439*	*20*	*9*
%chg	*24*	*21*	*17*	*72*	*-17*	*47*	*-19*	*-39*	*7*	*-17*	*-12*	*-42*	*36*	*-100*	*-17*	*10*	*7*	*-13*	*-64*	*-7*	*-15*	*-24*	*-31*

Lenoir Wildlife Sanctuary - Yonkers, New York (ave for 2004-2009, 2011-2015, 2019, % change in 2019)

YR	DYS	HRS	BV	TV	OS	BE	NH	SS	CH	NG	RS	BW	RT	RL	GE	AK	ML	PF	UR	TOT	XBWV	PH	XPH
2012	30	94	53	856	151	80	20	216	54	1	38	1585	77	0	0	61	9	6	9	3216	722	34.2	7.7
2013	41	123	61	606	78	78	7	143	19	0	30	794	53	0	0	53	2	9	7	1940	479	15.7	3.9
2014	23	62.5	12	223	40	58	8	120	19	0	30	61	75	0	0	25	2	0	2	675	379	10.8	6.1
2015	23	69	23	481	33	56	7	51	28	0	39	10	51	0	1	7	5	4	0	796	282	11.5	4.1
2018	25	94.5	39	621	211	114	18	267	61	0	45	3115	75	0	0	146	12	16	2	4742	967	50.2	10.2
2019	24	92.3	58	210	95	76	2	59	16	0	9	45	32	0	0	40	3	5	2	652	339	7.1	3.7
ave10	*40*	*134*	*29*	*694*	*116*	*64*	*15*	*279*	*54*	*1*	*44*	*1146*	*105*	*0*	*1*	*66*	*15*	*10*	*6*	*2643*	*774*	*21*	*6*
%chg	*-40*	*-31*	*99*	*-70*	*-18*	*18*	*-86*	*-79*	*-70*	*-100*	*-80*	*-96*	*-69*	*-100*	*-100*	*-39*	*-80*	*-47*	*-64*	*-75*	*-56*	*-66*	*-38*

Wildcat Ridge - Hibernia, New Jersey (ave for 2009-2018, % change in 2019)

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	47	278	0	0	76	72	20	409	121	1	17	6465	52	0	0	77	7	5	18	7340	875	26.5	3.2
2015	54	321	11	0	82	66	15	418	107	0	16	2332	56		0	39	13	3	6	3164	821	9.9	2.6
2016	62	316	15	0	62	62	6	313	100	3	15	1264	60	0	1	32	9	2	0	1944	665	6.2	2.1
2017	40	189	26	0	40	23	3	129	43	0	2	502	20	0	1	14	7	6	16	832	304	4.4	1.6
2018	31	166	31	0	49	32	14	280	83	2	7	3031	43	0	0	24	9	3	38	3646	584	21.9	3.5
2019	47	252	27	0	40	30	5	284	114	1	16	840	104	0	2	32	8	10	37	1550	683	6.2	2.7
ave10	*48*	*277*	*31*	*46*	*97*	*60*	*16*	*551*	*110*	*1*	*13*	*3909*	*54*	*0*	*1*	*55*	*10*	*6*	*11*	*4971*	*984*	*18*	*3*
%chg	*-2*	*-9*	*-13*	*-100*	*-59*	*-50*	*-69*	*-48*	*4*	*11*	*25*	*-79*	*91*		*150*	*-42*	*-17*	*75*	*225*	*-69*	*-31*	*-65*	*-22*

REGION 40

Montclair Hawk Lookout - Montclair, New Jersey (ave for 2009-2018, % change in 2019)

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	79	534	45	757	414	182	77	1749	288	3	472	6192	165	0	1	415	87	61	21	10929	3935	20.5	7.4
2015	91	590	56	2067	302	120	39	1259	289	1	239	1223	118	0	1	207	107	55	59	6142	2796	10.4	4.7
2016	83	572	21	1044	182	102	31	671	167	2	174	1074	75	0	1	127	53	23	24	3771	1632	6.6	2.9
2017	88	670	61	2866	251	184	51	1187	321	1	418	2396	298	0	1	296	126	82	44	8583	3260	12.8	4.9
2018	91	600	80	1863	272	160	53	1090	340	2	347	5442	174	0	1	324	92	45	9	10294	2909	17.2	4.8
2019	84	619	99	491	125	102	13	362	185	1	103	1208	133	0	0	119	52	34	9	3036	1238	4.9	2.0
ave10	*86*	*576*	*72*	*1479*	*328*	*142*	*63*	*1386*	*295*	*2*	*284*	*5151*	*237*	*0*	*2*	*313*	*91*	*47*	*60*	*9953*	*3250*	*17*	*6*
%chg	*-2*	*7*	*38*	*-67*	*-62*	*-28*	*-79*	*-74*	*-37*	*-47*	*-64*	*-77*	*-44*			*-62*	*-43*	*-28*	*-85*	*-69*	*-62*	*-72*	*-65*

Scott's Mountain - MCR Harmony Twp., New Jersey (ave for 2009-2018, % change in 2019)

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	86	608	0	0	238	247	101	2273	238	7	184	11808	980	0	13	262	93	43	163	16650	4842	27.4	8.0
2015	89	611	0	0	198	204	121	1800	176	6	146	15050	544	0	7	169	79	34	136	18671	3621	30.6	5.9
2016	88	604	0	0	148	240	80	1168	158	10	96	10431	586	1	8	97	43	40	116	13222	2791	21.9	4.6
2017	89	624	0	0	169	274	81	1460	242	13	228	6786	477	1	13	167	54	61	96	10123	3337	16.2	5.3
2018	87	582	0	0	217	259	72	2018	273	11	152	8466	598	0	15	195	58	50	114	12498	4032	21.5	6.9
2019	91	599	0	0	182	244	72	967	177	8	257	4966	467	0	14	121	50	43	91	7659	2693	12.8	4.5
ave10	*86*	*578*	*0*	*0*	*223*	*234*	*101*	*1997*	*225*	*10*	*158*	*11409*	*705*	*0*	*15*	*191*	*65*	*41*	*131*	*15505*	*4096*	*27*	*7*
%chg	*5*	*4*	*0*	*0*	*-19*	*4*	*-28*	*-52*	*-21*	*-18*	*63*	*-56*	*-34*	*-100*	*-5*	*-37*	*-23*	*6*	*-30*	*-51*	*-34*	*-53*	*-37*

Washington Valley (formerly Chimney Rock) - Martinsville, New Jersey (ave for 2017-2018, % change in 2019)

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	76	613	0	0	362	220	164	2591	255	2	367	6472	291	0	21	880	268	3	34	11930	5458	19.5	8.9
2015	73	623	0	0	242	210	118	2083	204	0	186	2420	44	1	7	428	181	0	25	6149	3729	9.9	6.0
2016	75	614	0	0	272	234	73	1350	149	7	347	1807	188	0	8	316	188	0	21	4960	3153	8.1	5.1
2017	33	172	0	108	41	94	17	427	52	0	154	1224	63	1	5	152	35	6	0	2379	1047	13.8	6.1
2018	37	200	4	33	86	155	60	1105	198	2	249	3188	99	0	4	304	82	10	0	5579	2354	28.0	11.8
2019	43	205	107	125	92	155	23	302	143	0	163	933	90	0	2	161	62	1	1	2360	1195	11.5	5.8
ave2	*35*	*186*	*2*	*70.5*	*63.5*	*125*	*39*	*766*	*125*	*1*	*202*	*2206*	*81*	*0.5*	*4.5*	*228*	*58.5*	*8*	*0*	*3979*	*1700.5*	*20.9*	*8.94*
%chg	*23*	*58*	*5250*	*77*	*45*	*24*	*-40*	*-61*	*14*		*-19*	*-58*	*11*		*-56*	*-29*	*6*	*-88*		*-41*	*-30*	*-45*	*-35*

COASTAL REGION

Lighthouse Point - New Haven, Connecticut (ave for 2009-2018, % change in 2019)

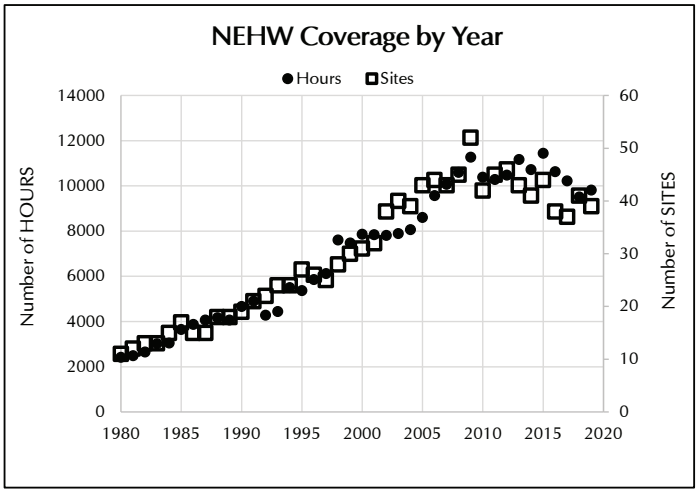
YR	DYS	HRS	BV	TV	OS	BE	NH	SS	CH	NG	RS	BW	RT	RL	GE	AK	ML	PF	UR	TOT	XBWV	PH	XPH
2014	101	730	17	373	1190	290	403	3706	1548	9	259	475	518	0	4	1046	389	232	566	11025	10160	15.1	13.9
2015	76.5	631	6	696	1027	164	291	2325	849	0	62	133	186	0	4	428	250	61	297	6779	5944	10.7	9.4
2016	96	611	10	496	764	234	294	2434	1013	7	155	213	433	1	3	460	305	148	344	7314	6595	12.0	10.8
2017	91	588	12	527	1084	181	263	2136	1080	2	298	441	243	2	0	1070	277	124	377	8120	7140	13.8	12.1
2018	103	631	4	239	1630	342	439	3634	2272	3	243	225	409	1	3	1717	475	215	589	12440	11972	19.7	19.0
2019	96	614	0	337	1035	232	183	1658	1509	4	159	208	291	0	2	657	229	99	295	6899	6354	11.2	10.3
ave10	*95*	*628*	*11*	*446*	*1031*	*197*	*345*	*3799*	*1340*	*6*	*213*	*1174*	*459*	*1*	*5*	*1123*	*331*	*172*	*425*	*11078*	*9448*	*18*	*15*
%chg	*1*	*-2*	*-100*	*-24*	*0*	*18*	*-47*	*-56*	*13*	*-33*	*-25*	*-82*	*-37*	*-100*	*-59*	*-41*	*-31*	*-42*	*-31*	*-38*	*-33*	*-37*	*-31*

Fire Island - Islip, New York (ave for 2009-2018, % change in 2019)

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	68	420	0	0	423	5	144	187	34	0	0	0	2	0	1	500	1010	177	6	2489	2489	5.9	5.9
2015	65	410	0	0	378	6	164	220	41	0	0	0	1	0	0	344	1064	73	2	2293	2293	5.6	5.6
2016	75	475	2	1	349	10	159	195	55	2	0	0	6	0	0	300	1016	121	8	2224	2221	4.7	4.7
2017	74	457	0	0	836	11	144	92	52	0	1	0	1	1	0	712	1177	216	6	3249	3249	7.1	7.1
2018	75	452	0	0	496	14	249	480	84	0	0	0	1	0	0	985	1590	172	3	4074	4074	9.0	9.0
2019	71	414	0	0	418	8	118	130	71	0	0	0	3	0	0	423	884	103	4	2162	2162	5.2	5.2
ave10	*67*	*434*	*0*	*0*	*439*	*6*	*205*	*269*	*49*	*0*	*0*	*0*	*1.8*	*0*	*0*	*705*	*1280*	*192*	*8*	*3186*	*3185*	*7*	*7*
%chg	*6*	*-5*			*-5*	*33*	*-42*	*-52*	*45*				*67*			*-40*	*-31*	*-46*	*-51*	*-32*	*-32*	*-29*	*-29*

The Count

We see from the regions discussion that while Region 44 doubled the number of hawks per hour this season compared to 2018, all other regions counted only one third to one half as many as counted in 2018. Yes, 2018 was a good year; we had an average number of hawks and that felt good compared to the previous two low years. For some sites, 2019 was also a good year. But, what about the other sites? How was 2019 at your watch? From our historical data, we see that our 133,342 Total Hawks is 28% below our 39-year average of 183,987, 36% below our 20-year average of 208,303, and 42% below our 10-year average of 230,814. This disparity in averages is a consequence of greater effort in more recent years than in the earlier years resulting in more hawks counted in recent years. For a more realistic comparison to our previous counts, we consider hawks/100 hours. Our 1,357 Total Hawks/100 hrs in 2019 was 54% below our 39 year average, 38% below the 20 year average, and 38% below our 10 year average.

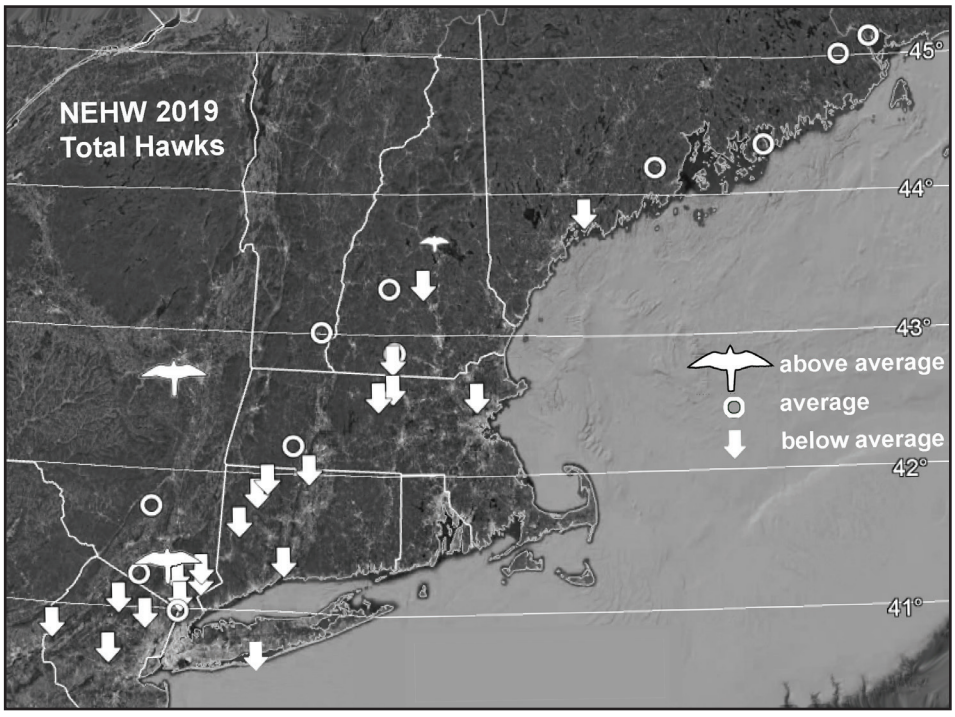


How meaningful is 38% below average? There were six years with counts of Total Hawks less than 133,342. The lowest was 69,818 in 1980 when 11 sites counted for 2,418 hours; that was 2,888 hawks/100 hours. In 2019 we counted 133,342 hawks in 9,825 hours; that is only 1,357 hawks/100 hours! We set a new record low! So, "How was 2019 at your watch?" Standing on top of Hook Mountain, I spent most of my days wondering: "What happened to the hawks? Where are they?" Were you just as bewildered as I was?

The Map. Our Regions are defined by latitude, which is helpful for comparisons. But the Northeast is geographically east of our southern states, so it is helpful to envision the pattern of movement both north-to-south and east-to-west by viewing it on a map. Using percent increase or decrease of Total Hawks at each site we can see the 2019 pattern of distribution across the Northeast.

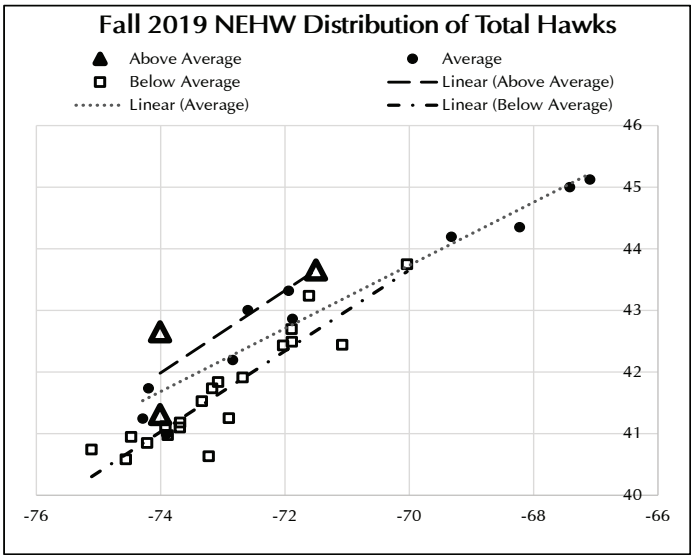
Description. The map locates 34 sites using icons that compare 2019 to their history. A 20% change from average was used as the criteria for the categories. Sites having a percent difference between -20% and +20% are considered Average. Sites that are above average by more than 20% are Above Average, and those that are below average by more than 20% are Below Average. We had three sites with Above Average Total Hawks (Peregrine icon), 11 sites with Average (circle icon), and 20 sites Below Average (down arrow icon). Ten of the 11 Average sites were actually below average but not more than 20% below. Five sites with inadequate data are not included on the map. The sites had either too few years of data, or insufficient coverage in 2019.

Interpretation. First, we need to recognize that our watch sites are located along a broad line from Northeast to southwest, and that is the most noticeable pattern on the map—simply, the location of the watch sites. Next, we see the predominance of



Above Average	Below Average
Helderberg NY	Harpswell Pen ME
Bear Mountain NY	Carter Hill NH
Interlakes School NH	Mount Watatic MA
(2 days)	Wachusett Mt MA
	Pinnacle Rock MA
	Barre Falls MA
Average	Poquonock CT
Greenlaw Mt NB	Middle School CT
Cooper ME	Chestnut Hill CT
Cadillac Mt ME	Botsford Hill CT
Clarry Hill ME	Chestnut Ridge NY
Concord School NH	Hook Mountain NY
Putney Mt VT	Quaker Ridge CT
Pack Monadnock NH	Lenoir Wildlife NY
Shatterack Mt MA	Wildcat Ridge NJ
Mohonk NY	Montclair NJ
Mount Peter NY	Scott's Mountain NJ
State Line NJ	Washington Val NJ
	Lighthouse Pt CT
	Fire Island NY

Below Average sites! The 2019 season was definitely a season with many watchers left to wonder "Where are the hawks?" The Average circles and the Above Average Peregrines seem to be mostly north and west, whereas the Below Average down arrows are mostly concentrated toward the south. To see if this is actually distinguishable geographically, the GPS coordinates of each site were graphed by category.



The Graph. The graph is set up like a map, with the longitude from west (-76 degrees) to east (-66 degrees) and the latitude from south (40 degrees) to north (46 degrees). The distance between degrees latitude (~69 mi) is different from the distance between degrees longitude, which varies by latitude (52.8 mi at 40° to 48.9 mi at 45°). So, regression lines were used only to help us better discern the patterns of the different categories. Will the Above Average line be north or south of the Below Average line? Will they intersect? Can we distinguish an east to west component?

The graph does help us to better distinguish the patterns. The Above Average category is restricted to the western half of the Northeast. Also, within the western half, there is clearly a difference from north to south: the Above Average is furthest north, the Average is between, and the Below Average is furthest south. For the eastern half, one site was Below Average and the rest were Average. Together, this supports a conclusion that sites located further north and west simply had more hawks, and those of us who watched at the southerly sites had pretty much empty skies. At Hook, my skies were pretty empty of migrants, but the locals were very entertaining. As I watched our juvenile Redtails attack our fake owl, chase each other, and then drop and chase each other's sticks, I wondered if we should be doing more behavior studies. Perhaps documenting behaviors of these aerial masters will be a greater part of the future of hawk watching.

Distribution of Hawks Across the Northeast

Collectively, our hawks were seen in greater numbers toward the north and west of the Northeast. But, is this true for each species? A simple sum of the hawks in each region is shown in the Distribution: Hawks/Region Table.

First, we see that Region 41 has the greatest effort—the most sites, days, and hours, and the most hawks. This includes the highest counts for Turkey Vulture, Bald Eagle, Sharp-shinned Hawk, Red-shouldered Hawk, Broad-winged Hawk, and Golden Eagle. Region 41 has significantly more effort than the other regions, so we expect this result. Next, we see that the Coastal Region also has high counts for six species—Osprey, Harrier, Cooper's Hawk, Kestrel, Merlin and Peregrine. Yet, the Coastal Region has less effort than Regions 40, 41, and 42, and it has the lowest count for Total Hawks. This distribution is not consistent with our Average Map and Graph.

To compensate for the difference in effort across the regions, the data is standardized in the Distribution: Hawks/100 Hour Table. The resulting data is more consistent with the Average outcome.

Northeast Fall 2019 Distribution: Hawks/Region

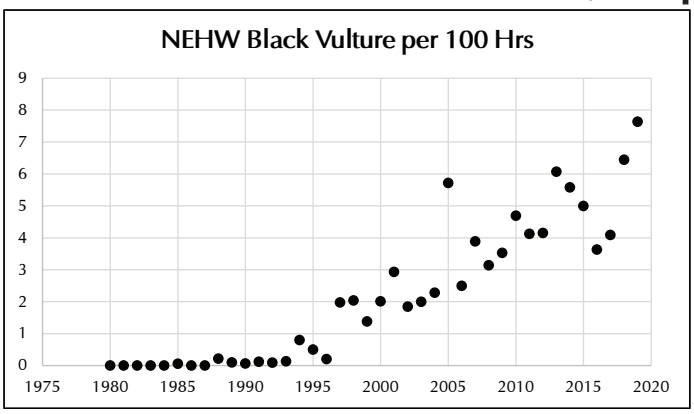
Reg	Sites	Days	HRS	BV	TV	OS	BE	NH	SS	CH	NG	RS	BW	RT	RL	GE	AK	ML	PG	UR	Total	XBV
44	5	155	991	4	1827	666	855	185	2370	86	**12**	38	13407	340	0	2	1018	127	68	267	21274	6036
43	5	153	907	2	387	194	141	83	1393	117	9	36	8369	413	0	8	281	138	37	62	11670	2912
42	8	256	1557	105	1169	422	549	94	1983	344	10	220	17267	476	0	9	472	162	133	**467**	23883	5342
41	**11**	**531**	**3024**	283	**4937**	1068	**939**	236	**5170**	972	3	**1186**	**26273**	1105	0	**28**	933	241	134	319	**43829**	12336
40	6	364	2212	**356**	3116	954	793	168	2808	896	**12**	734	9360	**1317**	0	19	832	231	139	183	21918	9086
CO	4	185	1134	0	354	**1738**	291	**338**	2033	**1651**	4	162	508	308	0	2	**1507**	**1356**	**223**	302	10778	**9916**
TOT	**39**	**1644**	**9825**	**750**	**11790**	**5042**	**3568**	**1104**	**15757**	**4066**	**50**	**2376**	**75184**	**3959**	**0**	**68**	**5043**	**2255**	**734**	**1600**	**133352**	**45628**

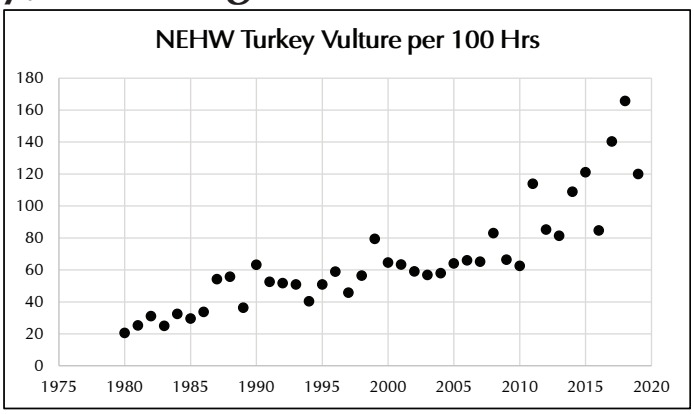
Northaast Fall 2019 Distribution: Hawks/100 Hours by Region

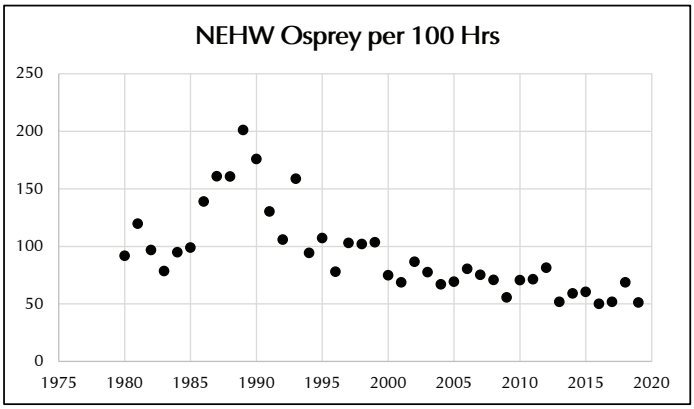
Reg	Sites	Days	HRS	BV	TV	OS	BE	NH	SS	CH	NG	RS	BW	RT	RL	GE	AK	ML	PG	UR	Total	XBV
44	5	204	1115	0	**184**	67	**86**	19	**239**	9	1.2	4	**1354**	34	0	0.2	103	13	7	27	**2148**	609
43	5	153	907.3	0	43	21	16	9	154	13	1.0	4	922	46	0	0.9	31	15	4	7	1286	321
42	8	256	1557	7	75	27	35	6	127	22	0.6	14	1109	31	0	0.6	30	10	9	**30**	1534	343
41	11	**531**	**3024**	9	163	35	31	8	171	32	0.1	**39**	869	37	0	**0.9**	31	8	4	11	1449	408
40	6	364	2212	**16**	141	43	36	8	127	40	0.5	33	423	**60**	**0**	0.9	38	10	6	8	991	411
CO	4	185	1134	0	31	**153**	26	**30**	179	**146**	0.4	14	45	27	0	0.2	**133**	**120**	**20**	27	950	**874**
Total 2019		**1644**	**9825**	**8**	**120**	**51**	**36**	**11**	**160**	**41**	**0.5**	**24**	**765**	**40**	**0**	**0.7**	**51**	**23**	**7**	**16**	**1357**	**464**
Total 2018		1584	9511	6	166	69	41	22	295	67	1.3	36	1081	61	0	1.3	95	38	11	20	2011	758
10-Year Av.			10616	5	103	62	28	20	289	47	1.6	26	1399	59	0	1.1	67	28	10	20	2173	666

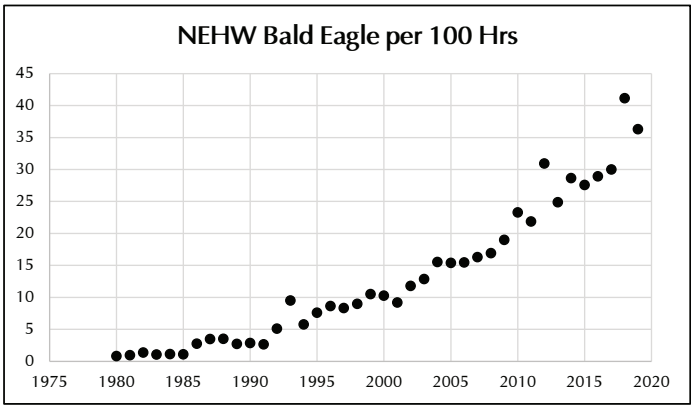
NorthEast Hawk Watch Fall Migration Trends, 1980–2019

Vultures, Osprey, Bald Eagle

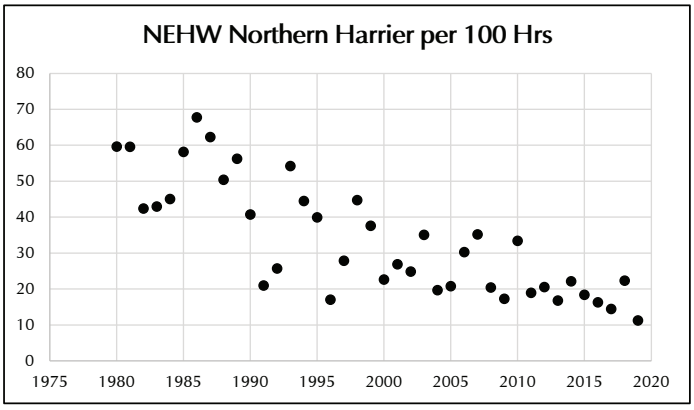


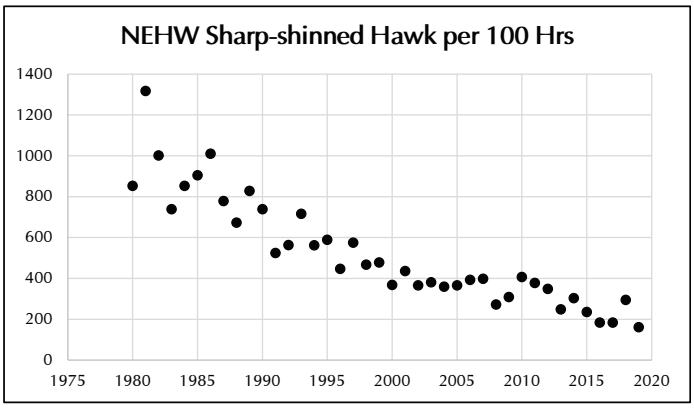


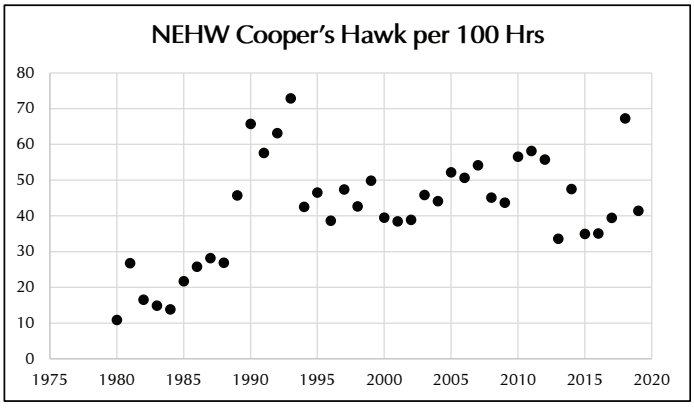


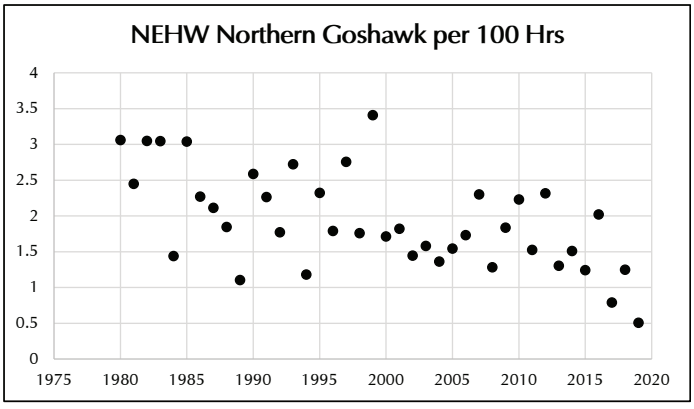


Harrier, Accipiters



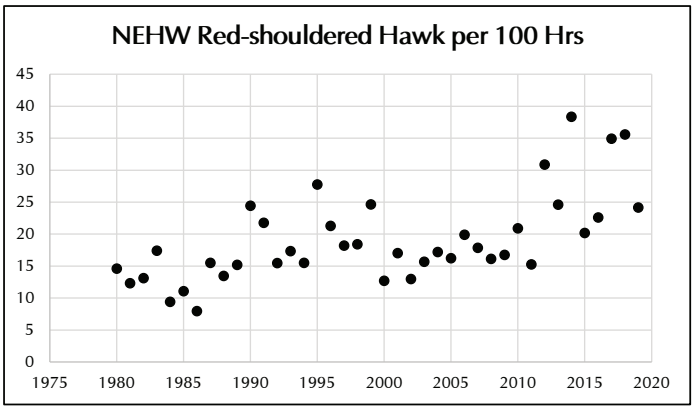


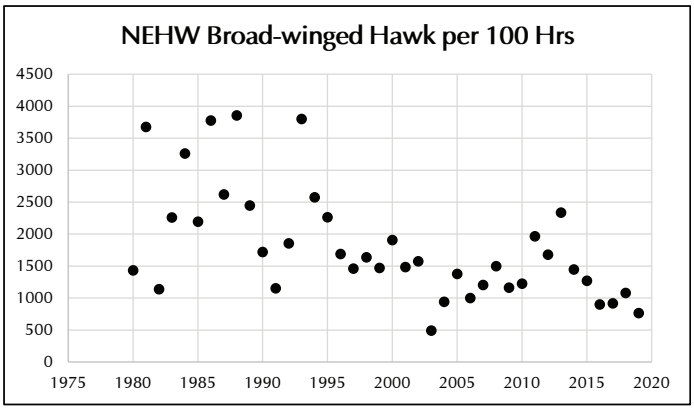


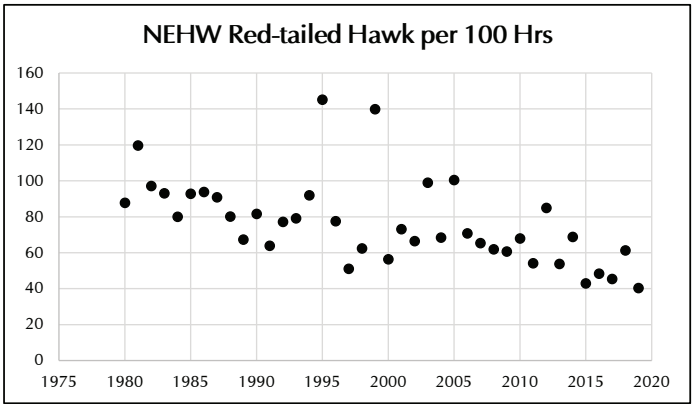


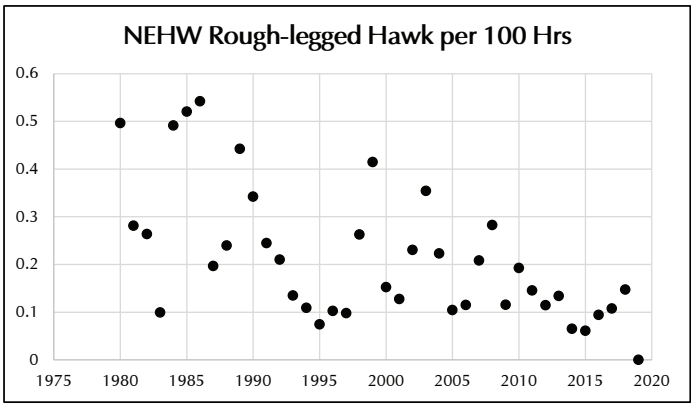
NorthEast Hawk Watch Fall Migration Trends, 1980–2019

Buteos

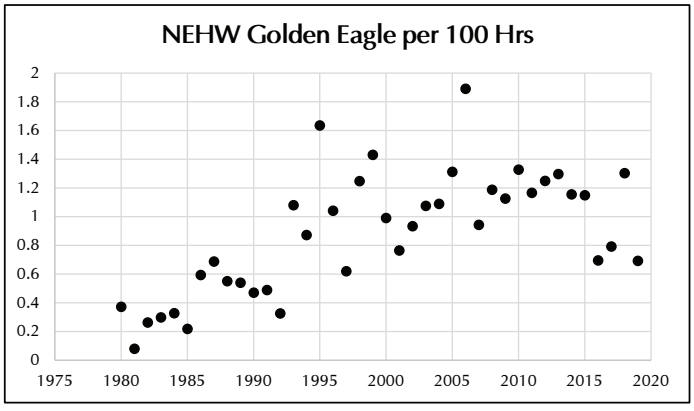


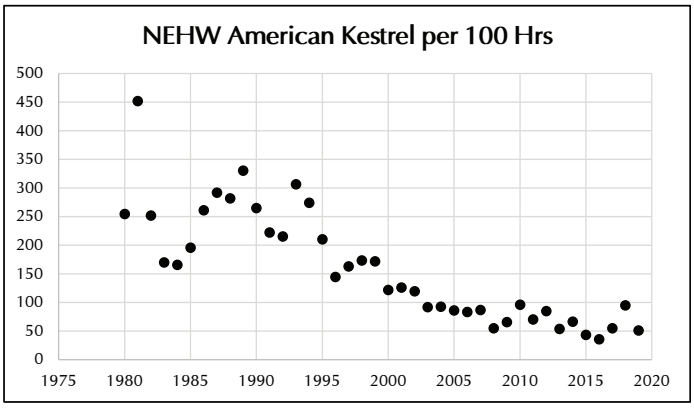


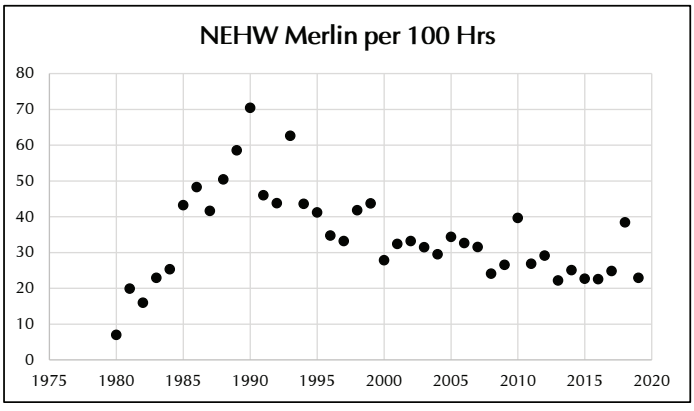


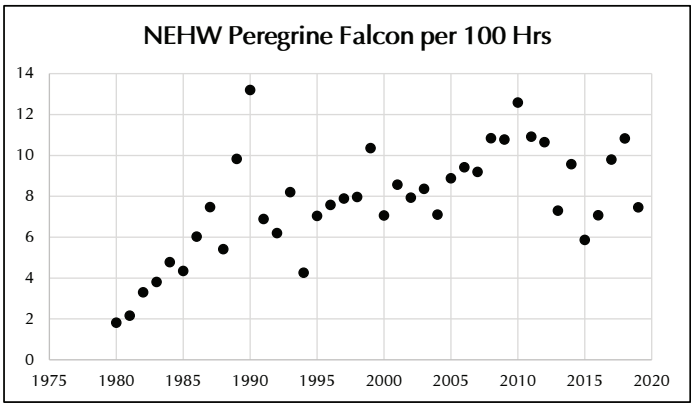


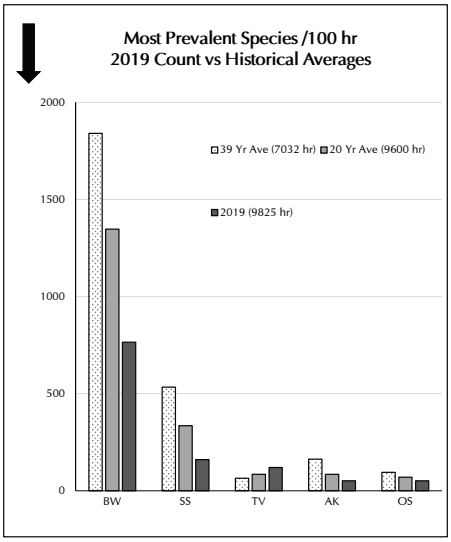
Golden Eagle, Falcons

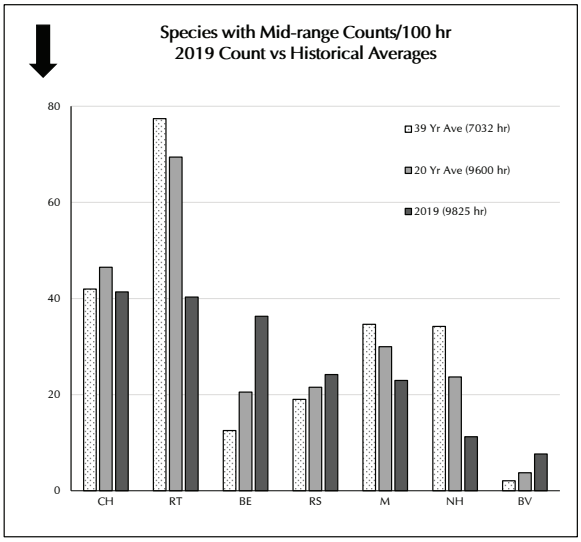


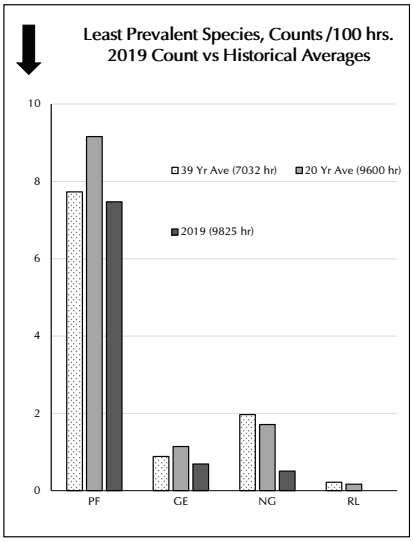












Region 44 pops up with high counts for four species—Turkey Vulture, Bald Eagle, Sharp-shinned Hawks, and Broad-winged Hawks, as well as Total Hawks. With Broadwings and Sharpies our two most prevalent species, we see why the Above Average sites on our Map also had the highest hawks/100 hr. Also, the decline in Total Hawks/100 hr from north to south shows the same pattern seen on the Average Map. For species distribution this season, Osprey, Harriers, Cooper's Hawks, and all three falcons definitely prefer the coast. The Buteos avoid the coast, with Shoulders concentrating in Regions 41 and 40, Redtails concentrating in Region 40, and Broadwings more concentrated in the northern half of the Northeast. Black Vultures are still mostly southern, and Goshawks still mostly northern.

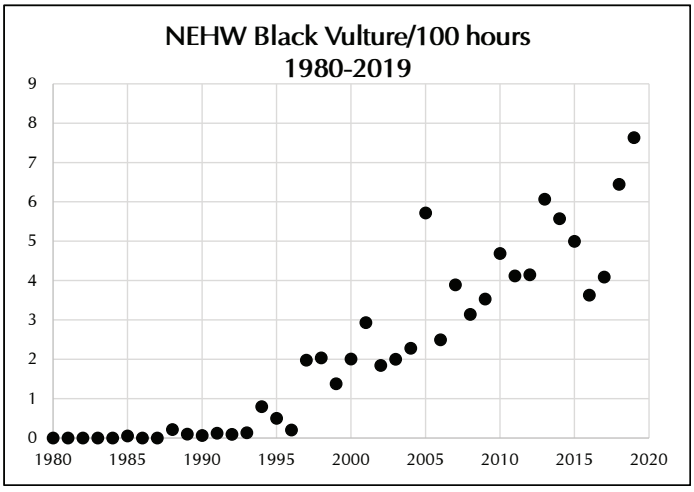
Compared to the average 2018 season, this record low season shows some interesting differences: 1. a more northerly component for Turkey Vultures, Sharpies, Broadwings, and even Kestrels, 2. a shift south for Redtails, 3. a broadening of Golden Eagles across more regions, and 4. sadly, no Rough-legged Hawks at all. (See NEHW 2018 Hawk Migration Report, p. 12-13; http://www.battaly.com/nehw/reports/NEHW2018.pdf)

The Species

Our Species Prevalence charts are arranged from most prevalent species to least prevalent. The charts provide an overview of both prevalence and trend. Note that the vertical scale, which represents hawks/100 hours, is different for each chart. The species rankings for the most prevalent species remains the same as last year, with Broadwings most prevalent, followed by Sharp-shins, Turkey Vultures, Kestrels, and Osprey. For the species at Mid-range Counts, Bald Eagle retained its rank in 8th place, with Red-shoulders and Merlins switching ranks. (See NEHW 2018 Report for a discussion of these three species: http://www.battaly.com/nehw/reports/NEHW2018.pdf) Black Vultures, previously in the Least Prevalent category, edged up past Peregrines into the Mid-range group, and Peregrine dropped down to the Least Prevalent category. Golden Eagle, which moved above Goshawk last season, retained it rank this season.

For each species the charts show three bars. From left to right, the bars represent the 39-year average, the 20-year average, and the 2019 count. This offers a glimpse at the trend for each species. Those that are steadily declining over the years since 1980 show a pattern with a larger 39-year average than 20-year average, and a larger 20-year average than the 2019 count. These include Broadwings, Sharpshins, Kestrels, Osprey, Redtails, Merlin, Harriers, Goshawks, and Roughlegs. That's nine species trending down across the Northeast in 2019! Species that are increasing over the years show a reverse pattern, with 39-year average less than the 20-year average, and the 20-year average less than the 2019 count. These species include Turkey Vulture, Bald Eagle, Red-shouldered Hawk, and Black Vulture. The species that do not fit either pattern are Cooper's Hawk, Peregrine, and Golden Eagle. These species increased from the long term 39-year average to the 20-year average, but had a 2019 count below the 20-year average.

The data for the 20-year average is included on The Fall Regional Totals Table. It contains the counts/100 hours for each species for the 20 years prior to 2019, along with the 2019 counts, the 20-year average, and the percent difference of the 2019 count from that average.



Northeast Fall Regional Totals, 1999-2019

			COUNTS PER 100 HOURS																	
YEAR	Sites	HRS	BV	TV	OS	BE	NH	SS	CH	NG	RS	BW	RT	RL	GE	AK	ML	PG	UR	TOT	XBV
1999	30	7479	1.4	79	104	11	38	478	50	3.4	25	1470	140	0.4	1.4	172	44	10	25	2651	1100
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
20yr Av	41	9600	4	84	70	21	24	335	46	2	22	1348	69	0.2	1	85	30	9.2	20	2174	738
% diff, 2019	-4	2	104	42	-26	77	-53	-52	-11	-70	12.3	-43	-42	-100	-40	-40	-23	-18	-20	-38	-37

XBV = Total count excluding Broad-wings and vultures

Species—Any Good News in 2019? Yes, 1 Record High

From our record low Total Hawks, and the nine species that appear to be on the decline, is there any good news in 2019? Yes, we had a record high count for Black Vulture. There were more Black Vultures (750) and more Black Vultures/100 hours (7.6) than in any other year. Also, though not a record, our Bald Eagle count is 77% above the 20-year average, and Red-shouldered Hawk held its own at 12% above average. But, the best good news is that you, the watchers, put in the effort in a slow migration year to get these numbers! Thank you!

Declining Species—The Bad News: 5 Record Lows!

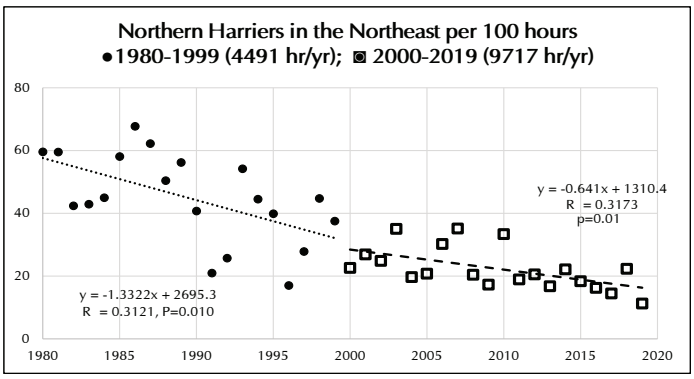
From 2015 to 2017 we had three, then four, and then three Record Lows. Then our 2018 season was a delightful return to average. This season, however, we retreated again—to Record Low counts for five species! It almost leaves me speechless; Record Lows for Northern Harrier, Sharp-shinned Hawk, Northern Goshawk, Red-tailed Hawk, and Rough-legged Hawk. No wonder our Total Hawks were so low!

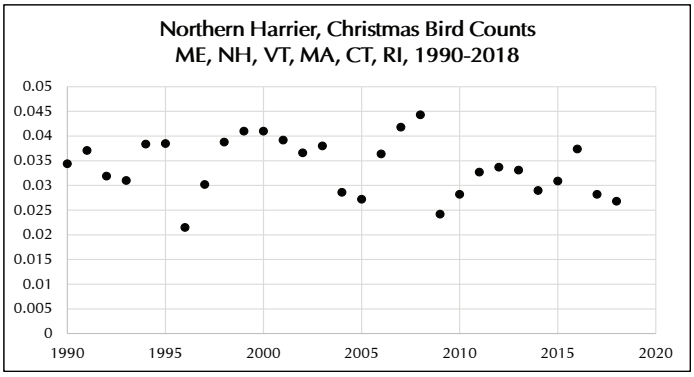
Northern Harrier—Record Low, and a Puzzle

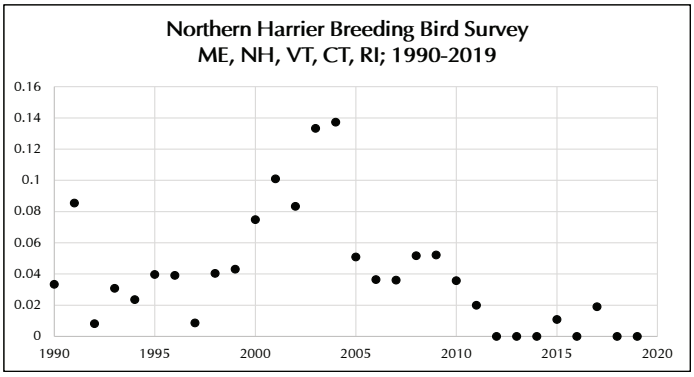
After three years of declining Harrier numbers, we had a reprieve in 2018 with a big jump up to 2,120. However, our 2019 count of only 1,104 Harriers, while not as low as the 997 counted in 1996, is a Record Low when standardized to 11.2 Harriers /100 hr. This puts the Harrier trend right back on the declining track.

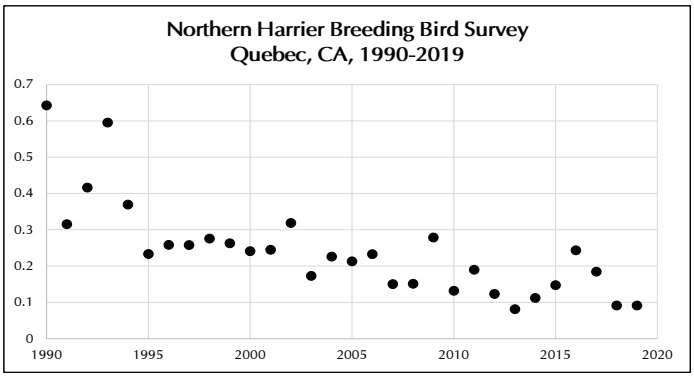
But, this is contrary to our Spring Harrier trend which shows higher counts in recents decades than earlier (pages 4-5). How can we have an increase in the Spring and a decrease in the Fall? One possibility is that more Harriers are over-wintering, moving south more slowly, and not getting reported as fall migrants. Christmas Bird Count data for the six New England states was obtained for 1990 to 2018. This shows slightly lower counts for Harriers in the last decade, but not much difference from the prior two decades. This suggests that the Harriers are not over-wintering in larger numbers.

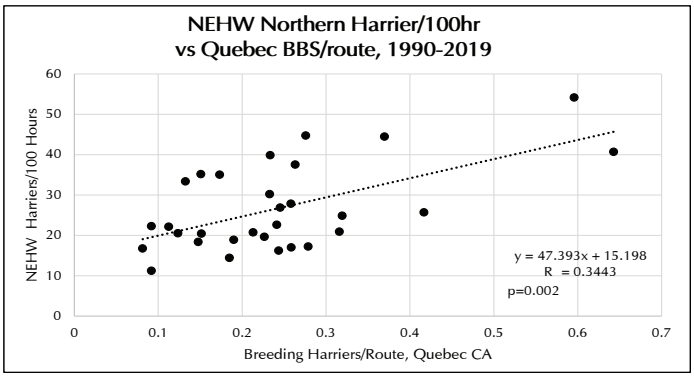
What about the USGS Breeding Bird Survey (BBS) in the Northeast? How does that compare with our Spring and Fall Harriers? BBS data for Maine, New Hampshire, Vermont, Massachusetts, Connecticut and Rhode Island were combined, and graphed. It shows no Harriers in six of the last eight years! This suggests that the Harriers we are counting are from north of our region. If so, either those populations are declining or they are flying west before flying south. Monitoring a Canadian population of Harriers that fly west while still in Canada in Fall, and return along our coast in Spring could explain the difference in Harrier trends that your data has shown. If this is true the populations in Canada should be more or less steady. To explore this possibility, the BBS data from Quebec, New Brunswick, Nova Scotia, and Newfoundland/Labrador was obtained. Our NEHW Harriers/100 hours were compared to the combined Canadian BBS data ($r=0.576$, $p=0.0023$), and then to a combined Canada-Northeast BBS data ($r=0.489$, $p=0.015$). The Canadian BBS data showed twice as many









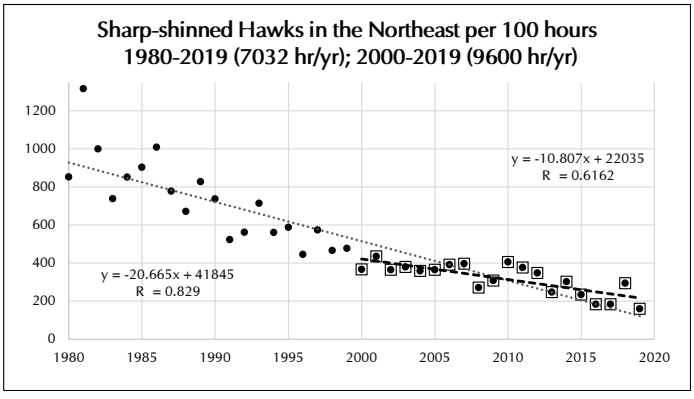


Harriers counted in Quebec than in the other Provinces, so our NEHW Harriers/100 hours were also compared to Quebec alone (r=0.587, p=0.0017). Among these three comparisons, the best fit was to the data from Quebec alone. Looking at the Quebec trend we see the similarity to our NEHW Harrier Fall trend, so it is easy to understand why the regression comparison between them is significant. This suggests that the Harriers we see flying over our watch sites are more likely to be breeding in Quebec than in the Northeast, and that the Quebec population is also likely to be in decline. But, we have no evidence for a "migrate west in the fall" and "up the coast in spring" theory, and that leaves us with no explanation for the difference in our Spring and Fall Harriers. If you have any ideas to help us explain this disparity, please let me know.

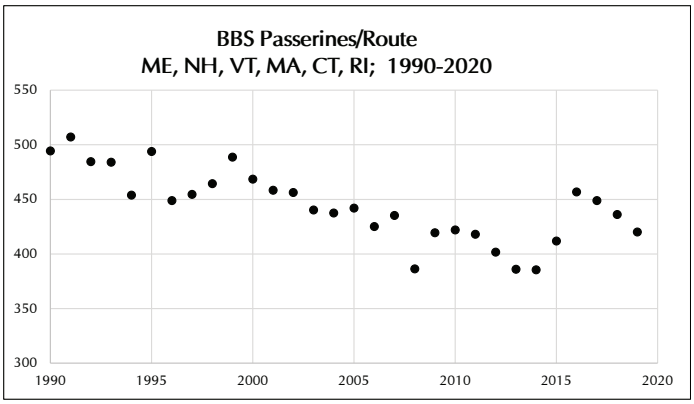
Sharp-shinned Hawks—4th Record Low in 5 Years! Why?

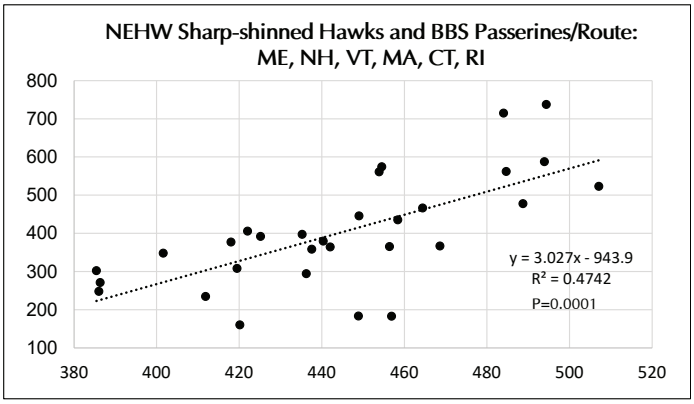
Our 2019 Sharpies hit a Record Low with 15,757 counted across the Northeast, the equivalent of 160.4 Sharpies/100 hours. There were only two other counts with less than 20,000 Sharpies: 19,497 in 2016, and 18,787 in 2017. For Sharpies/100 hours, this is the 4th Record Low in five years, and the 5th in seven years. For the last 20 years, the trend is declining at half the rate of the 40-year trend, thankfully! But, it also has less variation, so is more likely the better predictor. And, the prediction is for a continuing decline. The 20 year regression predicts about 200 Sharpies/100 hours, or 2 Sharpies/hour in 2020. The 40 year regression predicts half that much. In 2014 we had almost double this year's count, and in 2012 we had more than double. That's only five and seven years ago, and we lost half of our Sharpies! Let's hope our count is not halved again in another five to seven years. Why is this happening? Both Christmas Bird Counts (CBC) and Breeding Bird Surveys (BBS) are discussed with respect to Sharpies in the Spring section of this Report, pp. 7-9. These show slight declines for Sharpies, both over-wintering and breeding. So, our data is consistent with both. But, neither can offer an explanation for the decline.

Your data has documented this decline, and helps us to raise an alarm. But the data can't tell us why our Sharpies are declining. About 10 years ago, when graphing Hook's Sharpies, I asked Drew what he thought might be the cause. His response: "They eat birds, and birds are declining." To



find evidence of passerine decline, the best source of data is the Breeding Bird Survey. So, the BBS data for the Northeast states was searched for all passerines that were Robin size or smaller. The sums and per-route values were computed for each year. Then the yearly rates were compared to our Sharpies/100 hours.

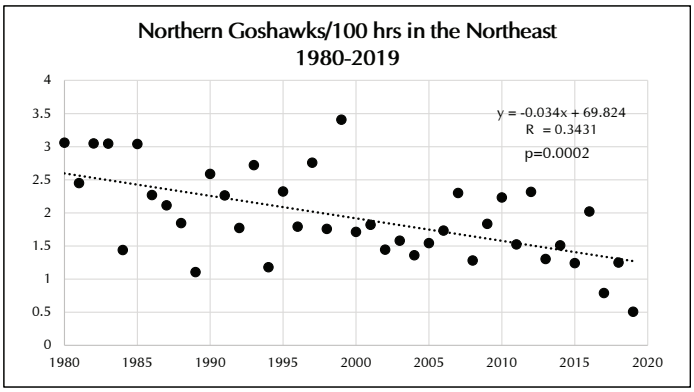




The BBS Passerine distribution shows a declining trend, with a reprieve to higher counts for a few years, ending at about 70 fewer passerines/route in 2019 than in 1990. When comparing the Passerines to our Sharpies, we find a significant positive association (r = 0.689, p=0.0001), indicating that as 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. So, it seems we should begin to appreciate every Sharpie we see. Have you noticed in the past how they always seem to fly in pairs? I suspect I will spend this next season yearning for the years when we had twice as many Sharpies. I will likely be seeing ghost Sharpies above and slightly behind the one that is actually flying by. (Please see page 9 for References.)

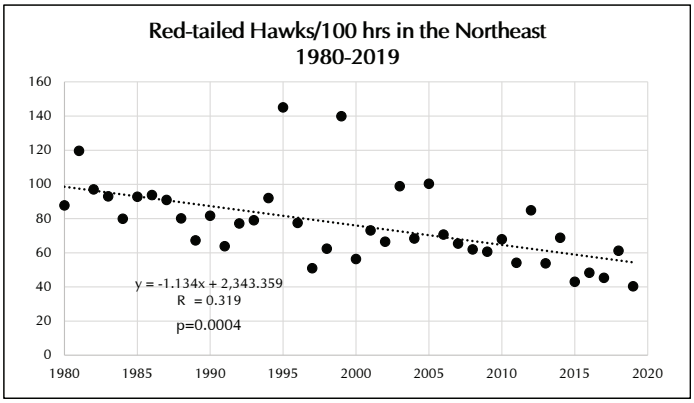
Northern Goshawk—Record Low: only 1 in 200 hours

We counted only 50 Northern Goshawks this season. This is only the 2nd time that we have counted fewer than 100 Goshawks, and the last time was just 2 years ago in 2017. Our 50 total Goshawks is equivalent to 0.51 Gos/100 hours, or only one Goshawk in 200 hours! In our 2017 NEHW Report, we considered that our migration data for Goshawks may actually represent post-breeding dispersal, a finding that Dave Brinker presented at the Raptor Research Foundation Conference in Cape May NJ in 2016. If that is correct, then our data suggests a poor breeding year across our whole Northeast. A check of the BBS data for Goshawk shows only 0 to 3 reported per year in all the states combined, with no apparent trend to the breeding population since 1990. If our data does represent our breeders, then it may be the best available information regarding the Northeastern population. Our 50 Gos this season is a long way down from 255 in 1999. We took a jump up after the last Record Low two years ago. We hope for another jump up next year. Please see: http://www.battaly.com/nehw/reports/NEHW2017.pdf



Red-tailed Hawk—fewer migrating

We counted 3,959 Redtails this season. There were five other years with fewer Redtails, but those were from 1980 to 1984, when the the hours of coverage were 2,400 to 3,100, quite a bit less than in recent years. When standardized, we are at a new Record Low of 40.3 Redtails/100 hours. The last Record Low was 42.9 in 2015. With four additional years, we see that our migrating Redtails are declining steadily. But, we also recognize that Redtails are regularly over-wintering in the Northeast. So, it appears that Redtail populations are not in jeopardy, even as fewer of them are actually migrating.



Rough-legged Hawk—not even one!

Our fifth Record Low species of 2019 is Rough-legged Hawk. Not even one was counted in the whole Northeast in the Fall 2019 season, and this is the first year without any

at all. Actual counts for Roughleg has varied from 3 in 1983 in 3,000 hours of coverage to 31 in 1999 with 7,400 hours. In 2018 we counted 14. We see a significant decline over the years, and expect that we will count more in the years to come, though probably fewer than 10. This decline is not unexpected, as the migration range for this species is actually north of us in Canada, and it breeds in the Arctic. As global warming has proceeded, Roughlegs have mostly been seen in our region in winter months.

WATCH LIST

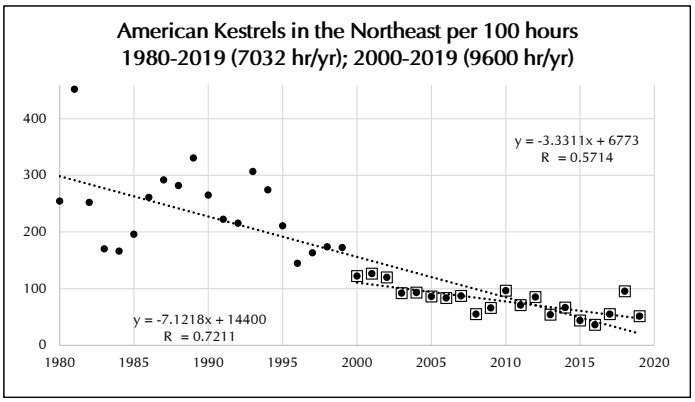
The NEHW Watch List is updated to include all four of the five species with Record Low counts this season. Though at a Record Low this season, Rough-legged Hawk was not added to the list, since it migrates and breeds north of our region and is more a visitor than a migrant. On the NEHW Watch List table, species are arranged from lowest to highest Watch List value, WL. The check marks indicate a Record Low and have a value of 1, and the numbers indicate the rank above the low for that season. The WL is simply the sum for that species. The species with the lowest WL are most at risk of decline.

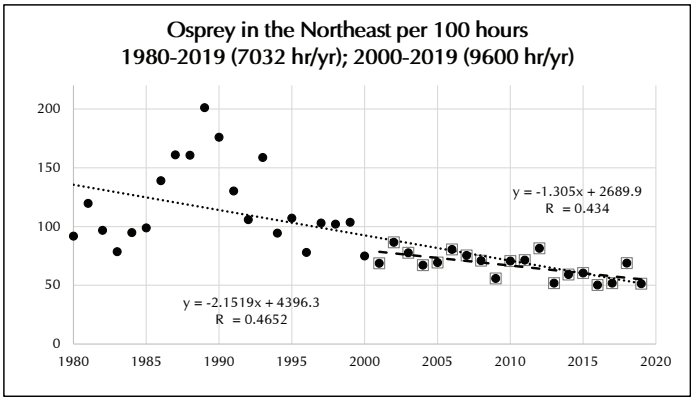
NEHW Watch List: Declining Species

	2015	2016	2017	2018	2019	WL	Status
Sharp-shinned Hawk	✓	✓	✓	6	✓	10	M
Northern Harrier	4	✓	✓	14	✓	21	M
American Kestrel	✓	✓	5	15	3	25	M
Northern Goshawk	4	20	✓	4	✓	30	R
Red-tailed Hawk	✓	2	2	9	✓	15	xCS
Osprey	3	✓	3	9	2	18	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

Our three most worrisome species are Sharp-shinned Hawk, Northern Harrier, and American Kestrel. Sharpies and Harriers have both had Record Lows in four of the last five years. Kestrels and Goshawks have both had Record Lows in two of the five years. The absence of Kestrels from our Record Lows for the last three years may be a signal that Kestrels are leveling off, still relatively low in numbers but not trending down. The Osprey count was not a record this season, but was very close, suggesting it is still trending down as a migrant. Populations of the species below the heavy line are not believed to be threatened. They are either transitioning from migration to over-wintering, or shifting their flyways.





Three Specialties—a Kite, a Buteo, and an Owl

Starting with the early migrant, two watch sites reported Misissippi Kites this season, Wachusett and Quaker Ridge. The timing of the reports is the reverse of what we would expect, with Quaker Ridge in Region 41 reporting a subadult on Aug 24, and Wachusett in Region 42 reporting their Mississippi on Sep 20. There are also ebird reports from Suffolk County NY on Aug 4, New Hampshire from Aug 2-23, Rhode Island from Aug 14-16, and Fairfield CT on Sep 8. It appears the kites have expanded into the Northeast. How neat it will be when they surpass Goshawks in rank!

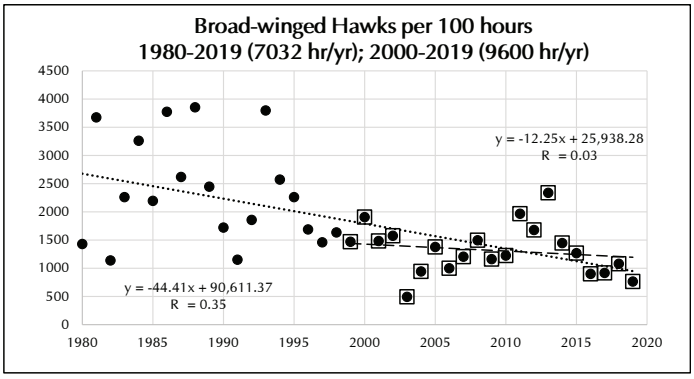
Our mid season specialty was Swainson's Hawk. Swainson's showed up at three watch sites: Greenlaw Mountain, Clarry Hill, and Lighthouse Point. At first I thought it might have been the same bird. At Greenlaw, the Swainson's was seen late in the day on Sep 29. At Clarry Hill, a "light morph juvenile was seen in the company of an adult Bald Eagle" on Oct 2. Then, at Lighthouse, a Swainson's was seen, at the end of the day, on Oct 4. This sequence of days seems like reasonable timing for a single bird. But then I found that Cape May also had a Swainson's on Oct 4 during the 4 pm hour. And a search of eBird for other sightings turned up two additional reports: Mansfield Lake/ Airport Trail in Windham CT on Sep 28, and the Black Dirt region, Orange NY on Oct 14. So, it appears that there were at least two Swainson's in the Northeastern region in fall of 2019. Based on these dates, we should all be thinking Swainson's at the end of the day from late September to mid October.

Our late season specialty this season was one Short-eared Owl, seen at Quaker Ridge. It was Nov 26, just a couple of days before Thanksgiving, and the beginning of their over-wintering season along the coasts of the Northeast.

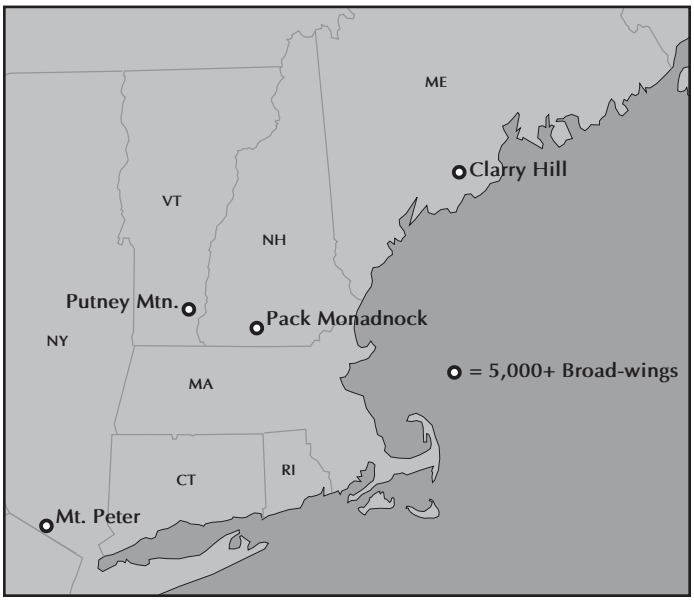
Broadwing Distribution—over land, time, and temperature

The 2019 Broadwing count was our 2nd lowest since 1980, with a total of 75,184 Broadwings, or 765 Broadwings/100 hours. This compares to 493/100 hours in 2003 and 1,081/100 hours in 2018. Even so, this is still within the variation expected for a more or less stable number of Broadwings

in the Northeast, when we look only at the last 20 years. Nevertheless, there were no sites that counted more than 10,000 this season, and only four sites that counted more than 5,000. Those four sites were Pack Monadnock with 7840, Mount Peter with 7,360, Clarry Hill with 6,782, and Putney Mt. with 5,721. All of these sites were categorized as 'Average' in the Total Hawks discussion. So, their average counts still put them on the top Broadwing list. Scott's Mountain, with 4,966, just missed the list by 34 hawks.



Since 2015, Broadwings have comprised 55% to 65% of our Total Hawks. We, therefore, expect that the distribution of Broadwings impacts the distribution found on the Average Map done for Total Hawks. In 2018 we found that Broadwings are inversely correlated with temperature. (NEHW 2018 Hawk Migration Report, p.13; http://www.battaly.com/nehw/reports/NEHW2018.pdf)

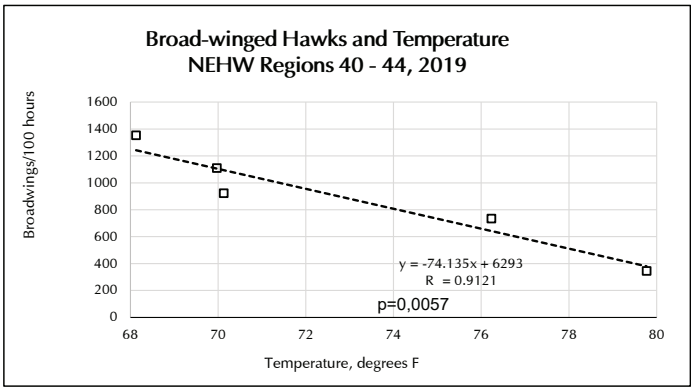


Could temperature explain the Average Map distribution? To explore this possibility, Broadwings/100 hours were determined by region and compared to temperatures in those regions. Average high temperature for Sep 2019 were obtained from a weather station within each of the five regions from Region 44 to Region 40. Those locations and temperatures are listed on the Temperature by Region Table.

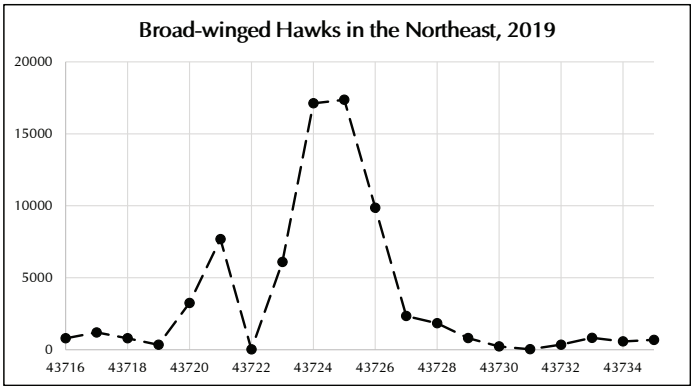
The two coastal sites with Broadwings were included in their respective region, 40 or 41, based on latitude. Results indicate a strong inverse relationship between average high temperature and Broadwings/100 hours across the Regions (r= -0.995, p=0.006). We see, from both the table and the graph, that regions 40 and 41, with the highest temperatures, had the lowest Broadwing count, and Regions 44 and 42, with the lowest temperatures, had the highest Broadwing counts. So, it appears that our Broadwings moved through the Northeast in those regions with the lowest average high temperatures.

NEHW Broad-winged Hawks and Temperature by Region

Reg	Weather Station	Ave High Temp	BW/100Hr
44	Bangor International Airport ME	68.13	1354
43	North Clarendon, Rutland VT	70.13	922
42	Worchester Reg Airpt MA	69.97	1109
41	Bradley International Airport CT	76.23	734
40	Teterboro NJ	79.77	344



In 2018, we saw reduced concentrations of Broadwings across the region, even while most of the highest daily counts were at Putney Mountain in the western portion of Region 43. This year the distribution is even less concentrated with daily high counts spread from Region 41 to Region 44, as seen on the Comparative Counts Table. The highest single count this season was 3,955 at Clarry Hill, lower than our previous three years: 5,907 at Quaker Ridge in 2018, 4,894 at Wachusett in 2017, and 4,602 at Clarry Hill in 2016. This season, 77% of the Broadwings came through the Northeast from Sep 13 to Sep 18. There were nine days with more than 1,000 total Broadwings, and five days with more than 5,000. Similar to 2018, we had only one peak, Sep 16 and 17, when 46% of all Broadwings were counted. This peak is six days earlier



than the peak in 2018, which occurred on Sep 22. Both peaks were preceded by a bump two to three days earlier. This bump might be something to look for on those days while we wait anxiously for the big day. Of course, we will not know the totals seen here. But, we can check hawkcount.org for a day when three of our Northeastern sites have more than 1,000 Broadwings. Then check the forecast for the next two to three days. But, if there are five or more sites with more than 1,000 Broadwings, you just enjoyed (or missed) a peak day for the season! I'm looking forward to being there for the peak day in 2020! It's NEHW's 50th year, and I'm counting hawks!

Broad-winged Hawk Comparative Counts During Flight Period, Fall 2019

Reg.	Date	9/8	9/9	9/10	9/11	9/12	9/13	9/14	9/15	9/16	9/17	9/18	9/19	9/20	9/21	9/22	9/23	9/24	9/25	9/26	9/27
	Greenlaw Mt NB	10	3	0	151	255	0	1	987	629	62	0	491	275	0	0	0	8	0	50	0
	Cooper ME	0	0	0	0	0	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0
44	Cadillac Mt ME	0	1	0	0	16	4	0	0	15	117	7	2	0	99	0	0	0	41	0	1
	Mt. Philo SP VT	3	73	0	4	2232	414	0	7	16	219	62	138	12	0	0	0	0	0	0	0
	Clarry Hill ME	16	87	50	0	80	76	0	31	904	3955	982	24	20	20	0	0	0	268	0	32
	Harpswell Pen ME	0	0	0	0	0	0	0	1	2	15	0	0	0	0	0	0	0	6	0	0
	Interlakes School NH	0	0	435	41	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
43	Concord School NH	0	0	0	0	0	66	0	0	1	0	0	16	0	0	0	3	0	0	0	0
	Carter Hill NH	0	0	85	2	0	1066	0	5	50	411	303	78	6	4	0	0	1	15	1	9
	Putney Mt VT	62	27	176	73	601	2467	0	1140	351	98	343	194	61	7	1	2	15	10	0	1
	Pack Monadnock NH	45	274	0	2	0	2267	0	379	584	1262	2435	307	65	22	3	1	46	29	0	3
	Mount Watatic MA	26	0	0	0	0	82	2	91	350	1005	406	22	51	7	4	0	0	0	0	0
	Helderberg NY	4	50	14	0	34	587	11	301	108	20	12	3	3	1	0	0	0	0	0	0
42	Wachusett Mt MA	83	33	9	0	0	62	0	258	1416	354	22	7	167	20	2	0	74	58	1	104
	Barre Falls MA	11	11	3	0	0	43	0	4	37	93	44	4	0	5	1	0	5	4	0	22
	Shatterack Mt MA	85	26	3	9	0	80	0	88	441	531	1165	17	48	2	0	0	24	19	0	5
	Blueberry Hill MA	0	0	0	0	0	0	0	485	0	0	0	0	0	0	0	0	0	0	0	0
	Poquonock CT	0	0	0	0	0	24	0	0	0	24	2	0	1	2	0	0	3	7	0	2
	Middle School CT	1	1	0	1	0	0	0	0	241	3	0	0	0	0	0	0	0	0	0	0
	Mohonk NY	0	33	4	7	1	347	0	15	0	47	45	151	319	18	0	0	3	2	0	6
	Chestnut Hill CT	0	42	0	5	0	15	0	346	935	59	107	6	251	0	3	0	5	2	0	0
	Botsford Hill CT	12	71	1	5	0	40	0	270	1142	642	35	11	0	0	0	0	0	0	0	0
41	Bear Mountain NY	0	43	0	8	0	24	0	9	3764	52	18	16	1	0	0	1	4	0	0	93
	Mount Peter NY	156	98	1	14	1	128	1	271	1961	738	2096	805	222	215	101	13	22	6	78	256
	Chestnut Ridge NY	64	120	1	7	0	20	0	452	876	944	44	2	80	135	1	1	32	12	447	45
	Hook Mountain NY	16	11	0	0	16	18	0	24	390	224	14	0	34	17	1	0	2	2	3	7
	Quaker Ridge CT	45	40	1	4	5	27	0	258	588	3270	52	1	70	25	1	0	26	71	7	13
	Purple Chickadee NJ	0	0	0	0	0	0	0	0	397	161	40	5	7	0	0	0	5	3	0	0
	State Line NJ	30	26	0	0	0	1	0	11	208	805	52	0	15	8	0	11	0	168	1	11
	Lenoir Wildlife NY	2	0	0	0	0	0	0	2	0	0	10	0	0	23	0	0	0	0	0	0
40	Wildcat Ridge NJ	0	0	8	8	0	50	0	6	45	85	475	3	10	73	0	0	0	0	22	2
	Montclair NJ	24	2	1	0	0	0	0	2	56	1005	38	0	4	23	1	0	5	10	1	0
	Scott's Mountain NJ	69	133	4	7	4	125	6	620	1468	419	1029	531	52	43	112	4	34	6	15	66
	Washington Val NJ	31	0	0	0	0	0	0	30	53	503	29	0	66	42	0	0	37	79	0	9
CO	Lighthouse Pt CT	0	0	0	0	0	0	0	1	0	46	0	1	0	0	0	0	0	12	0	0
	Boothe Memorial CT	0	0	0	0	0	0	0	0	95	198	0	0	0	0	0	0	0	0	0	0
	Total	**795**	**1205**	**796**	**348**	**3245**	**7686**	**21**	**6097**	**17123**	**17367**	**9867**	**2344**	**1840**	**811**	**231**	**36**	**351**	**830**	**576**	**687**

Peak Daily Site Counts—Fall 2019

BROAD-WINGED HAWK		
Clarry Hill	9/17	3955
Bear Mt	9/16	3764
Quaker Ridge	9/17	3270
Putney Mt	9/13	2467
Pack Monadnock	9/18	2435
Pack Monadnock	9/13	2267
Mt. Philo	9/12	2232
Mount Peter	9/18	2096
Mount Peter	9/16	1961
Scott's Mt	9/16	1468
Wachusett	9/16	1416
Pack Monadnock	9/17	1262
Shatterack Mt	9/18	1165
Botsford Hill	9/16	1142
Putney Mt	9/15	1140
Carter Hill	9/13	1066
Scott's Mt	9/18	1029
Mount Watatic	9/17	1005
Montclair	9/17	1005
Greenlaw Mt	9/15	987
Clarry Hill	9/18	982
Chestnut Ridge	9/17	944
Chestnut Hill	9/16	935
Clarry Hill	9/16	904
Chestnut Ridge	9/16	876
State Line	9/17	805
Mount Peter	9/19	805
Mount Peter	9/17	738
Botsford Hill	9/17	642
Greenlaw Mt	9/16	629
Scott's Mt	9/15	620
Putney Mt	9/12	601
Quaker Ridge	9/16	588
Helderberg	9/13	587
Pack Monadnock	9/16	584
Shatterack Mt	9/17	531
Washington V	9/17	503

RED-TAILED HAWK		
Mount Peter	11/8	160
Lighthouse	11/16	93
Putney Mt	11/8	60
Mount Peter	11/3	60
Scott's Mt	11/8	60
Putney Mt	11/3	57
Washington V	11/8	53
Scott's Mt	11/3	50
Putney Mt	11/6	50
Mount Peter	11/13	49
State Line	11/8	47
Clarry Hill	11/2	39
State Line	11/9	38
State Line	10/21	35
Lighthouse	11/13	34
Clarry Hill	10/26	33
Mount Peter	11/2	33
Putney Mt	10/23	30
Scott's Mt	10/26	29
Quaker Ridge	11/8	27
Pack Monadnock	11/16	26

RED-SHOULDERED HAWK		
Lighthouse	11/16	62
Scott's Mt	10/26	58
Chestnut Ridge	11/9	45
Quaker Ridge	11/3	41
Chestnut Ridge	11/13	38
Chestnut Ridge	11/3	37
Chestnut Ridge	11/4	37
Quaker Ridge	11/4	36
Quaker Ridge	10/26	35
Pack Monadnock	11/2	35
Chestnut Ridge	11/11	35
Washington V	11/3	33
Scott's Mt	11/3	33
Quaker Ridge	11/13	32
Chestnut Ridge	11/15	32
Pack Monadnock	10/26	32
Quaker Ridge	11/16	29
Washington V	11/8	29
Chestnut Ridge	11/2	26
Hook	10/21	26
Mount Peter	11/8	25
State Line	11/8	23
Lighthouse	11/17	22
Quaker Ridge	11/9	22

GOLDEN EAGLE		
Chestnut Ridge	11/9	4
Chestnut Ridge	11/2	3
Washington V	11/3	2
Mount Peter	11/13	2
Scott's Mt	11/11	2
Chestnut Ridge	11/8	2
Mount Peter	11/9	2
Mount Peter	11/2	2
Purple Chicadee	11/3	2
Scott's Mt	11/10	2
Scott's Mt	11/8	2
Putney Mt	10/8	2

BALD EAGLE		
Clarry Hill	11/6	69
Clarry Hill	11/9	47
Clarry Hill	11/3	37
Clarry Hill	11/2	34
Mt. Philo	9/12	33
Mount Peter	11/3	30
Lenoir	9/7	29
Boothe Memorial	9/17	25
Wachusett	9/16	24
Clarry Hill	10/9	23
Washington V	9/8	23
Lighthouse	9/17	22
Mohonk Preserve	9/13	21
Mount Watatic	9/13	21
State Line	9/13	20
Quaker Ridge	8/24	18

MISSISSIPPI KITE		
Quaker Ridge	8/24	1
Wachusett	9/20	1

SHARP-SHINNED HAWK		
Lighthouse	10/4	232
Lighthouse	10/10	223
Quaker Ridge	9/18	193
Lighthouse	10/5	181
Quaker Ridge	9/17	175
Cadillac Mt	9/17	144
Lighthouse	9/17	135
Cadillac Mt	9/21	125
Lighthouse	10/11	122
Putney Mt	10/4	116
Quaker Ridge	9/16	115
Hook	10/5	105
Quaker Ridge	10/4	104
Lighthouse	9/29	93
Quaker Ridge	9/20	90
Chestnut Ridge	9/21	85
Chestnut Ridge	10/4	84
Pack Monadnock	9/18	79
Hook	9/30	78
Cadillac Mt	9/29	78
Clarry Hill	9/17	77
State Line	9/25	76
Chestnut Ridge	9/25	75
Lighthouse	10/21	74
Harpswell	9/29	73
Mohonk Preserve	10/23	73

COOPER'S HAWK		
Lighthouse	10/11	384
Lighthouse	10/10	261
Lighthouse	10/18	107
Lighthouse	10/4	106
Lighthouse	10/8	78
Lighthouse	10/5	71
Lighthouse	10/21	61
Lighthouse	10/13	51
Lighthouse	9/29	30
Lighthouse	10/12	27
Quaker Ridge	10/11	25
Chestnut Ridge	10/13	24
Lighthouse	11/8	22
Mohonk Preserve	10/4	21
Quaker Ridge	10/4	21
Lighthouse	9/22	21
Quaker Ridge	10/10	20
Quaker Ridge	10/18	19
Washington V	9/29	18
Hook	10/5	17
State Line	9/21	17
Chestnut Ridge	9/30	17

NORTHERN GOSHAWK		
Putney Mt	10/9	3
Scott's Mt	11/21	2
45 days with 1 NG		1

SWAINSON'S HAWK		
Greenlaw Mt	9/28	1
Clarry Hill	10/2	1
Lighthouse	10/4	1

AMERICAN KESTREL		
Fort Tilden	10/4	264
Lighthouse	10/4	147
Fire Island	10/4	133
Cadillac Mt	9/21	123
Cadillac Mt	9/29	122
Lighthouse	10/10	110
Fire Island	10/10	92
Fort Tilden	10/10	60
Lighthouse	9/29	54
Harpswell	9/29	47
Cadillac Mt	9/25	45
State Line	9/18	41
State Line	9/21	40
Lighthouse	10/11	35
Mohonk Preserve	10/4	35
Clarry Hill	9/29	34
Cadillac Mt	9/27	34
Fire Island	9/25	34
Clarry Hill	10/3	33
Cadillac Mt	9/17	32
Fire Island	9/17	31

MERLIN		
Fire Island	10/4	193
Fort Tilden	10/4	128
Fire Island	10/11	57
Fire Island	9/17	54
Fire Island	9/29	51
Fire Island	10/10	50
Fire Island	10/18	48
Lighthouse	10/4	45
Fire Island	10/23	35
Fire Island	9/25	30
Harpswell	9/29	27
Fort Tilden	10/18	26
Fire Island	9/24	25
Fire Island	9/18	23
Lighthouse	10/18	22
Lighthouse	9/29	22
Fort Tilden	10/10	22
Fort Tilden	10/23	22
Fire Island	10/21	21
Fire Island	9/27	20

PEREGRINE FALCON		
Fire Island	9/29	20
Fire Island	10/4	12
Fire Island	9/24	12
Pack Monadnock	9/25	12
Lighthouse	10/11	10
Hook	10/6	10
Lighthouse	10/4	9
Pack Monadnock	9/28	9
Wachusett	10/8	8
Helderberg	9/12	8
Fire Island	10/11	7
Fort Tilden	10/4	6
Harpswell	9/29	6
Lighthouse	9/29	6
Helderberg	9/18	6

OSPREY		
Fort Tilden	9/7	102
Lighthouse	10/4	94
Fire Island	9/17	85
Fire Island	9/7	79
Lighthouse	9/13	75
Lighthouse	9/9	72
Lighthouse	9/5	67
Lighthouse	9/17	63
State Line	9/13	54
Quaker Ridge	9/13	54
Fort Tilden	10/4	52
Fire Island	10/4	49
Fire Island	9/29	48
Lighthouse	9/12	47
Lighthouse	9/7	40
Lighthouse	9/1	40
State Line	9/6	39

NORTHERN HARRIER		
Lighthouse	10/4	17
Lighthouse	9/29	10
Clarry Hill	10/2	10
Lighthouse	10/10	8
Lighthouse	10/5	8
Lighthouse	9/18	8
Quaker Ridge	10/8	8
Fire Island	9/29	8
Lighthouse	10/3	8
Fire Island	10/18	7
Fire Island	10/10	7
Lighthouse	11/7	7
Fire Island	10/4	7

TURKEY VULTURE		
State Line	10/17	263
Clarry Hill	9/29	255
State Line	11/8	240
State Line	10/18	188
Quaker Ridge	10/5	187
Quaker Ridge	10/26	185
Clarry Hill	10/2	174
Chestnut Ridge	10/26	153
Chestnut Ridge	10/19	145
Clarry Hill	10/3	138
Clarry Hill	9/30	137

BLACK VULTURE		
Washington V	11/3	55
Washington V	11/9	50
Mount Peter	11/3	25
Hook	10/21	24
State Line	10/23	18
Helderberg	9/18	17
Mount Peter	10/8	16
Helderberg	9/16	15
Helderberg	9/13	14
Mount Peter	11/2	14

SHORT-EARED OWL		
Quaker Ridge	11/26	1

Daily Counts at Northeastern Watch Sites, Fall 2019

Greenlaw Mountain, Fall 2019 - St. Andrews, New Brunswick

Date	HRS	BV	TV	OS	BE	NH	SS	CH	NG	RS	BW	RT	RL	GE	AK	ML	PG	UR	TOTAL
8/23	8.0	0	1	9	1	1	0	0	0	0	11	1	0	0	0	0	0	1	25
8/24	4.0	0	0	0	1	0	1	0	0	0	1	1	0	0	0	0	0	0	4
8/30	8.0	0	0	3	5	0	2	0	0	0	1	0	0	0	0	0	1	0	12
8/31	3.5	0	0	2	0	1	3	0	0	0	1	0	0	0	0	0	0	1	8
9/2	8.0	0	0	6	1	0	2	0	0	0	2	1	0	0	0	0	0	2	14
9/4	8.0	0	0	9	4	2	2	0	0	0	24	0	0	0	1	0	0	1	43
9/5	7.0	0	2	9	4	1	16	0	0	0	27	1	0	0	2	0	0	3	65
9/7	8.0	0	1	16	5	0	3	0	0	0	7	0	0	0	0	0	0	1	33
9/8	6.5	0	1	9	8	0	28	1	0	0	10	0	0	0	1	0	0	3	61
9/9	1.5	0	0	5	0	0	9	0	0	0	3	0	0	0	1	0	0	0	18
9/11	9.3	0	0	15	6	1	26	0	0	0	151	1	0	0	3	0	0	1	204
9/12	8.0	0	0	6	2	0	15	0	0	0	255	0	0	0	9	0	0	1	288
9/14	7.5	0	3	8	6	0	15	0	0	0	1	0	0	0	0	1	1	1	36
9/15	8.0	0	0	11	3	1	29	1	0	0	987	1	0	0	6	0	0	4	1043
9/16	9.3	0	0	10	2	3	20	0	1	0	629	1	0	0	3	0	0	3	672
9/17	8.3	0	0	3	3	0	15	0	0	0	62	2	0	0	5	1	0	3	94
9/19	8.0	0	0	2	0	2	23	0	0	0	491	1	0	0	2	2	0	0	523
9/20	9.0	0	0	8	1	4	24	1	0	0	275	2	0	0	24	1	1	7	348
9/24	7.0	0	0	10	0	0	5	0	0	0	8	0	0	0	0	0	2	1	26
9/26	9.3	0	31	11	2	0	14	0	0	0	50	0	0	0	13	1	2	5	129
9/28	8.3	0	7	2	2	2	27	0	0	0	9	2	0	0	24	1	1	6	84
9/29	8.0	0	53	0	3	1	30	1	0	0	19	5	0	0	13	0	2	4	131
10/1	6.0	0	7	9	1	0	9	0	0	0	0	6	0	0	2	0	2	2	38
10/2	7.8	0	20	1	2	2	32	1	0	0	2	4	0	0	6	0	0	2	72
10/3	1.5	0	3	1	2	0	0	0	0	0	0	3	0	0	1	0	0	1	11
10/4	8.3	0	42	0	7	1	9	0	0	0	3	4	0	0	9	2	2	5	84
10/7	5.0	0	5	4	0	0	5	0	0	0	0	1	0	0	1	1	1	4	22
10/8	8.0	0	12	0	2	3	17	2	1	0	10	3	0	0	5	3	2	4	64
10/9	6.0	0	3	1	0	1	10	2	1	0	0	4	0	0	0	5	1	0	28
10/12	7.0	0	6	0	1	0	3	0	0	0	0	1	0	0	0	0	0	0	11
10/14	7.5	0	15	0	3	0	10	0	0	0	0	0	0	0	1	0	0	1	30
10/17	6.0	0	1	1	9	0	0	0	0	0	0	1	0	0	1	1	0	0	14
10/18	7.5	0	7	1	4	1	9	0	1	0	0	5	0	0	0	1	0	0	29
10/19	7.5	0	37	1	6	2	21	0	1	0	1	13	0	0	0	1	3	2	88
10/21	6.0	0	8	0	2	2	8	1	0	1	0	5	0	0	1	1	0	0	29
10/24	5.0	0	3	0	5	0	2	0	0	0	0	3	0	0	0	0	0	1	14
10/25	6.3	0	24	0	4	0	8	0	0	0	0	17	0	0	0	0	0	0	53
11/1	4.8	0	1	0	11	1	2	0	0	0	0	9	0	0	0	1	0	1	26
11/8	4.3	0	0	0	7	1	1	0	0	0	0	12	0	0	0	1	0	1	23
11/10	4.0	0	0	0	8	1	1	0	1	0	0	2	0	0	0	0	0	0	13
40	270.5	0	293	173	133	34	456	10	6	1	3040	112	0	0	134	24	21	72	4510

Other: 9/28 1 Swainson's Hawk

Cadillac Mountain 2019 - Acadia National Park,Maine

Date	HRS	BV	TV	OS	BE	NH	SS	CH	NG	RS	BW	RT	RL	GE	AK	ML	PG	UR	TOTAL
8/14	5.3	0	3	0	1	0	1	0	0	0	1	1	0	0	0	0	0	1	8
8/15	5.8	0	5	0	1	0	1	0	0	0	0	0	0	0	0	0	0	1	8
8/20	6.3	0	1	0	0	0	3	0	0	0	0	0	0	0	0	0	0	1	5
8/21	5.0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1
8/22	4.5	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	2	4
8/23	5.8	0	12	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	13
8/24	6.3	0	1	5	13	2	12	0	0	0	10	0	0	0	0	0	0	1	44
8/25	4.0	0	2	3	2	0	11	0	0	0	0	1	0	0	0	0	0	3	22
8/26	5.5	0	1	1	1	3	3	1	0	0	0	0	0	0	0	0	0	0	10
8/27	5.5	0	2	0	0	1	2	0	0	0	1	0	0	0	0	0	0	1	7
8/28	5.0	0	5	0	0	0	3	0	0	0	0	0	0	0	0	0	0	0	8
8/30	5.8	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1
8/31	6.0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	2	4
9/1	4.3	0	2	1	1	3	25	0	0	0	3	1	0	0	0	0	0	3	39
9/2	0.8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9/3	7.0	0	2	9	1	2	12	0	0	0	0	1	0	0	0	0	0	4	31
9/4	2.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9/5	7.5	0	9	6	16	2	35	1	0	0	2	2	0	0	3	1	0	12	89
9/6	5.8	0	2	0	0	1	12	0	0	0	0	0	0	0	1	0	0	0	16
9/8	5.0	0	2	2	2	0	17	0	0	0	0	0	0	0	2	0	0	1	26
9/9	6.5	0	4	4	6	0	54	2	0	0	1	0	0	0	8	2	1	9	91
9/10	5.8	0	1	10	1	0	26	0	0	0	0	0	0	0	0	0	1	3	42
9/12	6.0	0	6	8	4	0	40	0	0	0	16	0	0	0	1	1	1	5	82
9/13	7.0	0	6	14	10	3	67	2	0	0	4	0	0	0	22	3	0	4	135
9/14	1.8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9/15	5.0	0	1	4	3	2	12	0	0	0	0	0	0	0	1	0	0	2	25
9/16	7.3	0	9	10	12	1	68	1	0	0	15	1	0	0	19	3	0	11	150
9/17	7.0	0	2	11	4	6	144	2	1	0	117	1	0	0	32	4	1	6	331
9/18	7.5	0	3	18	13	4	57	1	0	0	7	1	0	0	21	4	3	10	142
9/19	7.5	0	0	2	0	0	35	1	0	0	2	0	0	0	19	2	1	8	70
9/20	7.5	0	0	1	1	4	35	0	0	0	0	0	0	0	8	0	0	5	54
9/21	7.5	0	0	7	5	4	125	4	0	0	99	1	0	0	123	10	3	4	385
9/22	5.0	0	0	0	0	1	0	0	0	0	0	0	0	0	2	1	0	0	4
9/23	4.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9/24	6.3	0	0	0	0	0	5	0	0	0	0	0	0	0	0	0	0	0	5
9/25	6.8	0	0	17	6	4	39	0	0	0	41	0	0	0	45	3	4	4	163
9/26	5.0	0	8	1	0	0	1	0	0	0	0	0	0	0	0	0	0	1	11
9/27	6.3	0	0	3	2	0	28	0	0	0	1	0	0	0	34	1	0	1	70
9/28	4.3	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
9/29	6.5	0	2	10	2	3	78	0	0	0	18	0	0	0	122	8	1	4	248
9/30	6.0	0	16	2	4	4	36	2	0	0	17	1	0	0	28	4	1	15	130
10/3	5.5	0	14	2	9	2	56	3	1	0	4	0	0	0	21	2	2	6	122
10/5	6.8	0	15	0	2	1	19	1	0	0	2	1	0	0	11	2	0	3	57
10/8	5.5	0	3	0	2	3	5	0	0	0	0	0	0	0	1	0	1	0	15
10/9	6.0	0	4	2	7	1	11	0	0	0	0	0	0	0	12	0	1	4	42
10/10	2.5	0	1	0	1	3	4	0	0	0	0	0	0	0	0	0	0	1	10
10/11	3.0	0	1	0	7	0	3	0	0	0	0	0	0	0	1	0	0	0	12
10/15	4.0	0	8	0	2	0	2	0	0	0	0	0	0	0	0	0	0	0	12
10/19	3.0	0	8	0	0	0	5	0	0	0	0	0	0	0	3	0	0	0	16
10/20	4.0	0	20	2	1	2	10	0	0	0	2	3	0	0	0	1	1	0	42
10/26	5.0	0	10	0	5	5	7	1	0	0	0	4	0	0	2	1	0	0	35
51	274.3	0	193	155	150	67	1112	22	2	0	363	19	0	0	542	53	22	138	2838

Cooper Fall 2019 - Cooper, Maine

Date	HRS	BV	TV	OS	BE	NH	SS	CH	NG	RS	BW	RT	RL	GE	AK	ML	PG	UR	TOTAL
8/31	7.0	0	0	0	3	0	0	0	0	0	1	0	0	0	0	0	0	0	4
9/4	4.0	0	0	0	0	0	0	0	0	0	5	0	0	0	0	0	0	0	5
9/6	2.0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1
9/9	4.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9/11	4.0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1
9/15	6.0	0	5	0	1	0	0	1	0	0	3	0	0	0	0	0	0	0	10
9/18	6.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9/23	5.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9/25	4.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9/27	2.0	0	21	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	21
9/28	5.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9/29	6.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12	55.0	0	26	0	5	0	0	2	0	0	9	0	0	0	0	0	0	0	42

Clarry Hill Fall 2019 - Union, Maine

Date	HRS	BV	TV	OS	BE	NH	SS	CH	NG	RS	BW	RT	RL	GE	AK	ML	PG	UR	TOTAL
8/23	10.0	0	0	3	7	1	4	1	0	0	34	0	0	0	0	0	0	0	50
8/24	10.0	0	0	11	4	0	5	2	0	0	32	1	0	0	3	0	0	0	58
8/29	6.5	0	0	0	0	0	1	0	0	0	3	0	0	0	0	0	0	0	4
9/3	8.0	0	0	16	5	1	4	2	0	1	5	1	0	0	0	0	0	0	35
9/5	9.0	0	0	16	13	2	7	3	0	1	37	1	0	0	1	0	0	0	81
9/7	5.5	0	0	4	2	0	4	0	0	0	1	0	0	0	0	0	0	0	11
9/8	10.0	0	0	11	9	0	10	0	0	0	16	1	0	0	0	0	1	2	50
9/9	9.5	0	0	36	3	2	24	0	0	0	87	1	0	0	1	1	0	0	155
9/10	8.0	0	0	9	1	3	15	5	0	1	50	0	0	0	2	0	1	0	87
9/12	10.5	0	0	27	10	4	29	6	0	0	80	0	0	0	5	0	0	0	161
9/13	10.0	0	0	11	8	3	34	2	0	0	76	1	0	0	13	0	1	3	152
9/15	9.5	0	0	17	17	4	18	0	0	0	31	1	0	0	2	0	0	1	91
9/16	10.0	0	0	24	6	4	46	4	0	0	904	0	0	0	8	1	0	0	997
9/17	10.0	0	0	12	14	2	77	2	0	0	3955	0	0	0	5	0	0	0	4067
9/18	10.5	0	0	17	16	3	57	0	0	0	982	3	0	0	11	2	0	1	1092
9/19	9.0	0	0	5	4	4	31	0	0	0	24	1	0	0	10	3	1	2	85
9/20	9.5	0	0	1	1	6	28	1	0	0	20	0	0	0	0	0	1	0	58
9/21	10.0	0	0	8	9	0	49	2	0	0	20	0	0	0	20	2	0	3	113
9/25	10.0	0	33	12	11	0	41	0	0	0	268	0	0	0	27	2	2	1	397
9/27	11.0	0	117	17	3	1	16	0	0	1	32	1	0	0	9	2	0	1	200
9/29	9.5	0	255	8	15	4	37	2	0	2	33	1	0	0	34	5	1	3	400
9/30	9.0	1	137	0	17	2	51	0	0	3	63	0	0	0	22	2	0	1	299
10/2	7.5	0	174	29	9	10	40	0	0	0	19	3	0	0	23	9	0	0	317
10/3	8.5	0	138	0	9	0	44	2	0	1	9	8	0	0	33	2	3	1	250
10/8	9.0	0	114	3	5	3	9	0	0	1	1	1	0	0	13	1	1	0	152
10/9	9.0	0	71	1	23	0	22	3	1	1	0	13	0	0	29	4	0	1	169
10/13	7.0	0	115	0	6	1	3	0	1	0	0	3	0	0	6	2	0	2	139
10/15	9.0	0	48	0	11	0	3	1	0	2	0	8	0	0	3	1	2	0	79
10/21	6.0	0	9	0	5	0	6	0	1	4	0	7	0	0	0	0	3	0	35
10/25	5.5	0	26	0	3	0	2	0	1	0	0	2	0	0	2	2	0	3	41
10/26	8.0	0	18	0	14	1	9	0	0	6	0	33	0	1	5	2	0	0	89
11/2	7.0	0	8	0	34	1	6	0	0	11	0	39	0	0	1	0	0	5	105
11/3	6.5	0	4	0	37	0	0	0	0	0	0	20	0	0	0	1	0	1	63
11/6	6.0	0	0	1	69	0	0	0	0	0	0	21	0	1	0	0	0	0	92
11/9	6.0	0	0	0	47	1	3	0	0	0	0	25	0	0	0	0	0	2	78
11/11	4.0	0	4	0	2	1	0	0	0	1	0	5	0	0	0	0	0	0	13
36	304	1	1271	299	449	64	735	38	4	36	6782	201	0	2	288	44	17	33	10265

Other: 10/2 1 Swainson's Hawk

Mt. Philo State Park 2019 - Charlotte, Vermont

Date	HRS	BV	TV	OS	BE	NH	SS	CH	NG	RS	BW	RT	RL	GE	AK	ML	PG	UR	TOTAL
8/25	3.5	0	10	0	1	0	0	0	0	1	0	1	0	0	1	0	0	2	16
8/31	3.5	0	11	1	4	1	0	1	0	0	0	0	0	0	0	0	0	1	19
9/5	6.5	0	0	2	10	1	3	0	0	0	5	0	0	0	2	0	0	4	27
9/6	3.3	0	2	1	1	0	3	0	0	0	9	0	0	0	0	1	0	1	18
9/7	3.3	0	3	0	10	0	4	0	0	0	19	1	0	0	0	1	0	3	41
9/8	4.8	0	0	2	1	2	2	0	0	0	3	0	0	0	0	0	0	0	10
9/9	6.5	0	0	2	6	0	0	0	0	0	73	0	0	0	0	0	1	2	84
9/11	5.0	0	0	1	0	0	1	0	0	0	4	0	0	0	0	1	1	1	9
9/12	7.8	0	6	18	33	4	30	3	0	0	2232	1	0	0	29	2	3	4	2365
9/13	5.3	0	3	2	5	2	4	1	0	0	414	1	0	0	2	0	0	1	435
9/15	4.5	0	1	1	7	0	2	2	0	0	7	1	0	0	0	1	0	1	23
9/16	6.8	2	0	0	7	2	3	0	0	0	16	1	0	0	2	0	0	0	33
9/17	8.3	0	1	2	14	0	5	2	0	0	219	1	0	0	6	0	2	2	254
9/18	7.3	0	3	7	14	6	9	4	0	0	62	1	0	0	8	0	1	2	117
9/19	7.0	1	4	0	5	2	1	1	0	0	138	0	0	0	2	0	0	0	154
9/20	3.8	0	0	0	0	0	0	0	0	0	12	0	0	0	2	0	0	0	14
16	86.8	3	44	39	118	20	67	14	0	1	3213	8	0	0	54	6	8	24	3619

Harpswell Peninsula Fall 2019 - Casco Bay, Maine

Date	HRS	BV	TV	OS	BE	NH	SS	CH	NG	RS	BW	RT	RL	GE	AK	ML	PG	UR	TOTAL
9/6	7.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1
9/7	6.0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1	0	0	2
9/8	5.0	0	0	6	0	1	0	0	0	0	0	0	0	0	0	0	0	0	7
9/9	1.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9/10	2.3	0	0	4	0	0	1	0	0	0	0	0	0	0	0	1	0	0	6
9/11	1.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9/12	1.3	0	0	1	1	1	1	0	0	0	0	0	0	0	1	1	0	0	6
9/13	2.0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	1	0	0	2
9/14	1.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1
9/15	6.5	0	0	1	0	0	1	0	0	0	1	0	0	0	1	0	0	0	4
9/16	3.0	0	1	7	0	0	22	0	0	0	2	1	0	0	2	3	0	0	38
9/17	3.0	0	0	7	3	0	10	0	0	0	15	0	0	0	2	0	0	0	37
9/18	5.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1
9/19	1.0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	2
9/21	0.3	0	0	0	0	0	3	0	0	0	0	0	0	0	0	0	0	0	3
9/22	3.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	2
9/24	5.0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
9/25	3.5	0	1	9	3	1	14	0	0	0	6	0	0	0	4	10	0	4	52
9/26	1.8	0	0	4	0	0	0	0	0	0	0	0	0	0	1	2	1	0	8
9/27	2.0	0	0	3	0	0	1	0	0	0	0	0	0	0	0	3	0	0	7
9/28	2.5	0	0	1	0	0	0	1	0	0	0	0	0	0	0	1	6	0	9
9/29	6.8	0	12	4	7	2	73	8	0	0	8	2	0	0	47	27	6	2	198
9/30	1.5	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
10/2	1.0	0	0	2	2	0	0	1	0	0	0	0	0	0	0	0	0	0	5
10/3	2.0	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	2
10/4	3.0	0	5	1	0	3	26	1	1	0	2	0	0	0	7	7	0	0	53

Continued on next page . . .

Harpswell Peninsula Fall 2019 - Casco Bay, Maine

Date	HRS	BV	TV	OS	BE	NH	SS	CH	NG	RS	BW	RT	RL	GE	AK	ML	PG	UR	TOTAL
10/5	3.5	0	0	1	1	0	7	0	0	0	0	0	0	0	0	0	0	0	9
10/6	1.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	2
10/7	0.8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1
10/8	1.3	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	2
10/9	1.8	0	0	0	1	0	4	1	0	0	0	1	0	0	0	0	0	0	7
10/10	1.0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	1	0	0	3
10/11	1.0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	2
10/12	1.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1
10/13	1.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1
10/14	1.3	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1
10/15	3.0	0	0	0	0	0	6	3	0	0	1	1	0	0	0	0	0	0	11
10/16	1.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1
10/18	5.0	0	1	1	1	0	10	1	0	0	0	0	0	0	1	7	1	0	23
10/19	3.0	0	1	0	0	2	2	0	0	0	0	1	0	0	0	0	0	0	6
10/20	1.0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	2
10/21	1.3	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1
10/24	3.3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10/25	1.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10/26	1.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1
11/1	1.0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1
11/3	3.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1
47	**114.3**	**0**	**23**	**55**	**19**	**11**	**194**	**17**	**1**	**0**	**35**	**6**	**0**	**0**	**66**	**77**	**14**	**7**	**525**

Interlakes Elementary School Fall 2019 - Meredith, New Hampshire

Date	HRS	BV	TV	OS	BE	NH	SS	CH	NG	RS	BW	RT	RL	GE	AK	ML	PG	UR	TOTAL
9/10	5.0	0	11	3	4	0	1	0	0	0	435	1	0	0	0	0	0	0	455
9/11	5.0	0	3	2	3	1	1	0	0	0	41	0	0	0	0	0	0	3	54
2	**10.0**	**0**	**14**	**5**	**7**	**1**	**2**	**0**	**0**	**0**	**476**	**1**	**0**	**0**	**0**	**0**	**0**	**3**	**509**

Concord School Fall 2019 - Concord, New Hampshire

Date	HRS	BV	TV	OS	BE	NH	SS	CH	NG	RS	BW	RT	RL	GE	AK	ML	PG	UR	TOTAL
9/13	4.3	0	5	1	0	0	1	0	0	0	66	1	0	0	0	0	0	0	74
9/16	4.3	0	0	0	2	0	0	0	0	0	1	0	0	0	0	0	0	1	4
9/17	5.8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1
9/19	4.5	0	8	0	1	0	0	0	0	0	16	3	0	0	0	0	0	1	29
9/20	4.8	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
9/23	4.0	0	2	1	0	0	0	0	0	0	3	3	0	0	0	0	0	1	10
6	**27.5**	**0**	**17**	**2**	**3**	**0**	**1**	**0**	**0**	**0**	**86**	**7**	**0**	**0**	**0**	**0**	**0**	**4**	**120**

Carter Hill Fall 2019 - Concord, New Hampshire

Date	HRS	BV	TV	OS	BE	NH	SS	CH	NG	RS	BW	RT	RL	GE	AK	ML	PG	UR	TOTAL
9/5	1.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9/10	6.8	0	0	1	0	0	0	0	0	0	85	0	0	0	0	0	0	0	86
9/11	3.0	0	0	0	0	0	4	0	0	0	2	0	0	0	3	0	0	0	9
9/13	7.3	0	1	5	5	1	0	2	0	0	1066	0	0	1	1	0	0	0	1082
9/15	2.5	0	0	1	0	0	0	2	0	1	5	0	0	0	1	0	0	3	13
9/16	7.5	0	0	3	3	1	5	3	0	0	50	0	0	0	3	1	0	1	70
9/17	9.0	0	0	4	4	0	21	5	0	0	411	0	0	0	3	1	0	5	454
9/18	8.0	0	0	6	4	0	5	8	0	0	303	0	0	0	4	2	0	1	333
9/19	7.0	0	0	0	1	1	0	1	0	1	78	0	0	0	2	1	0	0	85
9/20	8.5	0	0	2	0	0	2	1	0	0	6	0	0	0	1	2	0	2	16
9/21	9.5	0	0	1	1	1	2	1	0	0	4	0	0	0	0	0	0	0	10
9/22	2.5	0	0	0	0	0	2	0	0	0	0	0	0	0	2	0	0	0	4
9/23	6.0	0	0	0	0	1	0	0	0	0	0	0	0	0	4	0	0	0	5
9/24	7.0	0	0	0	0	2	3	1	0	0	1	0	0	0	9	1	0	2	19
9/25	9.8	0	1	2	4	3	10	1	0	1	15	0	0	1	4	1	0	3	46
9/26	3.5	0	0	1	0	0	1	0	0	0	1	0	0	0	0	0	0	0	3
9/27	9.5	0	0	2	0	0	11	3	0	2	9	1	0	0	2	1	0	0	31
9/28	9.5	0	0	5	2	2	4	6	0	0	11	0	0	0	3	1	1	12	47
9/29	9.0	0	0	0	1	0	4	1	0	0	1	0	0	0	2	0	0	2	11
9/30	9.0	0	0	0	3	0	15	1	0	0	1	0	0	0	2	0	0	6	28
10/1	5.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10/3	5.0	0	0	4	0	0	7	1	0	0	0	0	0	0	0	2	0	0	14
10/4	1.0	0	0	0	1	0	0	0	0	0	0	1	0	0	4	0	0	0	6
10/5	8.5	0	0	0	0	0	15	6	0	4	2	1	0	0	1	0	0	7	36
10/13	5.8	0	0	0	0	0	3	0	0	0	0	1	0	0	0	0	0	1	5
10/15	6.2	0	0	0	0	0	5	0	0	0	0	2	0	0	0	0	0	3	10
10/24	5.5	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	2
27	**173.2**	**0**	**2**	**37**	**29**	**12**	**121**	**43**	**0**	**9**	**2051**	**6**	**0**	**2**	**51**	**13**	**1**	**48**	**2425**

Putney Mountain Fall 2019 - Putney, Vermont

Date	HRS	BV	TV	OS	BE	NH	SS	CH	NG	RS	BW	RT	RL	GE	AK	ML	PG	UR	TOTAL
8/26	4.0	0	0	0	1	0	0	0	0	0	1	0	0	0	0	0	0	0	2
8/27	4.5	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	2
8/28	4.5	0	0	0	0	0	3	0	0	0	1	0	0	0	0	0	0	0	4
8/29	7.0	0	0	0	1	2	2	0	0	0	6	0	0	0	0	0	0	0	11
8/30	9.0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1
8/31	7.0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1
9/1	8.0	0	0	0	0	0	1	0	0	0	4	0	0	0	0	0	0	0	5
9/3	7.5	0	0	1	0	0	4	0	0	0	0	0	0	0	0	0	0	0	5
9/4	5.3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1
9/5	9.5	0	0	0	1	0	0	0	0	0	16	0	0	0	1	0	0	0	18
9/6	10.0	0	0	3	0	0	12	0	0	1	22	0	0	0	1	0	0	0	39
9/7	9.5	0	0	5	2	1	8	1	0	0	38	0	0	0	2	0	1	0	58
9/8	10.0	0	0	3	4	1	14	1	0	0	62	0	0	0	1	0	0	0	86
9/9	10.0	0	0	4	1	0	5	0	0	0	27	0	0	0	1	2	0	0	40
9/10	9.0	0	0	2	3	0	3	1	0	0	176	0	0	0	0	0	0	0	185
9/11	10.0	0	0	6	5	1	6	1	0	0	73	0	0	0	3	0	0	0	95
9/12	9.0	0	0	2	1	0	7	0	0	0	601	0	0	0	3	0	1	0	615
9/13	10.5	0	0	5	4	1	35	0	0	0	2467	0	0	0	2	1	1	0	2516
9/14	9.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9/15	10.5	0	0	6	6	2	51	4	0	0	1140	0	0	0	4	3	0	0	1216
9/16	10.5	0	0	6	4	1	24	2	0	0	351	0	0	0	5	2	0	0	395
9/17	9.5	0	0	2	1	0	12	0	0	0	98	0	0	0	3	0	0	0	116
9/18	10.0	0	0	2	0	1	13	0	0	0	343	0	0	0	2	2	0	0	363
9/19	10.0	0	0	3	2	4	16	0	0	0	194	0	0	0	1	1	0	0	221
9/20	10.0	0	0	2	1	0	27	1	0	0	61	0	0	0	7	0	0	0	99
9/21	10.0	0	0	1	1	0	9	0	0	0	7	1	0	0	1	0	0	0	20
9/22	8.5	0	0	2	0	0	4	0	0	0	1	0	0	0	2	1	0	0	10
9/23	8.0	0	0	1	0	1	3	0	0	0	2	1	0	0	5	2	0	0	15
9/24	10.0	0	0	5	3	1	27	0	0	0	15	1	0	0	15	0	3	0	70
9/25	10.0	2	0	4	2	0	48	2	0	2	10	1	0	0	7	0	0	0	78
9/26	5.8	0	0	1	0	0	7	0	0	0	0	1	0	0	1	0	0	0	10
9/27	10.0	0	0	1	0	0	29	0	0	0	1	0	0	0	3	0	1	0	35
9/28	8.5	0	6	1	1	0	5	0	0	0	0	0	0	0	1	0	0	0	14
9/29	10.5	0	9	9	6	1	61	4	1	1	2	3	0	0	8	0	0	0	105
9/30	9.5	0	5	1	0	1	7	0	0	0	0	1	0	0	2	1	0	0	18
10/1	6.0	0	3	0	0	1	1	0	0	0	0	0	0	0	1	0	0	0	6
10/2	10.3	0	5	1	0	0	26	1	0	0	0	0	0	1	1	1	2	0	38
10/3	7.8	0	0	1	0	0	13	0	0	1	0	1	0	0	0	0	0	0	16
10/4	10.5	0	54	5	2	4	116	5	1	0	0	12	0	0	18	2	3	0	222
10/5	9.5	0	19	0	1	1	19	0	0	0	0	2	0	0	1	0	0	0	43
10/6	5.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10/8	9.5	0	3	2	1	3	44	5	0	0	0	12	0	2	5	2	2	0	81
10/9	9.5	0	16	0	1	1	59	5	3	0	0	8	0	0	10	9	2	0	114
10/10	10.0	0	10	0	1	4	57	1	0	5	0	12	0	0	6	2	0	0	98
10/11	9.0	0	6	0	1	5	40	2	1	0	0	2	0	1	4	2	0	0	64
10/12	9.0	0	21	0	0	1	8	0	1	0	0	8	0	0	1	0	0	0	40
10/13	8.8	0	6	0	1	0	17	2	0	0	0	5	0	0	1	0	1	0	33
10/14	8.0	0	0	0	1	1	3	0	0	0	0	0	0	0	0	0	0	0	5
10/15	10.3	0	40	1	3	1	25	1	0	1	0	9	0	0	9	0	0	0	90
10/16	8.3	0	13	0	2	0	8	2	0	0	0	2	0	0	0	0	0	0	27
10/18	9.0	0	7	0	3	4	32	2	0	0	0	4	0	0	8	4	3	0	67
10/19	9.0	0	10	5	3	1	16	5	0	4	0	19	0	0	6	5	0	0	74
10/20	7.5	0	29	0	0	0	6	0	0	0	0	1	0	0	0	2	0	0	38
10/21	8.8	0	37	0	2	1	10	0	0	1	0	6	0	0	2	0	0	0	59
10/22	7.0	0	2	1	0	2	31	2	0	0	0	0	0	1	0	0	0	0	39
10/23	9.5	0	5	0	1	2	28	5	0	0	0	30	0	0	8	2	1	0	82
10/24	8.0	0	8	0	3	1	10	0	0	0	0	1	0	0	1	0	0	0	24
10/25	7.0	0	0	0	0	0	4	1	0	0	0	0	0	0	0	0	0	0	5
10/26	8.3	0	2	0	0	2	20	1	0	4	0	18	0	0	0	0	0	0	47
10/28	7.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10/30	2.8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11/1	7.3	0	4	0	3	0	0	0	0	0	0	8	0	0	0	0	0	0	15
11/2	7.5	0	8	0	1	0	12	0	0	2	0	25	0	1	0	1	0	0	50
11/3	7.5	0	3	0	1	3	7	0	1	3	0	57	0	0	0	0	0	0	75
11/4	6.8	0	0	0	0	0	2	0	0	0	0	11	0	0	0	0	1	0	14
11/5	4.0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1
11/6	7.8	0	0	0	2	2	8	0	0	2	0	50	0	0	0	0	0	0	64
11/7	1.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11/8	7.0	0	0	1	0	0	5	0	0	0	0	60	0	0	0	0	0	0	66
11/9	6.8	0	0	0	0	1	2	0	0	0	0	18	0	0	0	0	0	0	21
11/10	6.5	0	0	0	0	0	1	0	0	0	0	3	0	0	0	0	0	0	4
71	**582.5**	**2**	**331**	**95**	**83**	**59**	**1075**	**57**	**8**	**27**	**5721**	**393**	**0**	**6**	**164**	**48**	**22**	**0**	**8091**

Pack Monadnock Fall 2019 - Peterborough, New Hampshire

Date	HRS	BV	TV	OS	BE	NH	SS	CH	NG	RS	BW	RT	RL	GE	AK	ML	PG	UR	TOTAL
8/23	1.5	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1
8/31	4.5	0	0	1	0	0	2	0	0	0	2	0	0	0	0	0	0	0	5
9/1	11.0	0	0	10	1	0	1	1	0	0	10	0	0	0	0	0	0	3	26
9/2	5.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9/3	8.5	0	0	4	2	0	2	0	0	1	2	0	0	0	1	1	0	1	14
9/4	6.3	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	2
9/5	8.5	0	0	4	1	0	2	0	0	0	7	0	0	0	1	0	0	0	15
9/6	8.0	0	0	9	2	1	8	1	0	0	13	0	0	0	0	1	0	2	37
9/7	9.8	0	0	4	1	0	19	0	0	0	20	0	0	0	6	3	0	2	55
9/8	8.8	0	0	8	1	1	13	0	1	0	45	0	0	0	4	1	2	1	77
9/9	8.0	0	0	9	10	0	23	0	0	0	274	0	0	0	0	0	0	0	316
9/10	7.5	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
9/11	8.0	0	0	3	1	1	3	0	0	0	2	0	0	0	0	1	0	0	11
9/12	2.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9/13	9.3	0	0	10	12	0	30	6	0	0	2267	0	0	0	16	3	0	11	2355
9/14	7.0	0	0	1	0	0	0	0	0	0	0	0	0	0	1	0	0	0	2
9/15	10.0	0	0	9	10	2	51	4	0	0	379	0	0	0	13	8	0	8	484
9/16	8.0	0	0	12	9	2	49	2	0	0	584	0	0	0	3	1	0	0	662
9/17	9.0	0	0	4	10	3	69	4	0	0	1262	0	0	0	8	2	1	2	1365
9/18	12.0	0	0	9	6	1	79	2	0	0	2435	0	0	0	6	3	0	4	2545
9/19	9.8	0	0	5	6	4	43	6	0	0	307	0	0	0	0	1	0	7	379
9/20	9.0	0	0	1	5	1	37	6	0	0	65	0	0	0	3	3	2	4	127
9/21	8.0	0	0	1	0	0	24	2	0	0	22	0	0	0	3	2	0	4	58
9/22	8.0	0	0	0	1	2	2	0	0	0	3	0	0	0	0	1	1	1	11
9/23	7.0	0	0	3	1	0	4	0	0	0	1	0	0	0	0	1	4	0	14
9/24	7.3	0	0	2	0	1	23	1	0	0	46	0	0	0	1	0	2	1	77
9/25	9.5	0	0	4	2	0	51	6	0	0	29	0	0	0	6	1	12	5	116
9/26	7.3	0	0	2	0	0	6	0	0	0	0	0	0	0	0	0	3	2	13
9/27	9.0	0	0	6	0	0	39	4	0	1	3	0	0	0	2	1	1	2	59
9/28	8.5	0	0	7	4	0	14	1	0	0	12	1	0	0	1	0	9	7	56
9/29	9.2	0	0	5	6	2	51	6	0	2	23	0	0	0	9	1	4	5	114
9/30	8.0	0	32	4	4	5	27	2	0	1	8	1	0	0	23	0	2	1	110
10/1	2.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10/2	4.0	0	0	0	0	1	7	1	0	0	0	0	0	0	0	0	0	0	9
10/3	8.1	0	19	11	7	3	25	2	0	1	17	1	0	0	7	1	0	0	94
10/4	7.0	0	9	6	6	3	70	6	0	1	1	2	0	0	16	4	3	17	144
10/5	9.0	0	13	0	5	1	45	2	1	3	0	8	0	0	5	1	2	7	93
10/6	8.5	0	4	1	2	0	0	0	0	0	0	0	0	1	0	1	1	0	10
10/7	4.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10/8	7.8	0	3	5	3	1	26	4	1	4	0	1	0	0	10	6	3	3	70
10/9	8.2	0	49	1	2	2	8	2	0	1	1	0	0	0	6	1	5	1	79
10/10	8.0	0	22	1	3	0	23	2	1	0	0	2	0	0	9	3	1	3	70
10/11	8.0	0	40	0	0	1	15	2	0	2	0	4	0	0	5	0	2	1	72
10/12	12.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10/13	8.0	0	7	1	2	3	7	1	1	3	0	2	0	1	1	1	0	4	34
10/14	8.0	0	19	0	5	1	7	2	1	0	0	3	0	0	1	0	0	2	41
10/15	7.8	0	8	0	4	1	18	3	0	3	0	7	0	0	4	2	0	0	50
10/16	8.0	0	15	1	1	1	6	1	0	1	0	0	0	0	3	3	1	1	34
10/17	0.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10/18	8.3	0	0	2	2	1	8	4	0	1	0	2	0	0	1	0	2	2	25
10/19	8.0	0	5	2	2	2	17	5	0	12	0	4	0	0	0	0	0	1	50
10/20	9.0	0	7	0	0	3	33	3	0	18	0	2	0	0	4	1	0	2	73
10/21	8.0	0	1	0	1	0	8	2	0	2	0	5	0	0	2	1	0	1	23
10/22	6.5	0	1	0	1	0	0	0	0	1	0	0	0	1	0	0	0	0	4
10/23	8.0	0	0	0	1	1	2	1	0	1	0	4	0	0	2	2	0	2	16
10/24	8.0	0	1	0	0	0	1	0	0	0	0	3	0	0	0	0	1	0	6
10/25	8.0	0	0	0	0	1	0	0	0	0	0	1	0	0	0	0	0	0	2
10/26	8.0	0	0	1	1	0	10	2	0	32	0	10	0	0	1	0	0	1	58
10/28	7.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10/29	1.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10/30	1.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11/1	7.0	0	1	0	4	0	0	0	0	1	0	1	0	1	0	0	0	1	9
11/2	8.0	0	7	0	6	0	2	1	0	35	0	5	0	0	0	0	0	1	57
11/3	7.3	0	1	0	0	0	1	1	0	18	0	13	0	0	0	2	0	0	36
11/4	7.0	0	2	0	0	0	6	0	1	6	0	11	0	0	0	0	0	3	29

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Pack Monadnock Fall 2019 - Peterborough, New Hampshire

Date	HRS	BV	TV	OS	BE	NH	SS	CH	NG	RS	BW	RT	RL	GE	AK	ML	PG	UR	TOTAL
11/5	5.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11/6	7.0	0	2	0	5	1	1	3	1	8	0	24	0	0	0	0	0	1	46
11/7	5.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11/8	6.3	0	0	0	2	1	0	0	1	4	0	18	0	0	0	0	0	0	26
11/9	6.0	0	0	0	7	0	2	0	0	6	0	24	0	0	0	0	0	1	40
11/10	6.0	0	0	0	3	0	0	1	0	1	0	1	0	0	0	0	0	0	6
11/11	6.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11/12	2.0	0	0	0	0	0	0	0	0	0	0	3	0	0	0	0	0	0	3
11/13	6.5	0	0	0	4	0	0	0	0	3	0	16	0	0	0	0	0	0	23
11/14	6.0	0	0	0	0	0	1	0	0	0	0	1	0	0	0	0	0	0	2
11/15	6.3	0	0	0	0	0	0	0	0	0	0	6	0	0	0	0	0	0	6
11/16	6.0	0	0	0	2	0	4	0	0	3	0	26	0	0	0	0	0	0	35
11/17	6.0	0	0	0	3	0	2	0	0	5	0	8	0	0	0	0	0	0	18
11/21	1.5	0	0	0	0	0	0	0	0	0	0	3	0	0	0	0	0	0	3
79	**557.2**	**0**	**268**	**171**	**180**	**54**	**1027**	**105**	**9**	**181**	**7840**	**223**	**0**	**4**	**185**	**64**	**64**	**128**	**10503**

Mount Watatic Fall 2019 - Ashby, Massachusetts

Date	HRS	BV	TV	OS	BE	NH	SS	CH	NG	RS	BW	RT	RL	GE	AK	ML	PG	UR	TOTAL
8/31	6.0	0	0	4	0	0	0	1	0	0	11	0	0	0	0	0	0	0	16
9/7	4.5	0	0	2	2	0	6	0	0	1	12	0	0	0	1	1	0	0	25
9/8	7.0	0	0	2	4	0	10	0	0	0	26	0	0	0	0	0	0	4	46
9/13	7.5	0	0	6	21	2	8	6	0	1	82	0	0	0	4	3	1	0	134
9/14	3.8	0	0	1	0	0	1	0	0	0	2	0	0	0	0	0	0	0	4
9/15	9.0	0	0	8	5	0	22	1	0	1	91	0	0	0	2	1	0	1	132
9/16	8.0	0	0	1	5	0	25	0	0	0	350	0	0	0	6	1	0	2	390
9/17	8.5	0	3	1	7	3	39	4	0	1	1005	0	0	0	3	1	0	1	1068
9/18	8.5	0	4	4	12	1	33	4	0	3	406	0	0	0	6	3	0	1	477
9/19	7.0	0	2	4	2	0	14	2	0	0	22	0	0	0	9	2	0	0	57
9/20	8.0	0	0	0	2	0	24	2	1	0	51	0	0	0	2	1	0	0	83
9/21	8.0	0	0	0	1	0	5	3	0	1	7	0	0	0	6	0	0	0	23
9/22	5.0	0	0	0	0	0	1	0	0	0	4	0	0	0	0	0	0	0	5
10/4	4.0	0	0	0	3	0	13	0	0	0	0	2	0	0	7	0	0	1	26
14	**94.8**	**0**	**9**	**33**	**64**	**6**	**201**	**23**	**1**	**8**	**2069**	**2**	**0**	**0**	**46**	**13**	**1**	**10**	**2486**

Helderberg Escarpment Fall 2019 - Voorheesville, New York

Date	HRS	BV	TV	OS	BE	NH	SS	CH	NG	RS	BW	RT	RL	GE	AK	ML	PG	UR	TOTAL
9/7	8.0	3	0	1	3	0	1	3	0	0	33	5	0	0	2	0	0	6	57
9/8	6.0	1	6	0	6	0	1	1	0	0	4	4	0	0	0	1	0	4	28
9/9	9.0	4	40	0	10	0	5	1	0	0	50	3	0	0	0	1	0	4	118
9/10	5.0	12	6	1	0	0	0	0	0	1	14	7	0	0	0	1	0	10	52
9/11	5.0	4	19	2	1	0	0	1	0	0	0	2	0	0	0	0	0	7	36
9/12	7.0	2	8	6	8	2	1	1	0	0	34	0	0	0	4	2	8	14	90
9/13	7.0	14	22	2	5	0	10	3	0	2	587	11	0	0	2	0	1	24	683
9/14	5.0	0	4	0	1	1	0	0	0	0	11	4	0	0	1	0	0	3	25
9/15	7.0	7	5	1	2	0	0	4	0	0	301	8	0	1	2	1	2	20	354
9/16	8.0	15	13	1	3	0	4	10	0	0	108	10	0	0	2	0	1	11	178
9/17	6.0	7	6	0	3	0	1	2	0	0	20	21	0	0	1	1	4	11	77
9/18	6.0	17	1	1	6	0	3	1	0	0	12	23	0	0	1	2	6	12	85
9/19	4.0	2	8	0	0	0	1	2	0	0	3	4	0	0	0	0	0	2	22
9/20	5.0	5	24	1	2	0	1	1	0	0	3	4	0	0	0	0	1	3	45
9/21	8.0	5	11	0	2	0	1	0	0	0	1	0	0	0	0	0	0	2	22
9/22	6.0	0	28	0	0	0	1	3	0	0	0	6	0	0	1	0	0	4	43
16	**102.0**	**98**	**201**	**16**	**52**	**3**	**30**	**33**	**0**	**3**	**1181**	**112**	**0**	**1**	**16**	**9**	**23**	**137**	**1915**

Wachusett Fall 2019 - Princeton, Massachusetts

Date	HRS	BV	TV	OS	BE	NH	SS	CH	NG	RS	BW	RT	RL	GE	AK	ML	PG	UR	TOTAL
8/16	4.5	0	0	1	0	0	2	2	0	0	1	0	0	0	0	0	0	0	6
8/19	4.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8/20	5.8	0	0	0	0	0	4	1	0	0	35	0	0	0	1	0	0	1	42
8/23	7.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8/24	6.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8/25	6.0	0	0	3	0	0	1	0	0	0	6	1	0	0	0	0	0	0	11
8/26	7.0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1
8/27	6.0	0	0	0	1	0	3	2	0	0	4	0	0	0	0	1	0	0	11
8/29	6.5	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	2
8/30	3.0	0	0	0	0	0	0	1	0	0	0	0	0	0	1	0	0	0	2
8/31	7.0	0	0	0	8	0	0	0	0	0	9	0	0	0	1	1	0	0	19
9/1	5.0	0	0	1	2	0	1	1	0	0	7	0	0	0	0	0	0	0	12
9/3	6.8	0	0	1	0	0	2	0	0	0	0	0	0	0	1	1	1	0	6
9/4	5.8	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	1	0	3
9/5	7.5	0	0	4	2	0	0	3	0	0	12	0	0	0	0	0	1	0	22
9/6	6.5	0	0	1	3	0	2	0	0	0	12	0	0	0	2	0	0	1	21
9/7	6.0	0	0	6	0	0	6	3	0	0	21	0	0	0	1	0	0	1	38
9/8	7.0	1	0	3	0	0	4	3	0	0	83	0	0	0	3	1	0	5	103
9/9	8.3	0	0	5	2	0	2	1	0	0	33	0	0	0	1	2	0	5	51
9/10	8.0	0	0	2	0	0	0	0	0	0	9	0	0	0	0	0	2	2	15
9/11	8.0	0	0	5	0	0	1	0	0	0	0	0	0	0	0	0	0	0	6
9/13	8.5	0	0	7	6	0	22	6	0	0	62	0	0	0	10	8	1	6	128
9/14	5.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9/15	8.5	0	0	10	7	0	9	2	0	0	258	0	0	0	0	0	0	7	293
9/16	9.0	0	0	13	24	0	18	5	0	2	1416	0	0	0	7	2	1	13	1501
9/17	8.0	2	0	8	7	1	17	3	0	0	354	0	0	0	16	4	0	4	416
9/18	7.5	1	1	4	5	0	33	1	0	3	22	0	0	0	11	5	2	7	95
9/19	8.0	0	1	9	0	0	19	4	0	0	7	0	0	0	7	5	1	1	54
9/20	8.0	0	0	4	4	0	19	1	0	0	167	0	0	0	17	3	2	7	225
9/21	8.0	0	0	3	0	1	12	2	0	0	20	0	0	0	2	1	1	5	47
9/22	3.0	0	0	0	2	0	0	0	0	0	2	0	0	0	0	0	0	2	6
9/23	6.0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	1	0	0	3
9/24	7.3	0	0	5	5	0	12	5	0	0	74	0	0	0	6	0	0	1	108
9/25	8.0	0	0	4	10	0	26	2	0	0	58	0	0	0	8	0	0	15	123
9/26	6.3	0	0	1	1	0	11	0	0	0	1	0	0	0	0	0	0	1	15
9/27	8.0	1	0	5	4	0	6	6	0	0	104	0	0	0	6	4	1	11	148
9/28	2.5	0	0	0	0	0	0	0	0	0	2	0	0	0	1	0	1	0	4
9/29	7.3	0	0	4	2	0	19	12	0	1	31	0	0	0	11	4	0	4	88
9/30	7.8	0	26	1	4	2	10	4	0	0	13	1	0	0	5	0	1	2	69
10/2	6.8	0	2	0	0	0	4	1	0	0	1	0	0	0	2	0	0	0	10
10/3	7.0	0	49	14	3	2	6	1	0	0	2	0	0	0	1	1	0	3	82
10/4	6.5	0	38	2	7	0	8	7	0	0	1	0	0	0	3	0	0	11	77
10/5	6.5	0	18	0	0	0	8	4	0	0	3	3	0	0	0	0	0	13	49
10/6	4.0	0	8	1	0	0	3	1	0	0	0	0	0	0	0	0	0	0	13
10/7	4.0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	2	0	3
10/8	7.0	0	13	0	2	0	6	8	0	2	0	6	0	0	7	6	8	2	60
10/9	2.0	0	0	0	2	0	0	1	0	0	0	0	0	0	2	0	0	1	6
10/10	2.0	0	14	0	0	0	7	1	0	0	0	4	0	0	2	0	0	2	30
10/11	4.8	0	2	0	2	0	2	0	0	0	0	2	0	0	1	0	0	1	10
10/12	5.0	0	6	0	1	0	5	1	0	0	0	0	0	0	0	1	0	0	14
10/13	6.5	1	35	0	4	1	1	2	0	1	0	12	0	0	0	1	0	0	58
10/14	7.5	0	18	1	3	0	2	1	0	0	0	3	0	0	0	0	0	2	30
10/15	6.5	0	37	1	1	0	2	1	0	1	0	5	0	0	1	0	1	5	55
10/18	5.5	0	2	1	1	0	7	0	0	0	0	1	0	0	0	0	1	1	14
10/19	7.0	0	31	0	4	1	11	3	0	0	0	13	0	0	1	0	0	4	68
10/20	5.5	1	27	0	0	2	9	3	0	0	0	5	0	0	0	0	1	4	52
10/21	6.5	0	51	0	3	0	9	5	0	2	0	10	0	0	1	0	2	1	84
10/22	2.8	0	0	1	0	0	3	0	0	0	0	0	0	0	0	0	0	0	4
10/23	5.5	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	2
10/25	7.0	0	2	0	0	0	2	0	0	0	0	1	0	0	0	0	1	0	6
10/26	7.0	0	21	0	12	0	1	4	0	0	0	11	0	0	1	0	2	1	53
11/3	1.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11/11	3.3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11/16	4.0	0	2	0	2	0	0	0	0	0	0	6	0	0	0	0	0	0	10
64	**390.5**	**7**	**404**	**133**	**148**	**10**	**359**	**114**	**0**	**12**	**2832**	**85**	**0**	**0**	**141**	**52**	**34**	**152**	**4484**

Other: 9/20 1 Mississippi Kite

Pinnacle Rock Fall 2019 - Medford, Massachusetts

Date	HRS	BV	TV	OS	BE	NH	SS	CH	NG	RS	BW	RT	RL	GE	AK	ML	PG	UR	TOTAL
9/23	3.3	0	0	0	0	0	1	0	0	0	0	0	0	0	1	0	0	0	2
9/27	7.5	0	0	2	0	0	1	0	0	0	0	0	0	0	0	0	0	0	3
9/29	7.3	0	0	1	3	0	2	1	0	0	0	0	0	0	0	2	0	4	13
10/5	2.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1
10/12	3.3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10/13	8.3	0	0	0	1	0	4	0	0	0	0	0	0	0	0	0	0	2	7
10/15	2.3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10/17	2.3	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1
10/18	7.5	0	0	2	3	0	5	0	0	0	0	0	0	0	1	0	0	0	11
10/19	4.5	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1
10/23	6.0	0	0	0	1	0	3	4	0	0	0	0	0	0	1	0	1	1	11
10/26	3.5	0	1	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	2
11/1	6.5	0	0	0	2	0	2	0	0	0	0	2	0	0	0	0	0	1	7
11/2	6.0	0	1	0	0	0	1	1	0	0	0	1	0	0	0	0	1	0	5
11/6	8.3	0	2	0	2	0	2	2	0	0	0	4	0	0	0	1	0	1	14
11/8	6.5	0	0	0	0	1	0	0	0	0	0	6	0	0	0	0	1	0	8
11/9	5.5	0	0	0	5	0	0	1	0	0	0	5	0	0	0	0	0	0	11
11/13	5.5	0	1	0	0	0	0	0	0	1	0	6	0	0	0	0	0	0	8
18	**95.8**	**0**	**5**	**5**	**18**	**1**	**22**	**9**	**0**	**1**	**0**	**25**	**0**	**0**	**3**	**3**	**3**	**10**	**105**

Barre Falls, Fall 2019 - Barre, Massachusetts

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	0	1	0	0	2	0	0	0	11	0	0	0	0	0	0	1	15
9/9	6.0	0	0	0	1	0	1	0	0	0	11	0	0	0	0	0	1	2	16
9/10	5.5	0	0	1	1	0	2	0	0	0	3	0	0	0	0	0	0	0	7
9/13	6.0	0	0	9	2	0	6	2	0	0	43	0	0	0	0	0	0	1	63
9/14	3.3	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1
9/15	6.0	0	0	1	0	0	5	0	0	1	4	0	0	0	1	1	0	0	13
9/16	6.5	0	0	1	1	0	3	0	0	0	37	0	0	0	0	0	0	3	45
9/17	6.0	0	0	3	1	0	3	0	0	0	93	0	0	0	3	0	0	0	103
9/18	6.0	0	0	1	1	0	4	0	0	0	44	0	0	0	0	1	0	1	52
9/19	5.0	0	0	1	0	0	2	0	0	0	4	0	0	0	0	0	0	0	7
9/21	5.0	0	0	0	0	0	1	0	0	0	5	0	0	0	0	0	0	1	7
9/22	4.0	0	0	2	1	0	2	3	0	0	1	0	0	0	2	0	0	0	11
9/24	6.0	0	0	2	0	0	4	0	0	0	5	1	0	0	2	1	1	1	17
9/25	6.0	0	0	1	1	1	6	1	0	0	4	0	0	0	2	0	0	0	16
9/27	6.5	0	0	2	1	1	7	2	0	1	22	0	0	0	2	0	0	0	38
9/28	5.0	0	0	1	0	0	3	0	0	0	2	0	0	0	0	1	1	0	8
9/29	5.0	0	0	3	1	0	16	3	0	0	5	1	0	0	0	0	0	2	31
10/3	3.0	0	0	1	1	0	4	0	0	0	1	0	0	0	0	0	1	1	9
10/4	4.0	0	0	0	0	0	10	3	0	0	0	1	0	0	2	1	0	0	17
10/5	5.5	0	28	0	0	0	4	1	0	0	0	0	0	0	1	0	0	0	34
10/8	5.5	0	6	0	0	1	12	3	0	0	0	5	0	0	0	2	0	1	30
10/13	6.0	0	3	1	1	0	2	0	0	0	0	1	0	0	1	0	0	1	10
10/14	4.5	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
10/15	5.5	0	18	0	1	0	5	1	0	0	0	0	0	0	0	0	0	0	25
10/18	4.5	0	8	0	2	0	7	0	0	0	0	4	0	1	0	0	0	2	24
10/19	5.5	0	5	0	1	0	1	0	0	0	0	4	0	0	1	0	0	1	13
10/20	4.0	0	5	0	0	0	0	1	0	0	0	1	0	0	1	0	0	0	8
10/21	5.0	0	10	0	0	0	3	0	0	0	0	3	0	0	0	0	0	0	16
10/23	4.5	0	2	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	4
10/24	3.5	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	2
10/26	5.5	0	1	0	5	1	2	0	0	0	0	2	0	1	0	1	0	1	14
31	**160.3**	**0**	**88**	**31**	**22**	**4**	**120**	**22**	**0**	**2**	**295**	**23**	**0**	**2**	**18**	**8**	**4**	**19**	**658**

Shatterack Mountain Fall 2019 - Russell, Massachusetts

Date	HRS	BV	TV	OS	BE	NH	SS	CH	NG	RS	BW	RT	RL	GE	AK	ML	PG	UR	TOTAL
9/6	6.0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
9/7	6.5	0	0	3	6	0	11	0	0	0	17	0	0	0	1	1	0	0	39
9/8	6.0	0	0	3	7	0	6	0	0	0	85	0	0	0	5	0	1	0	107
9/9	5.5	0	0	0	7	0	2	0	0	0	26	0	0	0	0	0	0	0	35
9/10	5.8	0	0	1	1	0	1	0	0	0	3	0	0	0	0	0	0	0	6
9/11	6.2	0	0	4	4	1	4	0	0	0	9	0	0	0	1	0	1	0	24
9/12	0.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9/13	6.0	0	0	1	5	1	5	0	0	1	80	0	0	0	3	0	0	0	96
9/14	1.8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9/15	7.3	0	0	1	1	0	12	2	0	0	88	0	0	0	3	0	0	0	107
9/16	5.8	0	0	1	2	1	8	1	0	0	441	0	0	0	1	0	0	0	455
9/17	6.0	0	0	0	1	0	0	0	0	0	531	0	0	0	0	0	0	0	532
9/18	6.6	0	2	7	2	0	14	0	0	0	1165	0	0	1	0	0	0	0	1191
9/19	5.0	0	0	0	0	0	2	0	0	0	17	0	0	0	0	0	0	0	19
9/20	6.5	0	0	4	1	0	25	8	0	0	48	0	0	0	18	2	0	0	106
9/21	4.3	0	0	0	0	0	2	1	0	0	2	0	0	0	0	0	0	0	5
9/22	0.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9/23	0.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9/24	6.0	0	8	1	9	1	11	2	0	0	24	0	0	0	3	0	1	0	60
9/25	6.0	0	1	2	5	0	14	5	0	0	19	0	0	0	6	1	0	0	53
9/26	0.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9/27	5.0	0	0	1	5	0	2	0	0	3	5	0	0	0	2	0	0	0	18
9/28	0.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9/29	5.5	0	0	0	0	0	5	0	0	0	0	0	0	0	1	0	0	0	6
9/30	0.1	0	0	0	1	1	5	0	0	0	0	0	0	0	1	0	0	0	8
10/1	5.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10/4	6.8	0	95	3	1	4	42	6	0	2	5	0	0	0	13	2	0	6	179
10/5	4.5	0	9	0	0	0	5	0	0	1	0	2	0	0	0	0	0	0	17
10/8	5.3	0	13	0	0	3	9	3	0	0	0	0	0	0	2	4	0	0	34
10/10	4.5	0	25	0	1	1	4	0	0	2	0	2	0	1	0	0	0	2	38
10/13	4.8	0	2	0	0	0	3	0	0	0	0	0	0	0	0	0	0	0	5
10/18	5.8	0	28	0	0	2	13	7	0	4	0	1	0	0	1	2	1	1	60
10/23	5.0	0	11	0	3	0	5	1	0	0	0	1	0	0	0	1	0	0	22
33	**149.6**	**0**	**194**	**32**	**62**	**16**	**210**	**36**	**0**	**13**	**2565**	**6**	**0**	**2**	**61**	**13**	**4**	**9**	**3223**

Blueberry Hill 2019 - Southwick, Massachusetts

Date	HRS	BV	TV	OS	BE	NH	SS	CH	NG	RS	BW	RT	RL	GE	AK	ML	PG	UR	TOTAL
9/15	7.0	0	0	1	3	0	14	2	0	0	485	0	0	0	2	0	0	2	509

Poquonock Fall 2019 - Poquonock, Connecticut

Date	HRS	BV	TV	OS	BE	NH	SS	CH	NG	RS	BW	RT	RL	GE	AK	ML	PG	UR	TOTAL
8/17	1.8	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	2
8/18	2.7	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
8/20	4.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8/21	2.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8/22	5.5	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1	0	0	2
8/23	5.3	0	0	1	2	0	0	0	0	0	0	0	0	0	0	0	0	0	3
8/24	5.0	1	0	1	0	0	0	0	0	0	4	0	0	0	0	0	0	0	6
8/25	4.0	0	0	2	1	0	0	0	0	0	4	0	0	0	0	0	0	1	8
8/27	1.0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1
8/28	1.8	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
8/29	1.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8/31	2.0	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3
9/1	2.8	0	0	0	1	0	0	1	0	0	3	0	0	0	0	0	0	0	5
9/3	2.3	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1
9/4	2.0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	2
9/5	3.0	1	0	2	0	0	0	0	0	0	1	0	0	0	0	0	0	0	4
9/6	4.0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	1	0	0	2
9/7	3.8	1	0	0	0	0	0	0	0	1	3	0	0	0	1	0	0	0	6
9/8	4.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9/9	5.0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	2	3
9/13	4.7	0	1	3	0	0	1	0	0	2	24	0	0	0	0	0	0	1	32
9/15	3.5	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1
9/16	4.0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1
9/17	5.5	0	0	0	0	0	1	0	0	0	24	0	0	0	1	0	0	0	26
9/18	3.5	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	2
9/19	5.1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1
9/20	4.9	0	3	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	4
9/21	5.2	0	1	0	0	0	1	0	0	0	2	0	0	0	0	0	0	0	4
9/22	4.9	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	2
9/23	2.6	0	1	0	1	0	0	0	0	0	0	0	0	0	1	0	0	0	3
9/24	8.0	0	0	0	0	0	1	0	0	0	3	0	0	0	0	0	0	0	4
9/25	6.0	0	1	0	2	0	0	0	0	0	7	0	0	0	1	0	0	1	12
9/26	6.3	0	0	0	3	0	2	0	0	0	0	0	0	0	0	0	0	0	5
9/27	3.9	2	0	0	2	0	0	0	0	0	2	0	0	0	0	0	0	0	6
9/28	3.8	0	0	0	0	0	0	0	0	0	0	4	0	1	0	0	0	0	5
9/29	4.1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
9/30	3.1	0	2	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	3
10/2	6.3	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1
10/4	7.3	0	14	0	0	1	1	0	0	0	7	1	0	0	1	4	1	0	30
10/8	2.6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10/10	3.6	0	2	0	0	0	0	1	0	3	0	1	0	0	2	1	0	0	10
10/11	3.0	0	20	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	20
10/12	7.5	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3
10/16	3.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11/3	3.0	0	0	0	0	0	0	0	0	2	0	3	0	0	0	0	0	0	5
11/6	0.6	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1
11/8	3.6	0	2	0	0	0	0	0	0	1	0	1	0	0	0	0	0	1	5
47	**182.6**	**7**	**51**	**14**	**13**	**2**	**13**	**3**	**0**	**9**	**90**	**12**	**0**	**1**	**8**	**7**	**1**	**7**	**238**

Middle School Fall 2019 - Torrington, Connecticut

Date	HRS	BV	TV	OS	BE	NH	SS	CH	NG	RS	BW	RT	RL	GE	AK	ML	PG	UR	TOTAL
9/8	2.0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	2
9/9	4.0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1	2
9/11	3.0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1
9/13	2.3	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	2
9/15	4.5	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	2
9/16	5.5	0	0	1	1	0	3	2	0	0	241	0	0	0	1	0	1	1	251
9/17	5.0	0	0	0	0	0	0	1	0	0	3	0	0	0	0	0	0	0	4
9/18	2.8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9/19	3.3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1
9/20	2.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9/21	3.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11	**37.3**	**0**	**0**	**1**	**2**	**0**	**4**	**3**	**0**	**0**	**247**	**1**	**0**	**0**	**3**	**0**	**1**	**3**	**265**

Mohonk Preserve Fall 2019 - New Paltz, New York

Date	HRS	BV	TV	OS	BE	NH	SS	CH	NG	RS	BW	RT	RL	GE	AK	ML	PG	UR	TOTAL
8/24	1.8	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
8/25	3.0	0	0	0	1	0	0	1	0	0	1	0	0	0	0	1	0	0	4
8/27	2.3	0	0	1	0	0	0	0	0	0	0	0	0	0	1	0	0	0	2
8/29	6.3	0	0	1	2	1	1	1	0	0	2	0	0	0	1	0	0	0	9
9/4	3.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9/5	7.0	0	0	2	3	2	1	0	0	1	17	3	0	0	3	0	1	1	34
9/6	3.0	0	0	0	4	0	0	0	0	0	0	0	0	0	0	0	0	0	4
9/9	5.0	0	0	1	5	0	4	0	0	1	33	0	0	0	1	0	0	0	45
9/10	4.5	0	11	1	2	0	1	0	0	0	4	0	0	0	0	0	0	0	19
9/11	7.0	0	0	2	2	0	4	0	1	0	7	1	0	0	0	0	0	1	18
9/12	1.8	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1
9/13	8.0	0	0	8	21	3	10	4	0	1	347	1	0	0	9	1	3	0	408
9/15	7.0	0	1	2	5	0	5	3	0	0	15	1	0	0	2	0	0	0	34
9/17	6.5	0	0	1	6	0	6	1	0	0	47	0	0	0	6	1	1	0	69
9/18	6.5	0	0	4	3	0	5	3	0	0	45	0	0	0	3	1	1	0	65
9/19	6.0	0	0	0	4	4	4	5	0	0	151	2	0	0	2	0	0	0	172
9/20	6.0	0	0	2	5	1	5	3	0	0	319	2	0	0	4	1	0	1	343
9/21	6.0	0	0	0	1	0	7	6	0	1	18	1	0	0	3	1	1	1	40
9/24	6.0	0	0	3	8	1	5	0	0	0	3	0	0	0	6	0	0	0	26
9/25	6.0	0	0	2	1	0	4	0	0	1	2	2	0	0	4	0	1	1	18
9/26	1.5	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	1	0	3
9/27	4.5	0	0	3	7	0	32	6	0	2	6	14	0	0	6	4	2	0	82
9/28	6.0	0	0	2	3	1	9	3	0	0	7	9	0	0	3	2	3	0	42
9/29	4.0	0	0	2	2	0	7	1	0	1	0	0	0	0	0	1	0	0	14
10/1	4.0	0	0	3	6	0	7	2	0	1	3	2	0	0	0	1	1	0	26
10/2	3.8	0	47	0	6	0	4	1	0	0	1	0	0	0	2	0	1	0	62
10/4	6.5	0	33	8	14	6	41	21	0	3	0	1	0	0	35	3	1	2	168
10/5	6.5	0	8	0	4	0	17	1	0	1	1	2	0	0	4	0	1	1	40
10/8	6.0	0	0	0	5	1	22	9	0	1	0	0	0	0	2	1	0	2	43
10/9	4.3	0	0	0	0	0	5	6	0	1	0	1	0	0	4	1	0	0	18
10/10	5.0	0	0	0	0	0	5	2	0	0	0	0	0	0	0	0	0	1	8
10/11	3.0	0	0	0	4	1	6	1	0	1	0	1	0	0	0	1	1	1	17
10/14	4.0	0	10	1	3	1	41	7	0	2	0	3	0	0	0	2	0	0	70
10/15	6.0	0	37	0	2	0	8	3	0	2	0	3	0	0	0	0	0	1	56
10/16	3.0	0	0	0	0	0	3	1	0	0	0	0	0	0	0	0	0	0	4
10/18	5.0	0	0	0	1	0	2	1	0	1	0	0	0	0	1	0	0	0	6
10/23	6.0	0	0	0	6	1	73	4	0	0	0	3	0	0	2	0	1	0	90
10/28	4.0	0	25	0	2	1	0	0	0	0	0	1	0	0	0	0	0	0	29
11/1	3.0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1
11/3	5.0	0	0	0	5	0	7	3	0	4	0	10	0	0	0	0	1	0	30
11/4	4.0	2	2	0	4	2	4	2	0	5	0	20	0	0	0	0	0	0	41
11/11	4.0	0	0	0	2	2	1	0	0	4	0	5	0	0	0	0	1	0	15
11/13	4.5	0	0	0	1	0	0	0	0	2	0	4	0	1	0	0	1	0	9
11/20	2.0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	1
44	**208.0**	**2**	**174**	**50**	**151**	**28**	**357**	**101**	**1**	**38**	**1030**	**92**	**0**	**1**	**104**	**22**	**23**	**13**	**2187**

Chestnut Hill Fall 2019 - Litchfield, Connecticut

Date	HRS	BV	TV	OS	BE	NH	SS	CH	NG	RS	BW	RT	RL	GE	AK	ML	PG	UR	TOTAL
9/5	2.0	0	0	0	0	0	0	0	0	0	16	0	0	0	0	0	0	0	16
9/7	1.8	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	2
9/8	1.3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9/9	5.0	0	0	2	0	0	0	0	0	0	42	0	0	0	0	0	0	0	44
9/10	1.3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9/11	2.5	0	0	1	0	1	0	0	0	0	5	0	0	0	0	0	0	0	7
9/13	2.8	0	0	1	0	0	3	0	0	0	15	0	0	0	1	0	0	0	20
9/15	6.3	0	0	2	1	0	3	1	0	0	346	0	0	0	0	0	0	0	353
9/16	4.3	0	0	1	6	0	5	2	0	0	935	0	0	0	0	0	0	0	949
9/17	4.5	0	0	1	0	0	13	0	0	0	59	0	0	0	1	0	0	0	74
9/18	7.3	0	0	2	1	0	2	2	0	0	107	0	0	0	2	1	0	1	118
9/19	5.7	0	0	0	0	0	1	0	0	0	6	0	0	0	0	0	0	0	7
9/20	5.5	0	0	2	0	0	6	1	0	0	251	0	0	0	2	0	0	2	264
9/21	3.5	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	2
9/22	4.8	0	0	0	0	0	0	0	0	0	3	0	0	0	0	0	0	0	3
9/23	2.0	0	0	0	0	0	2	0	0	0	0	0	0	0	1	0	0	0	3
9/24	2.5	0	0	1	0	0	2	0	0	0	5	0	0	0	0	0	0	0	8
9/25	3.3	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	2
18	**65.9**	**0**	**0**	**14**	**9**	**1**	**38**	**7**	**0**	**0**	**1792**	**0**	**0**	**0**	**7**	**1**	**0**	**3**	**1872**

Botsford Hill Fall 2019 - Bridgewater, Connecticut

Date	HRS	BV	TV	OS	BE	NH	SS	CH	NG	RS	BW	RT	RL	GE	AK	ML	PG	UR	TOTAL
9/5	1.5	0	0	0	2	0	0	0	0	0	5	0	0	0	0	0	0	0	7
9/7	2.3	0	0	0	0	0	0	0	0	0	6	0	0	0	0	0	0	1	7
9/8	3.3	0	0	2	2	0	1	0	0	0	12	0	0	0	1	0	0	0	18
9/9	3.5	0	0	4	1	0	3	0	0	0	71	0	0	0	0	0	0	0	79
9/10	1.0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1
9/11	3.0	0	0	0	1	0	2	0	0	0	5	0	0	0	1	0	0	0	9
9/12	0.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9/13	5.8	0	0	1	9	0	12	0	0	0	40	0	0	1	1	0	0	4	68
9/14	1.3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9/15	7.3	0	0	1	1	0	5	0	0	0	270	0	0	0	1	1	0	6	285
9/16	6.0	0	0	3	3	0	12	1	0	0	1142	0	0	0	0	0	0	1	1162
9/17	6.0	0	0	1	7	0	17	1	0	0	642	1	0	0	2	0	0	1	672
9/18	5.3	0	0	1	3	0	2	0	0	0	35	0	0	0	2	0	0	0	43
9/19	3.3	0	0	0	0	0	1	0	0	0	11	0	0	0	0	0	0	1	13
14	**49.3**	**0**	**0**	**13**	**29**	**0**	**55**	**2**	**0**	**0**	**2240**	**1**	**0**	**1**	**8**	**1**	**0**	**14**	**2364**

Bear Mountain Fall 2019 - Fort Montgomery, New York

Days	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	3	1	0	1	0	0	0	6	0	0	0	0	0	0	0	11
9/3	3.0	0	0	3	0	0	1	0	0	0	2	0	0	0	0	0	0	0	6
9/4	5.0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	2
9/5	5.0	0	0	3	2	0	0	0	0	0	0	0	0	0	0	0	0	0	5
9/6	3.5	0	0	0	4	0	3	0	0	0	1	0	0	0	0	0	1	0	9
9/7	2.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9/9	6.5	0	0	0	1	0	6	0	0	0	43	0	0	0	2	0	0	0	52
9/10	2.5	0	0	0	0	0	2	0	0	0	0	1	0	0	0	0	0	0	3
9/11	5.8	0	0	4	10	0	1	4	0	0	8	2	0	0	0	0	0	0	29
9/12	3.5	0	0	2	0	0	0	0	0	0	0	0	0	0	2	0	0	0	4
9/13	5.0	0	0	3	6	0	2	0	0	0	24	5	0	0	1	0	2	1	44
9/15	5.0	0	0	4	2	0	0	3	0	0	9	0	0	0	3	0	0	0	21
9/16	7.3	0	0	4	8	0	2	2	0	1	3764	0	0	0	4	1	0	0	3786
9/17	5.5	0	0	1	1	0	2	0	0	0	52	0	0	0	0	0	0	1	57
9/18	4.3	0	0	1	7	0	5	2	0	0	18	0	0	0	4	0	0	0	37
9/19	2.8	0	0	0	8	0	1	1	0	2	16	0	0	0	0	0	1	1	30
9/20	5.5	0	0	1	6	0	3	0	0	0	1	0	0	0	0	0	0	0	11
9/23	4.5	0	0	3	3	0	3	2	0	0	1	1	0	0	2	1	0	1	17
9/24	5.5	0	0	2	0	0	1	0	0	0	4	0	0	0	0	0	0	0	7
9/25	3.0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1
9/27	6.0	0	0	2	3	0	13	6	0	1	93	0	0	0	0	0	1	1	120
9/28	3.0	0	0	1	1	0	10	0	0	0	6	0	0	0	2	1	1	0	22
9/30	5.3	0	0	3	3	1	18	3	0	1	1	0	0	0	5	1	3	0	39
10/1	4.3	0	0	0	2	1	4	0	0	0	2	2	0	0	1	0	1	3	16
10/2	2.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10/4	6.0	0	0	0	1	1	2	0	0	0	0	2	0	0	0	0	1	0	7
10/5	3.0	0	0	0	0	0	1	0	0	2	0	4	0	0	0	0	0	0	7
10/8	3.0	0	0	0	1	0	6	2	0	0	0	1	0	0	0	0	1	0	11
10/10	1.5	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1
10/11	1.0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	2
10/14	4.0	0	0	1	0	0	1	0	0	0	0	4	0	0	0	1	0	0	7
10/15	5.5	0	0	0	2	1	1	1	0	1	0	3	0	0	0	0	0	1	10
10/16	3.0	0	0	1	1	0	3	2	0	0	0	0	0	0	0	0	0	0	7
10/18	3.8	0	0	0	0	0	3	0	0	0	0	0	0	0	1	0	0	0	4
10/21	3.8	0	0	0	3	0	6	0	0	1	0	2	0	0	0	0	0	1	13
10/23	5.0	0	0	0	0	0	5	0	0	2	0	3	0	0	0	0	0	0	10
10/24	3.0	0	0	0	2	0	5	0	0	0	0	1	0	0	0	0	0	0	8
10/25	3.8	0	0	0	0	0	1	1	0	2	0	2	0	0	1	0	0	0	7
10/28	4.0	0	0	0	0	0	0	0	0	0	0	3	0	0	0	0	0	0	3
11/2	1.5	0	0	0	0	0	0	1	0	1	0	1	0	0	0	0	1	0	4
11/3	3.0	1	0	0	0	0	1	0	0	16	0	8	0	0	0	0	0	0	26
11/4	5.3	0	0	0	0	1	0	0	0	8	0	11	0	0	0	0	1	2	23
11/5	1.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11/6	3.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11/11	4.5	0	0	0	0	0	0	0	0	0	0	3	0	0	0	0	0	1	4
11/14	1.8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11/15	2.3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11/25	2.0	0	0	0	0	0	0	0	0	0	0	3	0	0	0	0	0	0	3
48	**185.5**	**1**	**0**	**43**	**79**	**5**	**116**	**30**	**0**	**38**	**4051**	**63**	**0**	**0**	**28**	**5**	**14**	**13**	**4486**

Mount Peter Fall 2019 - Warwick, New York

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	4	0	1	1	0	0	0	9	0	0	0	0	0	0	0	15
9/2	4.0	0	0	0	1	0	0	0	0	0	0	1	0	0	0	0	1	0	3
9/3	7.0	0	0	1	2	0	0	0	0	0	9	0	0	0	0	0	1	0	13
9/4	5.0	0	0	3	0	0	0	0	0	0	1	0	0	0	0	0	0	0	4
9/5	8.0	0	0	3	2	0	0	1	0	1	3	0	0	0	0	0	0	0	10
9/6	6.8	0	0	10	2	1	0	0	0	0	9	0	0	0	0	0	0	0	22
9/7	8.0	0	0	8	2	4	8	2	0	1	49	0	0	0	1	2	0	3	80
9/8	8.8	0	0	7	12	0	7	1	0	1	156	0	0	0	6	1	1	0	192
9/9	8.0	0	1	5	3	1	18	2	0	0	98	0	0	0	0	0	1	2	131
9/10	7.0	10	0	1	0	0	4	0	0	0	1	0	0	0	0	0	0	0	16
9/11	7.0	0	0	9	2	0	6	0	0	4	14	0	0	0	0	0	0	0	35
9/12	5.8	0	0	0	0	0	2	0	0	0	1	0	0	0	0	0	0	1	4
9/13	8.5	1	1	10	3	3	7	1	0	0	128	0	0	0	2	1	0	2	159
9/14	6.5	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0	0	0	2
9/15	8.5	0	4	4	12	0	18	2	0	0	271	0	0	0	10	0	0	1	322
9/16	9.0	0	0	2	1	0	6	1	0	0	1961	0	0	0	3	1	0	0	1975
9/17	8.5	0	0	1	2	1	3	1	0	1	738	0	0	0	1	0	0	1	749
9/18	9.8	0	1	11	3	0	22	6	0	0	2096	0	0	0	1	0	0	0	2140
9/19	9.3	0	0	1	5	0	20	0	0	0	805	0	0	0	0	0	0	0	831
9/20	9.3	0	0	3	5	0	15	4	0	0	222	0	0	0	5	0	0	0	254
9/21	8.0	0	0	1	0	0	8	1	0	0	215	0	0	0	1	0	1	0	227
9/22	7.5	0	1	2	1	0	28	2	0	0	101	0	0	0	0	0	0	0	135
9/23	7.0	0	0	2	1	0	21	2	0	3	13	0	0	0	3	0	0	0	45
9/24	8.0	0	3	3	4	0	13	1	0	0	22	1	0	0	14	0	0	0	61
9/25	7.3	0	0	1	1	0	20	0	0	0	6	0	0	0	8	0	0	0	36
9/26	6.0	0	0	1	0	0	8	1	0	0	78	0	0	0	0	0	0	1	89
9/27	8.0	0	0	2	2	0	31	2	0	0	256	2	0	0	5	1	1	2	304
9/28	7.5	0	0	12	3	0	35	3	0	0	81	0	0	0	0	0	1	4	139
9/29	7.0	0	0	1	0	0	13	2	0	0	7	0	0	0	0	0	0	0	23
9/30	7.0	0	0	2	0	0	18	0	0	1	3	0	0	0	3	0	0	0	27
10/1	7.5	0	0	2	2	0	8	2	0	0	2	1	0	0	2	0	0	0	19
10/2	8.0	0	3	2	0	0	7	1	0	3	4	0	0	0	1	0	0	0	21
10/4	7.0	0	4	6	6	1	38	1	0	3	0	0	0	0	5	0	0	2	66
10/5	8.0	0	0	2	1	0	45	1	0	0	0	4	0	0	0	0	0	0	53
10/6	7.0	0	0	0	0	0	21	2	0	0	0	0	0	0	0	0	0	0	23
10/7	5.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10/8	4.0	16	1	0	0	0	4	0	0	0	0	0	0	0	0	0	0	0	21
10/9	3.3	0	0	0	0	0	2	0	0	1	0	0	0	0	1	0	0	0	4
10/10	6.0	0	0	0	1	0	17	1	0	1	0	1	0	0	0	0	0	1	22
10/11	6.5	0	7	0	3	0	10	0	0	2	0	0	0	0	0	0	0	0	22
10/12	7.0	0	0	0	6	2	8	1	0	1	0	3	0	0	1	0	0	0	22
10/13	7.0	1	2	0	2	0	16	3	0	1	0	6	0	0	0	0	0	1	32
10/14	7.0	13	0	0	1	0	7	2	0	0	0	1	0	0	0	0	0	0	24
10/15	7.0	6	6	0	0	0	5	1	0	0	0	4	0	1	0	0	0	3	26
10/16	4.5	0	0	0	1	0	5	3	0	0	0	0	0	0	1	0	1	0	11
10/17	5.9	3	7	0	3	1	5	1	0	0	0	0	0	0	1	0	0	0	21
10/18	7.0	5	29	1	2	0	30	4	0	7	0	4	0	0	2	1	0	0	85
10/19	7.8	2	44	0	1	1	29	3	0	4	0	12	0	0	0	0	1	0	97
10/20	5.0	0	1	0	0	0	8	0	0	0	0	0	0	0	0	0	0	0	9
10/21	6.5	1	13	0	0	0	8	4	0	1	0	4	0	0	0	0	0	0	31
10/22	1.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10/23	8.0	7	47	0	4	1	33	2	0	1	0	4	0	0	3	1	0	0	103
10/24	6.5	7	14	0	0	0	3	0	0	1	0	9	0	0	0	0	0	0	34
10/25	5.5	7	9	0	0	0	5	1	0	0	0	1	0	0	0	0	0	0	23
10/26	7.0	3	123	0	2	0	11	3	0	20	0	7	0	0	2	0	1	0	172
10/27	1.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10/28	7.0	0	2	0	1	0	1	0	0	12	0	0	0	0	0	0	0	0	16
10/29	1.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10/30	3.0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1
11/1	8.0	0	26	0	9	0	10	3	0	0	0	6	0	0	1	0	0	0	55
11/2	7.5	14	11	0	4	0	1	1	0	9	0	33	0	2	0	0	0	2	77
11/3	7.8	25	16	0	30	2	10	2	0	18	0	60	0	1	1	0	2	0	167
11/4	6.5	0	1	0	1	1	5	0	0	14	0	20	0	0	0	0	0	0	42
11/5	4.0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
11/6	6.0	0	12	0	0	0	0	2	0	20	0	17	0	0	0	0	0	0	51
11/7	3.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11/8	7.0	4	21	0	2	3	5	2	0	25	0	160	0	0	0	0	0	1	223
11/9	6.3	3	1	0	0	0	0	0	0	10	0	10	0	2	0	0	0	0	26
11/10	3.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11/11	7.0	2	1	0	0	1	1	1	0	15	0	17	0	0	0	0	0	1	39
11/12	3.5	0	2	0	1	0	0	0	0	0	0	2	0	0	0	0	0	0	5
11/13	7.0	4	12	0	11	1	0	0	0	21	0	49	0	2	0	0	2	0	102
11/14	5.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11/15	7.0	2	0	0	0	1	2	0	0	1	0	4	0	1	0	0	0	0	11
74	**479.2**	**136**	**426**	**123**	**163**	**27**	**693**	**82**	**0**	**203**	**7360**	**443**	**0**	**9**	**85**	**8**	**14**	**28**	**9800**

Chestnut Ridge Fall 2019 - Bedford, New York

Date	HRS	BV	TV	OS	BE	NH	SS	CH	NG	RS	BW	RT	RL	GE	AK	ML	PG	UR	TOTAL
8/25	7.0	0	0	1	0	0	0	1	0	2	9	2	0	0	0	1	0	3	19
8/26	7.0	0	0	0	3	0	0	0	0	0	3	1	0	0	0	1	0	1	9
8/27	7.0	0	0	0	2	0	0	0	0	0	1	1	0	0	0	0	0	0	4
8/28	4.1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8/29	7.0	0	0	4	1	0	0	0	0	0	4	0	0	0	0	0	0	1	10
8/30	7.0	0	0	0	1	0	0	0	0	0	0	0	0	0	1	0	0	0	2
8/31	6.3	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	2
9/1	7.0	0	0	4	0	0	2	0	0	1	2	4	0	0	0	0	0	0	13
9/2	3.2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9/3	7.0	0	0	5	1	0	3	0	0	1	6	6	0	0	0	0	0	1	23
9/4	7.0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1
9/5	7.0	0	0	6	1	0	1	0	0	0	7	0	0	0	1	0	0	1	17
9/6	8.0	0	0	9	2	0	5	3	0	0	2	0	0	0	2	0	0	0	23
9/7	8.0	0	0	2	3	1	2	1	0	0	7	0	0	0	0	2	0	0	18
9/8	8.0	0	0	6	1	2	6	2	0	2	64	2	0	0	1	1	0	6	93
9/9	8.0	0	2	13	1	1	21	2	0	5	120	2	0	0	5	1	0	7	180
9/10	8.0	0	0	1	0	1	3	0	0	0	1	0	0	0	1	4	0	0	11
9/11	7.8	0	0	3	1	0	1	1	0	0	7	0	0	0	1	0	0	0	14
9/12	7.5	0	0	3	0	3	1	0	0	0	0	0	0	0	0	1	0	0	8
9/13	8.0	0	2	9	3	3	8	0	0	1	20	0	0	0	6	4	0	4	60
9/14	8.0	0	0	2	0	0	2	0	0	0	0	0	0	0	1	0	0	0	5
9/15	9.0	0	1	5	7	1	14	1	0	2	452	2	0	0	5	4	1	13	508
9/16	8.5	0	0	6	1	0	66	3	0	1	876	0	0	0	7	4	0	4	968
9/17	8.0	0	2	3	5	0	53	3	0	0	944	0	0	0	10	0	1	5	1026
9/18	8.0	0	0	12	5	0	68	4	0	4	44	1	0	0	12	3	1	8	162
9/19	8.0	0	0	2	1	1	20	1	0	0	2	0	0	0	5	1	0	1	34
9/20	8.0	0	0	2	2	0	46	3	0	1	80	0	0	0	7	0	0	1	142
9/21	8.0	0	0	5	2	2	85	1	0	1	135	1	0	0	15	2	0	2	251
9/22	8.0	0	0	6	2	1	57	0	0	0	1	0	0	0	17	3	0	0	87
9/23	8.0	0	0	7	2	3	14	1	0	1	1	0	0	0	9	9	1	1	49
9/24	8.0	0	0	9	3	1	69	0	0	1	32	1	0	0	14	5	1	4	140
9/25	8.0	0	0	0	3	0	75	1	0	2	12	0	0	0	12	0	0	3	108
9/26	6.9	0	26	8	1	0	36	1	0	1	447	0	0	0	17	2	1	4	544
9/27	8.0	0	0	10	3	1	47	0	0	1	45	3	0	0	9	3	1	4	127
9/28	8.0	0	7	33	1	0	34	0	0	0	11	3	0	0	9	1	1	1	101
9/29	8.0	0	3	5	4	0	32	2	0	0	12	1	0	0	3	0	0	4	66
9/30	8.0	0	19	13	2	4	63	17	0	0	3	3	0	0	12	3	3	3	145
10/1	8.0	0	0	6	2	0	11	3	0	0	0	1	0	0	4	3	2	1	33
10/2	8.0	0	10	3	2	1	11	2	0	0	3	0	0	0	2	2	1	0	37
10/3	0.8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10/4	8.8	0	6	9	8	5	84	9	0	0	7	1	0	0	15	2	1	6	153
10/5	8.0	0	129	1	0	0	64	9	0	4	0	11	0	0	6	3	1	6	234
10/6	8.0	0	5	0	0	0	9	5	0	0	0	0	0	0	1	1	3	0	24
10/7	8.0	0	3	0	2	0	8	0	0	0	0	0	0	0	0	1	0	0	14
10/8	7.8	0	9	4	4	0	22	10	0	1	0	0	0	0	4	1	0	1	56
10/9	0.8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10/10	8.0	0	89	2	3	2	44	14	0	3	1	2	0	0	3	5	0	3	171
10/11	8.0	0	47	0	0	0	25	5	0	0	1	0	0	0	2	2	1	1	84
10/12	8.0	0	38	0	1	3	15	11	0	0	0	2	0	0	3	0	0	0	73
10/13	8.0	0	13	1	3	3	30	24	0	4	1	3	0	0	4	0	0	2	88
10/14	8.0	2	15	2	0	0	8	7	0	1	0	0	0	0	2	1	0	0	38
10/15	8.0	0	10	1	0	0	6	7	0	1	0	0	0	0	0	1	0	3	29
10/16	6.3	0	3	0	0	1	9	7	0	1	0	0	0	0	0	1	1	0	23
10/17	8.0	8	68	0	0	0	4	3	0	0	0	0	0	0	1	1	0	0	85
10/18	8.0	1	46	1	3	2	28	12	0	4	0	2	0	0	1	4	1	3	108
10/19	8.0	1	145	0	3	1	27	10	0	4	0	3	0	0	1	7	0	3	205
10/20	4.5	0	30	5	1	1	21	2	0	5	0	1	0	0	2	3	0	0	71
10/21	8.0	0	122	0	0	0	25	14	0	11	0	0	0	0	2	2	1	5	182
10/22	2.8	0	0	0	0	1	2	0	0	0	0	0	0	0	1	0	0	1	5
10/23	8.0	0	108	0	3	1	22	8	0	5	0	3	0	0	2	2	0	2	156
10/24	8.0	0	101	2	3	0	27	5	0	9	0	3	0	0	1	0	0	3	154
10/25	8.0	0	55	0	0	1	7	4	0	2	0	1	0	0	0	0	0	0	70
10/26	8.0	0	153	0	0	0	7	4	0	14	0	4	0	0	0	1	0	1	184
10/28	8.0	0	111	0	1	1	6	2	0	18	0	5	0	0	1	0	0	4	149
10/29	2.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10/30	2.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11/1	8.0	0	65	0	1	1	11	3	0	2	0	5	0	0	0	0	0	1	89
11/2	8.0	0	95	0	4	0	7	2	0	26	0	5	0	3	0	0	0	3	145
11/3	8.0	6	95	0	1	3	5	2	0	37	0	3	0	0	0	0	0	3	155
11/4	8.0	0	102	0	0	1	10	2	0	37	0	4	0	0	0	0	1	1	158
11/5	8.0	0	80	0	0	0	1	0	0	0	0	0	0	0	0	0	1	0	82
11/6	6.3	0	101	0	2	1	1	1	1	18	0	9	0	0	0	0	0	1	135
11/7	7.0	0	6	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	7
11/8	7.5	0	75	1	1	0	6	4	0	11	0	6	0	2	0	1	0	3	110
11/9	7.0	0	68	0	1	0	4	3	0	45	0	15	0	4	0	1	0	0	141
11/10	7.0	0	54	0	0	1	0	3	0	1	0	1	0	0	0	0	0	0	60
11/11	6.3	0	35	0	0	0	0	0	0	35	0	4	0	0	0	1	0	3	78
11/12	7.0	0	6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	6
11/13	7.0	0	54	0	6	1	3	1	0	38	0	16	0	0	0	0	0	3	122
11/14	7.0	0	86	0	1	1	4	0	0	9	0	3	0	0	0	0	0	1	105
11/15	7.0	2	54	0	2	1	2	1	0	32	0	8	0	0	0	0	0	2	104
11/16	7.0	0	31	0	3	1	1	0	0	12	0	4	0	0	0	0	0	0	52
11/17	7.0	0	45	0	3	0	0	1	0	5	0	2	0	0	0	0	0	0	56
11/19	7.0	0	14	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	14
11/20	6.5	2	44	0	4	0	1	0	0	3	0	0	0	0	0	0	0	0	54
11/21	6.0	0	16	0	3	0	1	0	0	9	0	3	0	0	0	0	0	3	35
11/22	4.8	0	54	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	55
11/23	6.0	2	23	0	0	0	0	0	0	4	0	2	0	0	0	0	0	0	31
11/25	6.0	5	8	0	1	0	0	0	0	1	0	1	0	0	0	0	0	0	16
89	**631.5**	**29**	**2589**	**233**	**137**	**59**	**1414**	**248**	**1**	**439**	**3363**	**168**	**0**	**9**	**240**	**101**	**25**	**151**	**9206**

Hook Mountain Fall 2019 - Nyack, New York

Date	HRS	BV	TV	OS	BE	NH	SS	CH	NG	RS	BW	RT	RL	GE	AK	ML	PG	UR	TOTAL
8/31	3.5	0	0	0	2	0	1	0	0	0	0	0	0	0	0	0	0	0	3
9/3	5.0	0	0	5	0	0	0	0	0	0	7	0	0	0	0	0	0	0	12
9/4	4.0	0	0	2	2	0	0	0	0	0	0	0	0	0	0	0	0	0	4
9/5	6.3	0	0	1	1	0	1	0	0	0	3	0	0	0	1	0	0	0	7
9/6	0.5	0	0	2	0	0	0	0	0	0	1	0	0	0	0	0	0	0	3
9/7	8.5	0	0	10	5	0	7	3	0	1	6	0	0	0	2	3	0	0	37
9/8	7.0	0	0	7	1	2	14	1	0	0	16	0	0	0	1	1	0	0	43
9/9	3.0	0	0	1	0	0	3	0	0	0	11	0	0	0	0	0	0	0	15
9/10	6.5	2	0	9	2	0	7	1	0	0	0	0	0	0	0	0	1	0	22
9/11	4.3	0	0	6	0	0	1	0	0	0	0	0	0	0	0	0	0	0	7
9/12	3.5	0	0	2	2	0	1	1	0	0	16	0	0	0	0	0	0	0	22
9/13	6.0	0	0	6	4	0	16	0	0	0	18	0	0	0	5	3	0	0	52
9/14	5.5	0	0	1	0	1	0	0	0	0	0	0	0	0	3	0	0	0	5
9/15	7.0	0	0	8	11	3	15	1	0	0	24	4	0	0	3	0	1	0	70
9/16	6.5	0	0	5	3	0	35	2	0	0	390	0	0	0	1	0	0	0	436
9/17	8.0	0	0	8	7	0	44	2	0	0	224	0	0	0	7	0	0	0	292
9/18	5.0	0	0	3	0	0	34	3	0	0	14	0	0	0	14	0	0	0	68
9/19	9.3	0	0	5	7	0	15	2	0	0	0	2	0	0	9	0	0	0	40
9/20	8.5	0	0	2	5	4	30	2	0	1	34	0	0	0	3	0	0	0	81
9/21	8.0	0	0	3	4	1	28	3	0	0	17	0	0	0	6	0	0	1	63
9/22	4.0	0	0	0	0	0	7	0	0	0	1	0	0	0	3	0	0	0	11
9/23	4.0	0	0	3	3	1	7	1	0	0	0	1	0	0	1	3	0	0	20
9/24	7.8	0	0	10	3	0	38	3	0	0	2	0	0	0	6	0	0	0	62
9/25	4.0	0	0	1	0	1	22	0	0	0	2	0	0	0	5	0	0	0	31
9/26	5.5	0	0	1	2	1	11	3	0	0	3	0	0	0	7	0	1	1	30
9/27	6.5	0	0	1	5	0	6	0	0	0	7	0	0	0	4	0	0	0	23
9/28	8.0	0	0	6	3	0	9	2	0	0	38	0	0	0	1	0	3	0	62
9/29	9.5	0	0	10	4	1	31	0	0	0	4	3	0	0	9	0	0	1	63
9/30	5.5	0	0	3	3	1	78	13	0	2	22	0	0	0	3	0	0	0	125
10/1	6.0	0	0	4	1	0	1	2	0	0	0	0	0	0	2	1	0	0	11
10/4	5.0	0	0	1	4	0	8	11	0	0	0	0	0	0	2	0	0	3	29
10/5	7.0	0	24	2	6	3	105	17	0	0	11	0	0	0	17	1	0	0	186
10/6	6.0	0	0	0	0	0	10	1	0	0	0	0	0	0	3	0	10	0	24
10/7	5.0	0	0	1	0	0	2	0	0	0	0	0	0	0	0	0	1	1	5
10/8	4.0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1
10/10	6.0	0	0	0	1	1	8	1	0	0	1	0	0	0	5	1	1	0	19
10/11	6.0	0	28	1	3	0	43	4	0	1	0	0	0	0	1	3	0	0	84
10/12	5.5	0	0	0	0	0	31	9	0	2	1	0	0	0	1	0	0	0	44
10/13	6.3	0	0	1	2	1	30	5	0	0	0	0	0	0	0	0	0	0	39
10/14	4.0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1
10/15	7.0	0	0	0	0	0	4	2	0	0	0	0	0	0	1	0	0	0	7
10/18	6.0	3	0	0	0	1	4	0	0	0	0	4	0	0	1	0	0	0	13
10/19	8.0	0	9	1	2	3	6	4	0	2	0	0	0	0	2	0	1	0	30
10/20	3.5	0	0	0	0	0	14	3	0	1	0	0	0	0	1	0	1	0	20
10/21	7.0	24	68	1	3	1	30	16	0	26	0	1	0	0	3	3	0	0	176

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Hook Mountain Fall 2019 - Nyack, New York

Date	HRS	BV	TV	OS	BE	NH	SS	CH	NG	RS	BW	RT	RL	GE	AK	ML	PG	UR	TOTAL
10/22	3.5	0	0	0	0	1	1	0	0	0	0	0	0	0	2	1	0	0	5
10/23	4.8	0	0	0	0	1	5	2	0	0	0	0	0	0	0	1	0	0	9
10/24	8.0	7	18	0	0	2	20	2	0	0	0	2	0	0	3	0	0	0	54
10/25	6.0	0	13	0	0	2	2	1	0	3	0	0	0	0	0	0	0	0	21
10/26	6.3	0	0	0	0	0	3	1	0	1	0	0	0	0	1	0	0	0	6
10/28	5.5	0	0	0	3	0	1	0	0	1	0	1	0	0	0	0	2	1	9
10/29	4.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11/2	6.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11/3	6.0	0	41	0	0	0	2	4	0	5	0	3	0	0	0	0	0	0	55
11/4	4.8	0	0	0	3	0	0	2	0	1	0	0	0	0	0	0	0	0	6
11/5	5.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11/6	7.0	0	29	0	4	0	4	1	0	5	0	0	0	1	0	0	0	0	44
11/7	3.5	0	0	0	1	0	2	0	0	0	0	0	0	0	0	0	0	0	3
11/10	7.0	0	0	0	3	1	0	0	0	0	0	0	0	0	0	0	2	0	6
11/11	5.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11/14	5.0	0	2	0	3	2	0	0	0	1	0	1	0	0	0	0	0	0	9
11/16	5.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11/17	3.0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	1
11/21	4.0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	2
64	**362.0**	**36**	**232**	**133**	**119**	**35**	**799**	**132**	**0**	**54**	**873**	**22**	**0**	**1**	**139**	**21**	**24**	**8**	**2628**

Quaker Ridge Fall 2019 - Greenwich, Connecticut

Date	HRS	BV	TV	OS	BE	NH	SS	CH	NG	RS	BW	RT	RL	GE	AK	ML	PG	UR	TOTAL
8/20	8.0	0	0	4	3	1	1	0	0	0	4	0	0	0	0	0	0	0	13
8/21	8.7	0	0	5	0	0	0	0	0	0	1	0	0	0	0	0	0	0	6
8/22	7.7	0	0	2	2	0	0	1	0	0	1	0	0	0	0	0	0	0	6
8/23	7.7	0	0	4	1	0	0	0	0	0	1	0	0	0	0	0	0	0	6
8/24	8.5	0	0	19	18	0	1	0	0	0	14	0	0	0	1	0	0	4	58
8/25	3.8	0	0	4	2	0	0	0	0	0	0	0	0	0	0	0	0	0	6
8/26	7.7	0	0	4	1	0	0	0	0	0	2	0	0	0	0	0	0	0	7
8/27	9.0	0	0	6	2	0	0	1	0	0	0	0	0	0	0	0	0	0	9
8/28	2.7	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
8/29	9.8	0	0	5	4	0	0	0	0	0	0	0	0	0	0	0	0	0	9
8/30	9.7	0	0	6	0	0	0	0	0	0	2	0	0	0	0	0	0	0	8
8/31	10.0	0	0	1	0	1	0	0	0	0	2	0	0	0	0	0	0	0	4
9/1	5.8	0	0	4	0	0	0	0	0	0	0	0	0	0	1	1	0	0	6
9/3	9.8	0	0	20	2	0	2	0	0	0	2	0	0	0	0	1	0	1	28
9/4	8.8	0	0	11	0	1	0	0	0	0	0	0	0	0	1	0	0	0	13
9/5	12.0	0	0	16	7	3	0	1	0	0	9	0	0	0	3	5	1	1	46
9/6	7.0	0	0	10	1	1	0	0	0	0	1	0	0	0	0	0	0	0	13
9/7	7.0	0	0	4	0	0	1	1	0	0	3	0	0	0	1	0	0	0	10
9/8	8.0	2	1	18	15	3	8	5	0	0	45	0	0	0	4	1	0	1	103
9/9	8.0	0	0	7	3	0	15	3	0	0	40	0	0	0	5	3	0	1	77
9/10	7.0	0	0	3	0	0	1	0	0	0	1	0	0	0	1	0	0	0	6
9/11	7.8	0	0	6	1	0	2	0	0	0	4	0	0	0	0	0	0	0	13
9/12	8.0	0	0	2	4	0	3	2	0	0	5	0	0	0	2	0	0	1	19
9/13	9.0	0	0	54	9	3	11	3	0	0	27	0	0	0	7	7	0	1	122
9/14	7.9	0	0	1	0	0	1	1	0	0	0	0	0	0	0	0	0	0	3
9/15	8.0	0	0	21	3	3	51	4	0	0	258	0	0	0	14	2	0	6	362
9/16	11.0	0	0	13	3	4	115	6	0	2	588	0	0	0	14	3	1	1	750
9/17	9.5	0	1	10	11	0	175	9	0	0	3270	1	0	0	25	2	0	0	3504
9/18	10.0	0	0	22	10	2	193	10	0	1	52	0	0	0	19	5	0	1	315
9/19	9.0	0	0	5	4	2	47	2	0	0	1	0	0	0	8	0	0	0	69
9/20	10.0	0	1	13	7	0	90	2	0	0	70	0	0	0	18	3	1	1	206
9/21	2.0	0	0	8	3	0	40	4	0	0	25	0	0	0	11	0	0	0	91
9/22	6.7	0	0	5	4	1	10	2	0	0	1	0	0	0	4	0	0	0	27
9/23	7.2	0	0	4	2	2	8	0	0	0	0	0	0	0	1	0	1	0	18
9/24	10.0	0	0	18	5	1	47	1	0	0	26	1	0	0	16	1	0	0	116
9/25	10.0	1	20	16	2	3	60	6	0	1	71	1	0	0	11	2	1	1	196
9/26	7.0	0	0	7	0	1	9	2	0	0	7	0	0	0	3	0	1	1	31
9/27	9.0	0	10	11	2	2	26	3	0	0	13	0	0	0	1	0	1	1	70
9/28	3.4	0	0	8	1	0	2	0	0	0	0	0	0	0	0	0	0	0	11
9/29	6.3	2	21	5	3	2	71	13	0	0	30	0	0	0	8	2	0	1	158
9/30	8.0	0	11	13	6	0	46	6	0	0	9	0	0	0	15	3	2	3	114
10/1	8.0	0	0	9	0	2	10	0	0	0	2	0	0	0	1	0	0	0	24
10/2	9.0	0	5	7	0	2	3	1	0	0	1	0	0	0	2	0	1	0	22
10/4	9.0	0	12	8	10	5	104	21	0	0	6	0	0	0	21	3	1	1	192
10/5	5.1	0	187	1	6	1	22	5	0	5	1	3	0	0	5	0	0	2	238
10/6	2.0	0	0	0	0	0	1	0	0	0	0	0	0	0	1	0	0	0	2
10/7	7.5	0	6	0	0	0	5	0	0	0	0	0	0	0	1	2	2	0	16
10/8	9.0	0	28	1	0	8	55	12	0	0	1	0	0	0	6	1	2	1	115
10/10	8.0	1	41	1	6	2	53	20	0	5	1	0	0	0	9	0	1	2	142
10/11	8.8	8	58	1	1	1	34	25	0	2	1	0	0	0	3	3	0	1	138
10/12	8.0	7	9	0	1	1	31	9	0	6	1	2	0	0	3	0	0	2	72
10/13	7.5	4	5	0	0	0	12	5	0	1	0	0	0	0	0	1	0	0	28
10/14	8.0	0	12	0	1	0	5	7	0	0	0	0	0	0	2	0	0	0	27
10/15	7.8	0	41	1	4	0	11	1	0	0	0	2	0	0	4	1	0	4	69
10/16	11.9	0	0	0	0	0	1	0	0	0	0	0	0	0	1	1	0	0	3
10/17	5.8	1	15	1	1	0	3	0	0	0	0	0	0	0	2	1	0	0	24
10/18	9.0	0	37	1	0	3	14	19	0	4	0	6	0	0	2	1	0	0	87
10/19	3.8	0	67	0	0	0	5	3	0	3	0	5	0	0	1	0	0	0	84
10/20	2.0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1
10/21	8.0	0	49	0	1	0	11	15	0	13	0	9	0	0	0	1	3	1	103
10/23	8.0	0	7	0	1	1	11	8	0	3	0	7	0	0	2	2	0	1	43
10/24	7.0	0	3	0	1	1	4	5	0	2	0	0	0	0	2	1	0	0	19
10/25	7.0	0	7	1	1	0	2	4	0	2	0	1	0	0	0	0	1	1	20
10/26	4.9	5	185	0	6	2	10	17	0	35	0	10	0	0	2	0	0	1	273
10/28	8.8	0	43	0	1	0	1	3	0	3	0	1	0	0	0	0	0	0	52
10/29	1.0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1
10/30	7.8	0	15	0	0	0	4	0	0	1	0	0	0	0	0	0	0	0	20
11/1	8.0	0	9	1	1	0	5	1	0	3	0	3	0	0	0	1	0	0	24
11/2	5.2	4	41	0	6	0	5	2	0	18	0	16	0	0	1	0	0	0	93
11/3	3.0	3	40	0	3	1	11	0	0	41	0	3	0	0	1	1	1	1	106
11/4	7.5	0	32	1	1	0	12	6	0	36	0	12	0	1	0	1	0	1	103
11/5	7.5	0	1	0	0	0	1	0	0	0	0	0	0	1	1	0	0	0	4
11/6	6.0	0	28	0	1	3	9	3	0	14	0	5	0	0	0	1	0	0	64
11/7	4.5	0	5	0	0	0	3	0	0	0	0	0	0	0	0	1	0	0	9
11/8	7.3	9	12	0	1	0	4	5	0	21	0	27	0	0	0	0	0	0	79
11/9	7.1	0	20	0	0	0	3	2	0	22	0	22	0	0	0	0	0	0	69
11/10	8.0	0	10	0	0	0	0	0	0	0	0	4	0	0	0	0	0	0	14
11/11	7.5	0	11	0	0	3	3	1	0	19	0	6	0	0	0	0	0	0	43
11/12	5.0	0	2	0	1	1	2	1	0	1	0	1	0	0	0	0	0	0	9
11/13	7.0	0	21	0	3	1	1	2	0	32	0	10	0	0	0	0	0	1	71
11/14	8.0	1	57	0	1	0	4	3	0	4	0	4	0	0	0	0	0	0	74
11/15	6.5	0	12	0	1	0	1	1	0	10	0	8	0	1	0	1	1	0	36
11/16	5.5	0	14	0	7	0	10	2	0	29	0	9	0	0	1	0	1	2	75
11/17	3.8	3	1	0	2	0	2	0	0	6	0	14	0	0	0	0	0	1	29
11/18	7.0	0	25	0	0	1	0	1	0	1	0	0	0	0	0	0	0	0	28
11/19	7.5	0	7	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	9
11/20	9.0	0	17	0	0	0	1	1	0	2	0	1	0	0	0	0	0	0	22
11/21	9.0	0	9	0	0	0	2	1	0	7	0	2	0	0	0	0	0	0	21
11/22	5.0	0	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	2
11/23	5.8	2	2	0	0	0	1	0	0	3	0	2	0	0	0	0	0	0	10
11/25	7.0	0	3	1	2	0	3	2	0	1	0	1	0	0	0	1	0	0	14
11/26	7.0	0	9	0	0	0	2	0	0	0	0	4	0	0	0	0	2	0	18
11/27	1.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11/28	6.5	0	25	0	0	0	0	0	0	0	0	10	0	0	0	0	0	0	35
11/29	6.8	0	5	0	0	0	0	1	0	5	0	7	0	0	0	0	0	0	18
11/30	8.0	0	17	0	2	0	0	1	0	6	0	7	0	0	0	0	0	0	33
96	**695.5**	**53**	**1332**	**431**	**215**	**75**	**1535**	**306**	**0**	**370**	**4599**	**228**	**0**	**3**	**268**	**66**	**25**	**49**	**9557**

Other: 8/24 1 Mississippi Kite, 11/26 Short-eared Owl

Purple Chickadee 2019 - Ringwood, New Jersey

Date	HRS	BV	TV	OS	BE	NH	SS	CH	NG	RS	BW	RT	RL	GE	AK	ML	PG	UR	TOTAL
9/15	7.3	7	0	1	2	0	0	0	0	0	0	1	0	0	3	0	0	0	14
9/16	7.5	4	0	2	2	0	16	1	0	0	397	1	0	0	1	0	1	14	425
9/17	6.0	0	0	0	2	0	5	0	0	0	161	1	0	0	1	0	0	425	171
9/18	6.8	0	0	0	1	0	9	2	0	0	40	0	0	0	1	0	0	172	54
9/19	2.8	0	1	0	0	1	2	0	0	0	5	0	0	0	0	0	0	55	9
9/20	4.8	0	3	0	2	0	5	1	0	0	7	1	0	0	2	0	0	9	21
9/24	7.5	1	2	0	1	0	5	2	0	0	5	2	0	0	5	0	0	21	24
9/25	2.8	0	0	1	1	0	2	3	0	0	3	0	0	0	0	0	0	25	11
9/29	6.0	1	5	3	0	0	6	2	0	1	7	2	0	0	1	0	0	12	30
9/30	1.3	0	0	0	0	0	1	1	0	0	2	0	0	0	1	0	0	32	5
10/4	9.0	4	11	4	1	0	34	15	0	0	1	3	0	0	19	3	2	5	103
10/5	2.0	0	1	0	0	0	15	4	0	0	0	0	0	0	1	0	0	109	22
10/8	5.3	0	5	0	0	0	8	4	0	0	0	1	0	0	2	1	0	23	23
10/9	3.0	0	1	0	0	0	3	2	0	0	0	0	0	0	0	1	0	25	8
10/10	6.5	1	3	0	0	0	2	5	0	0	0	4	0	0	4	1	0	9	21
10/11	4.0	0	1	0	0	0	9	1	0	0	0	0	0	0	0	0	1	22	13
10/12	3.5	0	1	0	0	0	1	3	0	0	0	1	0	0	0	0	0	14	6
10/19	2.5	0	0	0	0	0	1	2	0	0	0	2	0	0	0	0	0	6	5
10/21	3.8	0	2	0	0	0	0	3	0	0	0	0	0	0	0	0	0	5	5
10/23	8.5	0	70	1	0	1	12	3	0	2	0	5	0	0	2	2	3	5	107
10/26	5.0	1	2	1	0	0	4	2	0	9	0	6	0	0	0	0	0	113	26
10/28	4.5	0	2	0	1	0	1	0	0	0	0	1	0	0	0	0	0	27	5
11/1	3.8	0	5	0	6	0	1	0	0	0	0	3	0	0	0	0	0	5	15
11/2	4.0	0	10	0	0	1	0	0	0	5	0	12	0	0	0	0	0	15	28
11/3	5.5	0	3	0	2	1	3	1	1	9	0	18	0	2	0	0	0	28	41
11/9	4.0	0	5	0	1	0	1	1	0	9	0	11	0	1	0	1	0	42	34
26	**127.3**	**19**	**133**	**13**	**22**	**4**	**146**	**58**	**1**	**35**	**628**	**75**	**0**	**3**	**43**	**9**	**7**	**38**	**1226**

State Line Fall 2019 - Alpine, New Jersey

Date	HRS	BV	TV	OS	BE	NH	SS	CH	NG	RS	BW	RT	RL	GE	AK	ML	PG	UR	TOTAL
9/5	6.0	0	0	10	1	0	2	4	0	0	3	5	0	0	0	1	0	1	27
9/6	7.0	0	0	39	11	0	1	1	0	0	0	0	0	0	3	0	0	0	55
9/7	6.0	0	0	3	3	0	1	3	0	1	0	1	0	0	0	1	0	0	13
9/8	6.3	0	0	7	6	0	1	2	0	0	30	1	0	0	1	1	1	0	50
9/9	6.0	0	0	12	6	3	13	1	0	1	26	7	0	0	7	0	2	0	78
9/10	7.0	0	0	13	4	0	0	0	0	0	0	1	0	0	1	0	1	0	20
9/11	6.0	0	0	17	0	0	1	1	0	0	0	1	0	0	1	0	1	0	22
9/12	6.0	0	0	3	2	1	1	0	0	0	0	0	0	0	0	1	0	1	9
9/13	8.0	0	0	54	20	2	1	2	0	0	1	5	0	0	19	1	3	0	108
9/14	8.0	0	0	6	2	0	6	3	0	0	0	1	0	0	14	2	1	0	35
9/15	8.5	6	0	14	14	1	25	8	0	1	11	2	0	0	11	3	1	3	100
9/16	7.0	0	0	17	3	2	45	8	0	0	208	1	0	0	13	3	2	1	303
9/17	7.0	0	0	11	14	2	41	8	0	2	805	6	0	0	18	1	0	3	911
9/18	8.0	0	0	38	1	1	44	9	0	0	52	4	0	0	41	0	0	4	194
9/19	6.0	0	0	2	3	0	16	2	0	0	0	2	0	0	12	1	0	1	39
9/20	9.3	0	0	9	5	4	44	14	0	0	15	2	0	0	13	1	0	0	107
9/21	6.0	0	0	9	7	3	69	17	0	2	8	2	0	0	40	3	1	1	162
9/22	5.0	0	0	5	0	0	4	0	0	0	0	0	0	0	6	1	1	0	17
9/23	6.0	0	0	23	0	0	8	1	0	1	11	2	0	0	2	0	0	1	49
9/24	8.0	0	0	13	2	2	25	1	0	0	0	10	0	0	20	0	4	1	78
9/25	7.5	0	0	9	2	2	76	9	0	0	168	3	0	0	25	1	0	2	297
9/26	7.0	0	0	11	0	3	5	1	0	0	1	0	0	0	15	2	1	0	39
9/27	9.0	0	0	6	2	2	22	4	0	2	11	5	0	0	10	2	0	0	66
9/28	6.0	0	0	14	1	0	5	0	0	0	0	1	0	0	3	1	0	0	25
9/29	5.5	0	0	2	2	1	35	6	0	0	1	3	0	0	10	0	2	3	65
9/30	8.3	0	7	17	1	0	29	4	0	0	3	5	0	0	13	0	0	0	79
10/1	7.0	0	0	8	1	0	4	2	0	0	1	4	0	0	8	3	2	0	33
10/2	6.0	0	0	2	0	0	2	0	0	0	0	0	0	0	1	1	1	0	7
10/4	9.0	0	0	14	5	4	51	11	0	0	1	3	0	0	16	3	1	0	109
10/5	6.0	0	46	5	0	0	15	1	0	0	12	0	0	0	0	0	0	1	80
10/6	6.0	7	0	2	1	0	5	2	0	0	0	1	0	0	2	0	3	0	23
10/7	6.0	0	21	1	0	0	0	2	0	0	0	0	0	0	1	0	1	0	26
10/8	7.0	0	5	3	3	2	4	2	0	0	0	3	0	0	1	0	1	0	24
10/9	3.3	0	0	2	1	0	0	0	0	0	0	0	0	0	2	0	0	0	5
10/10	6.0	0	13	3	1	0	12	6	0	0	0	1	0	0	4	3	0	3	46
10/11	7.0	0	3	0	2	0	7	5	1	0	0	3	0	0	0	4	0	0	25
10/12	7.0	3	9	0	0	2	9	6	0	1	0	1	0	0	1	3	1	0	36
10/13	6.0	0	43	1	0	0	28	13	0	0	0	0	0	0	0	0	0	0	85
10/14	7.0	0	40	1	2	2	16	12	0	1	0	3	0	0	4	1	0	0	82
10/15	8.0	0	39	3	0	1	5	7	0	6	0	9	0	0	4	0	0	0	74
10/16	5.0	0	0	2	5	1	5	2	0	0	0	5	0	0	5	0	2	1	28
10/17	6.0	12	263	3	2	0	1	1	0	0	0	3	0	0	1	0	1	1	288
10/18	8.0	4	188	1	3	0	12	11	0	0	0	6	0	0	2	2	0	0	229
10/19	6.5	0	114	2	3	0	41	12	0	9	0	18	0	0	1	0	1	0	201
10/20	3.3	0	0	0	0	0	2	0	0	1	0	0	0	0	0	0	2	1	6
10/21	6.5	0	128	2	1	1	15	7	0	9	0	35	0	0	2	1	0	0	201
10/23	7.5	18	115	0	4	2	14	6	0	8	0	9	0	0	2	0	0	3	181
10/24	6.0	0	63	0	1	1	18	5	0	2	0	7	0	0	0	1	1	0	99
10/25	7.0	0	18	0	3	0	0	1	0	0	0	1	0	0	0	1	1	0	25
10/26	7.0	1	14	0	3	1	12	8	0	21	0	24	0	0	0	0	1	7	92
10/28	4.0	0	16	0	0	0	1	1	0	1	0	3	0	0	1	0	0	0	23
10/30	3.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11/1	7.0	0	89	0	2	3	7	5	0	1	0	6	0	0	0	0	0	0	113
11/2	6.5	0	55	1	4	2	2	6	0	12	0	17	0	0	2	1	0	0	102
11/3	6.0	3	26	0	1	0	4	2	0	8	0	15	0	0	0	1	1	0	61
11/4	6.0	0	84	0	1	1	5	2	0	15	0	24	0	0	0	1	0	0	133
11/5	7.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11/6	6.0	6	34	0	3	0	3	1	0	7	0	14	0	0	0	0	0	4	72
11/7	4.5	0	42	0	1	0	2	0	0	0	0	2	0	1	0	0	0	0	48
11/8	7.0	3	240	0	4	0	4	4	0	23	0	47	0	0	1	0	1	0	327
11/9	4.5	0	44	0	1	0	1	0	0	11	0	38	0	0	0	0	0	0	95
11/10	5.5	0	85	0	1	0	2	0	0	2	0	11	0	0	0	1	0	0	102

Continued on next page . . .

State Line Fall 2019 - Alpine, New Jersey

Date	HRS	BV	TV	OS	BE	NH	SS	CH	NG	RS	BW	RT	RL	GE	AK	ML	PG	UR	TOTAL
11/11	5.5	0	33	0	1	0	3	1	1	8	0	7	0	0	0	0	0	0	54
11/13	4.0	0	62	0	0	0	1	1	0	6	0	7	0	0	0	0	0	0	77
11/14	5.0	0	25	0	1	0	0	0	0	1	0	8	0	0	0	0	0	0	35
11/15	5.5	2	87	0	2	0	0	0	0	6	0	10	0	0	0	0	0	0	107
11/16	4.0	0	28	0	3	0	1	4	0	2	0	23	0	0	0	1	2	0	64
11/17	3.5	0	34	0	3	1	0	1	0	5	0	19	0	0	0	1	0	0	64
11/19	2.5	0	16	0	1	0	0	0	0	0	0	0	0	0	0	0	1	0	18
11/20	2.5	0	17	0	0	0	0	0	0	0	0	4	0	0	0	0	0	0	21
11/21	2.5	0	36	0	0	0	0	1	0	3	0	5	0	0	0	1	1	0	47
11/23	3.0	0	16	0	1	0	0	0	0	3	0	10	0	0	0	0	0	0	30
11/26	3.0	0	44	0	2	0	0	0	0	1	0	5	0	0	0	0	0	0	52
11/29	2.0	0	16	0	0	0	0	1	0	0	0	6	0	0	0	0	0	0	23
11/30	2.0	0	32	0	1	0	0	0	0	3	0	4	0	0	0	0	0	0	40
75	**446.3**	**65**	**2290**	**420**	**186**	**53**	**834**	**261**	**2**	**186**	**1368**	**491**	**0**	**1**	**359**	**56**	**46**	**43**	**6661**

Lenoir Wildlife Sanctuary 2019 - Yonkers, New York

Date	HRS	BV	TV	OS	BE	NH	SS	CH	NG	RS	BW	RT	RL	GE	AK	ML	PG	UR	TOTAL
8/24	3.0	2	5	8	0	0	0	1	0	0	2	0	0	0	0	0	0	0	18
9/2	13.0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
9/7	5.0	11	1	10	29	0	0	0	0	0	5	2	0	0	1	0	0	0	59
9/8	3.0	8	4	4	3	0	0	0	0	0	2	4	0	0	0	0	0	0	25
9/14	4.0	0	0	10	0	0	1	0	0	0	0	0	0	0	3	0	0	0	14
9/15	7.0	1	2	18	6	1	7	0	0	0	2	1	0	0	2	0	0	0	40
9/18	4.5	0	3	20	6	0	13	1	0	0	10	2	0	0	5	0	0	0	60
9/21	6.0	0	2	6	1	1	16	0	0	0	23	0	0	0	19	0	0	1	69
9/28	4.0	0	1	4	3	0	0	0	0	0	0	0	0	0	0	0	0	0	8
9/29	2.5	9	13	8	6	0	4	3	0	0	1	1	0	0	5	0	0	1	51
10/5	4.0	0	8	2	1	0	0	1	0	0	0	0	0	0	0	0	0	0	12
10/6	2.8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10/12	7.0	0	5	0	3	0	2	2	0	0	0	1	0	0	3	1	1	0	18
10/13	5.5	3	12	0	0	0	6	2	0	1	0	3	0	0	0	0	0	0	27
10/19	2.0	0	1	1	0	0	2	0	0	0	0	2	0	0	0	0	0	0	6
10/20	2.0	0	0	2	0	0	1	0	0	0	0	0	0	0	1	0	0	0	4
11/1	2.5	2	24	0	13	0	2	2	0	1	0	3	0	0	1	0	2	0	50
11/2	3.0	0	14	0	0	0	3	2	0	0	0	0	0	0	0	1	0	0	20
11/3	2.0	5	19	1	1	0	2	1	0	4	0	3	0	0	0	0	1	0	37
11/8	2.0	0	58	0	2	0	0	0	0	1	0	3	0	0	0	0	0	0	64
11/13	3.5	7	13	0	0	0	0	0	0	2	0	2	0	0	0	0	0	0	24
11/16	1.5	1	11	0	1	0	0	1	0	0	0	5	0	0	0	1	0	0	20
11/23	1.5	0	2	0	1	0	0	0	0	0	0	0	0	0	0	0	1	0	4
11/28	1.0	9	12	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	21
24	**92.3**	**58**	**210**	**95**	**76**	**2**	**59**	**16**	**0**	**9**	**45**	**32**	**0**	**0**	**40**	**3**	**5**	**2**	**652**

Wildcat Ridge Fall 2019 - Hibernia, New Jersey

Date	HRS	BV	TV	OS	BE	NH	SS	CH	NG	RS	BW	RT	RL	GE	AK	ML	PG	UR	TOTAL
8/17	4.3	3	0	1	0	0	0	0	0	0	0	1		0	0	0	0	0	5
8/20	5.0	0	0	0	1	0	0	0	0	0	0	1		0	0	0	0	0	2
8/22	5.0	6	0	0	0	0	0	0	0	0	0	2		0	0	0	0	0	8
8/26	5.0	1	0	0	0	0	0	0	0	0	0	2		0	0	0	0	0	3
8/29	5.5	0	0	0	0	0	0	1	0	0	0	1		0	0	0	0	1	3
9/4	5.3	0	0	3	0	0	1	1	0	0	0	0		0	0	0	0	0	5
9/5	6.0	0	0	4	0	0	2	1	0	0	7	2		0	0	0	0	2	18
9/7	9.0	0	0	1	0	0	1	0	0	0	1	1		0	0	0	0	0	4
9/8	4.5	0	0	0	0	0	1	2	0	0	0	0		0	0	0	0	2	5
9/10	8.0	0	0	3	1	0	0	3	0	2	8	0		0	0	0	0	2	19
9/11	4.5	0	0	2	0	0	0	0	0	0	8	0		0	0	0	0	1	11
9/13	1.0	0	0	1	1	0	4	0	0	0	50	1		0	11	1	0	3	72
9/14	8.0	0	0	1	0	0	0	0	0	0	0	0		0	1	0	0	0	2
9/15	9.5	0	0	0	2	0	17	4	0	0	6	6		0	1	1	0	2	39
9/16	5.0	0	0	1	0	0	6	0	0	0	45	0		0	1	0	0	0	53
9/17	11.0	0	0	2	5	0	9	4	0	1	85	0		0	2	0	0	1	109
9/18	10.8	0	0	2	0	0	18	3	0	0	475	0		0	0	0	2	1	501
9/19	5.0	0	0	0	3	0	5	1	0	0	3	0		0	0	0	0	2	14
9/20	5.3	0	0	0	1	3	8	0	0	0	10	0		0	2	0	1	1	26
9/21	9.0	0	0	4	3	0	23	7	1	0	73	0		0	3	2	1	3	120
9/24	5.5	0	0	0	0	0	2	1	0	0	0	0		0	0	0	0	1	4
9/25	6.0	0	0	0	3	0	15	10	0	0	0	4		0	0	0	0	1	33
9/26	4.5	0	0	0	1	1	7	3	0	1	22	2		0	0	0	0	0	37
9/27	3.5	0	0	0	0	0	4	2	0	2	2	0		0	1	1	0	0	12
9/28	5.0	0	0	11	1	0	11	8	0	2	35	2		0	4	0	1	2	77
9/30	5.0	0	0	0	0	0	21	8	0	0	0	2		0	1	0	1	1	34
10/1	5.5	2	0	1	0	0	12	7	0	0	0	7		0	0	0	0	1	30
10/4	5.5	0	0	1	0	0	15	5	0	0	0	3		0	0	0	0	0	24
10/5	5.5	0	0	1	2	0	18	8	0	0	5	0		0	2	2	1	5	44
10/6	2.5	0	0	0	0	0	0	0	0	0	0	0		0	0	0	0	0	0
10/10	6.0	0	0	0	0	0	18	9	0	0	2	4		0	0	0	0	2	35
10/11	2.0	0	0	0	0	0	2	1	0	0	0	0		0	0	0	0	0	3
10/14	6.5	0	0	0	0	0	4	2	0	0	0	3		0	0	1	0	0	10
10/16	3.5	5	0	1	0	0	2	1	0	0	0	0		0	0	0	0	0	9
10/18	4.0	0	0	0	0	0	2	0	0	0	0	0		0	0	0	0	0	2
10/19	5.3	0	0	0	1	1	13	7	0	3	3	5		0	2	0	0	2	37
10/20	2.0	0	0	0	0	0	0	0	0	0	0	0		0	0	0	0	0	0
10/21	5.0	0	0	0	1	0	3	2	0	0	0	2		0	0	0	0	0	8
10/24	6.5	0	0	0	2	0	25	3	0	1	0	3		0	1	0	0	0	35
10/25	4.5	1	0	0	0	0	9	4	0	0	0	4		0	0	0	0	1	19
10/26	3.0	0	0	0	0	0	1	1	0	0	0	1		0	0	0	3	0	6
11/1	6.0	0	0	0	0	0	0	0	0	0	0	1		0	0	0	0	0	1
11/2	2.3	0	0	0	1	0	0	1	0	2	0	0		0	0	0	0	0	4
11/4	5.0	9	0	0	1	0	5	2	0	0	0	16		0	0	0	0	0	33
11/13	5.0	0	0	0	0	0	0	0	0	0	0	6		1	0	0	0	0	7
11/15	4.0	0	0	0	0	0	0	2	0	0	0	11		0	0	0	0	0	13
11/16	6.3	0	0	0	0	0	0	0	0	2	0	11		1	0	0	0	0	14
47	**251.8**	**27**	**0**	**40**	**30**	**5**	**284**	**114**	**1**	**16**	**840**	**104**		**2**	**32**	**8**	**10**	**37**	**1550**

Montclair Hawk Lookout Fall 2019 - 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	0	0	1	0	0	0	0	0	2	1	0	0	0	0	1	0	5
9/2	8.0	2	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	5
9/3	8.0	0	0	3	0	0	0	1	0	1	0	0	0	0	0	0	0	0	5
9/4	8.0	0	2	8	1	0	0	1	0	0	1	1	0	0	0	0	0	5	14
9/5	8.0	0	1	3	0	0	0	1	0	0	0	0	0	0	0	0	0	5	5
9/6	8.0	0	0	0	0	0	2	0	0	0	0	0	0	0	1	0	0	5	3
9/7	7.0	0	0	5	5	0	8	5	0	0	4	0	0	0	0	0	2	14	30
9/8	8.0	5	8	12	5	0	7	6	0	0	24	0	0	0	2	5	3	5	79
9/9	8.0	0	0	5	2	0	0	3	0	0	2	0	0	0	0	1	0	3	13
9/10	8.0	0	0	3	0	0	0	0	0	0	1	0	0	0	1	0	0	31	5
9/11	8.0	1	1	9	2	0	1	1	0	0	0	0	0	0	0	0	1	81	16
9/14	4.0	0	0	5	0	0	0	0	0	0	0	0	0	0	0	0	0	13	5
9/15	8.0	2	0	9	3	1	5	2	0	0	2	1	0	0	5	6	1	5	38
9/16	8.0	0	0	1	0	0	16	3	0	0	56	0	0	0	2	0	0	16	78
9/17	8.0	0	1	1	9	0	13	4	0	0	1005	0	0	0	1	0	0	5	1034
9/18	8.0	0	6	5	1	1	16	2	0	0	38	0	0	0	5	0	1	39	75
9/19	8.0	0	0	3	0	0	5	0	0	0	0	0	0	0	1	1	0	78	10
9/20	8.0	0	1	2	4	1	19	0	0	0	4	0	0	0	8	1	1	1034	42
9/21	7.0	0	0	1	2	0	20	8	0	0	23	0	0	0	9	1	1	75	65
9/22	8.0	4	0	2	0	0	4	1	0	0	1	0	0	0	2	0	0	10	14
9/23	8.0	0	0	5	2	0	5	0	0	0	0	1	0	0	3	0	0	43	16
9/24	8.0	0	0	4	2	1	10	4	0	0	5	0	0	0	4	2	0	65	32
9/25	8.0	0	2	0	5	0	18	2	0	0	10	0	0	0	9	0	0	14	46
9/26	8.0	0	0	7	7	0	1	2	0	0	1	0	0	0	13	1	1	16	33
9/27	8.0	3	4	7	2	0	3	1	0	0	0	0	0	0	3	0	0	32	23
9/28	6.0	0	0	7	3	1	4	1	0	0	3	0	0	0	3	2	1	46	25
9/29	8.0	3	16	2	2	0	13	4	0	0	7	0	0	0	1	0	0	33	48
9/30	8.0	0	0	1	4	1	15	5	0	0	10	0	0	0	13	6	3	23	58
10/1	8.0	0	0	1	5	0	4	0	0	0	0	0	0	0	5	3	0	25	18
10/2	8.0	0	0	2	3	2	2	4	0	0	1	0	0	0	1	1	0	48	16
10/3	6.0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	1	0	58	3
10/4	8.0	0	11	5	2	2	21	9	0	0	5	0	0	0	10	2	0	18	67
10/6	8.0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	3	16	5
10/7	8.0	0	0	0	0	0	0	1	0	0	0	0	0	0	1	1	0	3	3
10/8	8.0	0	3	0	0	0	4	7	0	0	1	0	0	0	2	0	0	67	17
10/9	4.5	0	1	0	0	0	2	2	0	0	0	0	0	0	2	0	2	5	9
10/10	8.0	1	29	1	4	0	27	9	0	1	2	6	0	0	4	2	0	3	86
10/11	8.0	5	12	0	2	0	4	4	0	0	0	2	0	0	0	0	0	17	29
10/13	8.0	3	16	0	6	0	7	2	0	0	0	5	0	0	2	0	0	9	41
10/14	8.0	0	2	0	0	0	3	5	0	1	0	1	0	0	1	0	0	86	13
10/15	8.0	1	5	0	0	0	3	4	0	0	0	2	0	0	0	0	0	29	15
10/16	6.0	0	2	0	0	0	3	6	0	0	0	2	0	0	4	0	2	41	19
10/17	8.0	1	4	0	0	0	2	3	0	0	0	1	0	0	0	0	0	13	11
10/18	8.0	0	14	1	0	0	2	5	0	2	0	2	0	0	0	0	0	15	26
10/20	5.0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	19	2
10/21	8.0	7	73	0	0	0	6	9	0	2	0	1	0	0	0	1	2	11	102
10/22	3.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	26	0
10/23	8.0	2	43	0	2	0	24	9	0	2	0	8	0	0	1	2	0	2	94
10/24	8.0	0	3	0	0	0	4	2	0	0	0	0	0	0	0	0	0	103	9
10/25	8.0	1	3	0	0	0	4	2	0	0	0	1	0	0	0	1	0	0	12
10/26	5.0	0	13	0	0	0	1	2	0	8	0	1	0	0	0	0	0	95	25
10/27	1.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	9	0
10/28	8.0	0	21	0	0	0	3	2	0	1	0	1	0	0	0	1	0	12	29
10/29	7.0	0	0	0	0	0	1	2	0	0	0	0	0	0	0	0	0	25	3
10/30	8.0	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	2
10/31	8.0	0	2	0	0	0	0	1	0	0	0	0	0	0	0	0	0	29	3
11/1	8.0	10	27	0	3	1	4	5	0	8	0	11	0	0	0	0	1	3	70
11/2	4.0	0	7	0	0	0	3	0	0	0	0	0	0	0	0	0	0	2	10
11/3	8.0	5	12	1	1	1	5	8	1	15	0	12	0	0	0	0	0	3	61
11/4	8.0	2	15	0	0	0	7	2	0	2	0	4	0	0	0	0	1	70	33
11/5	8.0	1	2	0	0	0	4	2	0	0	0	1	0	0	0	0	2	10	12
11/6	8.0	1	14	0	0	0	4	2	0	1	0	10	0	0	0	2	1	61	36
11/7	8.0	0	9	0	0	0	5	0	0	1	0	1	0	0	0	0	0	33	16
11/8	8.0	1	11	0	4	1	1	2	0	8	0	13	0	0	0	1	0	12	43
11/9	3.0	0	3	0	2	0	2	3	0	9	0	5	0	0	0	0	0	37	24
11/10	8.0	0	8	0	0	0	2	1	0	6	0	3	0	0	0	0	1	16	21
11/11	8.0	0	6	0	0	0	1	1	0	10	0	5	0	0	0	1	0	44	24
11/12	8.0	0	4	0	1	0	0	1	0	1	0	0	0	0	0	0	0	24	7
11/13	8.0	0	8	0	0	0	0	1	0	9	0	4	0	0	0	1	1	21	24
11/14	8.0	3	12	0	1	0	1	1	0	1	0	4	0	0	0	1	0	24	24
11/15	8.0	12	7	0	1	0	0	2	0	3	0	4	0	0	0	2	0	7	31
11/17	8.0	0	2	0	0	0	0	2	0	3	0	2	0	0	0	0	1	24	10
11/18	7.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	24	0
11/19	8.0	6	16	0	0	0	0	1	0	0	0	1	0	0	0	0	0	31	24
11/20	8.0	5	4	0	0	0	0	3	0	1	0	1	0	0	0	1	1	10	16
11/21	8.0	5	0	0	0	0	2	0	0	1	0	2	0	0	0	0	0	0	10
11/22	8.0	0	5	0	0	0	1	1	0	0	0	0	0	0	0	0	0	24	7
11/24	0.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	16	0
11/25	8.0	3	7	0	1	0	0	0	0	2	0	0	0	0	0	0	0	10	13
11/26	8.0	0	4	0	0	0	2	0	0	0	0	3	0	0	0	2	0	7	11
11/27	8.0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	2
11/28	8.0	1	1	0	1	0	0	0	0	0	0	4	0	0	0	0	0	13	7
11/29	8.0	0	3	0	0	0	0	0	0	2	0	3	0	0	0	0	0	11	8
11/30	7.0	3	3	0	0	0	0	0	0	2	0	3	0	0	0	0	0	2	11
84	**618.5**	**99**	**491**	**125**	**102**	**13**	**362**	**185**	**1**	**103**	**1208**	**133**	**0**	**0**	**119**	**52**	**34**	**7**	**3036**

Scott's Mountain Fall 2019 - MCR Harmony Twp., New Jersey

Date	HRS	BV	TV	OS	BE	NH	SS	CH	NG	RS	BW	RT	RL	GE	AK	ML	PG	UR	TOTAL
9/1	7.5	0	0	4	3	0	1	1	0	0	7	0	0	0	0	1	0	0	17
9/2	8.0	0	0	3	2	0	0	0	0	0	0	0	0	0	0	0	1	0	6
9/3	6.5	0	0	2	5	0	0	1	0	0	9	1	0	0	0	0	0	1	19
9/4	7.0	0	0	4	1	0	3	1	0	0	1	0	0	0	0	0	0	0	10
9/5	7.8	0	0	6	4	0	1	0	0	0	10	0	0	0	0	1	0	0	22
9/6	7.3	0	0	2	5	2	2	0	0	0	12	0	0	0	1	0	0	0	24
9/7	7.5	0	0	9	6	0	2	4	0	1	53	2	0	0	2	1	0	0	80
9/8	7.5	0	0	13	0	2	6	0	0	0	69	0	0	0	0	0	1	1	92
9/9	6.8	0	0	8	8	2	12	2	0	2	133	2	0	0	0	0	1	2	172
9/10	7.0	0	0	14	5	3	6	7	0	0	4	0	0	0	2	2	0	0	43
9/11	7.0	0	0	2	1	0	3	0	0	0	7	0	0	0	1	0	0	0	14
9/12	6.0	0	0	3	1	0	6	2	0	0	4	0	0	0	4	0	0	0	20
9/13	9.0	0	0	29	10	2	17	3	0	0	125	0	0	0	8	1	2	2	199
9/14	8.5	0	0	5	1	0	0	0	0	0	6	0	0	0	0	0	2	0	14
9/15	8.5	0	0	11	13	2	9	4	0	3	620	3	0	0	3	2	1	1	672
9/16	8.0	0	0	4	0	0	18	4	0	0	1468	0	0	0	0	1	0	2	1497
9/17	8.3	0	0	2	4	3	25	2	0	0	419	1	0	0	5	1	1	1	464
9/18	9.3	0	0	4	5	0	34	2	0	4	1029	0	0	0	0	3	0	2	1083
9/19	8.0	0	0	1	2	0	21	1	0	0	531	0	0	0	1	1	0	1	559
9/20	7.3	0	0	1	1	0	10	1	0	3	52	0	0	0	2	1	0	2	73
9/21	7.5	0	0	1	0	0	4	2	0	0	43	1	0	0	1	1	1	0	54
9/22	7.8	0	0	2	2	0	34	4	0	0	112	0	0	0	8	4	1	3	170
9/23	7.5	0	0	3	2	1	14	0	1	0	4	0	0	0	4	3	1	2	35
9/24	8.5	0	0	4	0	0	36	3	0	0	34	0	0	0	8	3	1	1	90
9/25	8.0	0	0	0	1	2	6	0	0	0	6	1	0	0	2	1	0	0	19
9/26	6.8	0	0	1	1	0	10	3	0	0	15	0	0	0	0	0	0	0	30
9/27	8.8	0	0	1	2	0	19	2	0	0	66	0	0	0	2	1	1	3	97
9/28	7.5	0	0	10	1	0	25	3	0	0	46	0	0	0	3	2	1	0	91
9/29	8.3	0	0	10	3	4	39	9	0	0	56	0	0	0	10	0	0	4	135
9/30	6.3	0	0	2	1	1	54	3	0	0	9	0	0	0	1	2	1	1	75
10/1	7.5	0	0	5	2	2	37	6	0	0	8	0	0	0	1	2	2	2	67
10/2	7.0	0	0	0	0	3	18	3	0	0	3	2	0	0	1	0	2	0	32
10/3	3.0	0	0	1	0	0	0	0	0	0	0	0	0	0	1	0	0	0	2

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Scott's Mountain Fall 2019 - MCR Harmony Twp., New Jersey

Date	HRS	BV	TV	OS	BE	NH	SS	CH	NG	RS	BW	RT	RL	GE	AK	ML	PG	UR	TOTAL
10/4	7.0	0	0	3	4	1	44	3	0	0	1	9	0	0	12	0	2	7	86
10/5	7.5	0	0	2	3	3	59	4	0	2	0	6	0	0	4	2	0	4	89
10/6	6.0	0	0	2	0	0	3	2	0	0	0	1	0	0	1	2	1	0	12
10/7	7.0	0	0	0	0	0	2	3	0	0	0	0	0	0	0	1	1	2	9
10/8	7.0	0	0	0	0	2	49	11	0	3	0	4	0	0	7	1	1	2	80
10/9	5.5	0	0	0	1	1	26	3	0	0	0	1	0	0	0	1	0	1	34
10/10	7.0	0	0	1	2	1	25	2	0	1	1	3	0	0	4	0	0	0	40
10/11	6.5	0	0	0	2	0	16	1	0	1	0	1	0	0	1	0	0	1	23
10/12	7.5	0	0	0	0	0	5	2	0	0	2	0	0	0	1	0	0	1	11
10/13	7.8	0	0	0	2	2	23	6	0	5	1	7	0	0	2	1	1	0	50
10/14	7.8	0	0	1	2	0	11	8	0	0	0	7	0	0	0	0	1	3	33
10/15	7.3	0	0	0	1	0	10	1	1	0	0	3	0	0	0	0	0	0	16
10/16	4.0	0	0	0	0	0	1	0	0	0	0	0	0	0	1	0	0	0	2
10/17	6.3	0	0	1	14	0	2	1	1	0	0	2	0	0	0	0	0	2	23
10/18	6.3	0	0	0	5	0	28	3	0	0	0	3	0	0	4	0	2	0	45
10/19	7.5	0	0	0	4	0	16	7	1	8	0	6	0	1	1	1	1	2	48
10/20	2.5	0	0	3	0	0	0	0	0	0	0	1	0	0	0	2	0	0	6
10/21	7.5	0	0	0	9	0	13	3	0	4	0	13	0	0	0	1	0	2	45
10/22	2.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10/23	7.0	0	0	0	14	1	21	5	0	3	0	5	0	1	0	0	4	2	56
10/24	6.5	0	0	0	3	1	8	2	0	1	0	4	0	0	0	0	0	0	19
10/25	7.5	0	0	1	2	1	9	3	1	4	0	2	0	1	1	1	0	1	27
10/26	7.5	0	0	0	5	3	38	10	0	58	0	29	0	0	1	0	1	3	148
10/27	2.5	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1
10/28	7.0	0	0	0	8	1	12	1	0	14	0	20	0	0	1	0	0	4	61
10/29	6.8	0	0	0	0	1	2	0	0	0	0	0	0	0	1	0	0	0	4
10/30	6.0	0	0	1	0	1	0	0	0	0	0	0	0	0	2	0	0	0	4
10/31	0.3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11/1	6.5	0	0	0	5	1	5	0	0	3	0	15	0	0	1	0	1	0	31
11/2	7.5	0	0	0	3	1	11	6	0	7	0	13	0	0	1	0	0	1	43
11/3	6.5	0	0	0	6	4	16	1	0	33	0	50	0	1	2	0	1	4	118
11/4	5.8	0	0	0	3	0	9	4	0	15	0	25	0	1	1	0	0	4	62
11/5	6.8	0	0	0	0	0	3	0	0	2	0	4	0	0	0	0	0	0	9
11/6	5.3	0	0	0	2	1	3	0	0	4	0	15	0	0	1	1	0	0	27
11/7	5.5	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	1
11/8	5.3	0	0	0	5	2	6	0	0	4	0	60	0	2	0	0	0	0	79
11/9	6.5	0	0	0	3	1	2	1	0	8	0	5	0	1	0	0	0	1	22
11/10	6.8	0	0	0	1	0	4	0	0	5	0	5	0	2	0	0	1	0	18
11/11	6.0	0	0	0	2	3	1	1	0	20	0	25	0	2	0	1	0	5	60
11/12	5.3	0	0	0	2	0	2	0	0	1	0	7	0	0	0	0	0	1	13
11/13	5.3	0	0	0	4	1	2	0	1	0	0	8	0	0	0	0	0	1	17
11/14	5.5	0	0	0	2	1	0	0	0	5	0	1	0	1	0	0	0	0	10
11/15	6.5	0	0	0	0	0	1	0	0	2	0	9	0	0	0	0	0	0	12
11/16	6.5	0	0	0	0	0	0	2	0	4	0	15	0	0	0	0	0	0	21
11/17	6.5	0	0	0	0	2	0	1	0	7	0	7	0	0	0	0	4	1	22
11/18	3.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11/19	6.3	0	0	0	6	0	0	1	0	2	0	6	0	0	0	0	0	1	16
11/20	6.3	0	0	0	1	0	0	0	0	0	0	3	0	0	0	0	0	0	4
11/21	6.8	0	0	0	0	2	1	0	2	1	0	4	0	0	0	0	0	0	10
11/22	6.5	0	0	0	4	0	0	1	0	0	0	1	0	0	0	0	0	0	6
11/23	6.8	0	0	0	0	0	0	1	0	0	0	6	0	0	0	0	0	0	7
11/24	5.5	0	0	0	1	0	0	0	0	0	0	2	0	0	0	0	0	0	3
11/25	5.3	0	0	0	1	1	1	1	0	1	0	8	0	0	0	0	0	2	15
11/26	5.8	0	0	0	1	2	0	0	0	0	0	3	0	0	0	0	0	0	6
11/27	5.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1
11/28	6.8	0	0	0	9	0	0	0	0	0	0	6	0	1	0	0	0	0	16
11/29	5.8	0	0	0	7	0	1	1	0	5	0	12	0	0	0	0	0	1	27
11/30	7.0	0	0	0	3	2	3	2	0	10	0	12	0	0	0	1	0	1	34
91	**598.8**	**0**	**0**	**182**	**244**	**72**	**967**	**177**	**8**	**257**	**4966**	**467**	**0**	**14**	**121**	**50**	**43**	**91**	**7659**

Washington Valley Fall 2019 - Martinsville, New Jersey

Date	HRS	BV	TV	OS	BE	NH	SS	CH	NG	RS	BW	RT	RL	GE	AK	ML	PG	UR	TOTAL
8/24	0.0	0	0	0	0	0	0	0	0	0	2	0	0	0	1	0	0	0	3
8/25	2.0	0	0	0	1	0	0	0	0	0	1	0	0	0	0	0	0	0	2
8/29	6.0	0	0	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4
8/31	2.5	0	0	6	7	0	0	0	0	0	6	0	0	0	2	0	0	0	21
9/5	5.0	0	0	2	1	2	0	0	0	0	1	0	0	0	0	0	0	0	6
9/7	8.0	0	0	6	10	3	2	0	0	1	16	0	0	0	3	1	0	0	42
9/8	6.0	0	0	25	23	0	9	2	0	0	31	0	0	0	9	5	0	0	104
9/13	5.0	0	0	3	5	0	1	0	0	0	0	0	0	0	1	1	0	0	11
9/15	6.8	0	0	4	9	1	12	2	0	0	30	0	0	0	6	4	0	0	68
9/16	5.5	0	0	7	9	0	3	11	0	1	53	0	0	0	4	3	0	0	91
9/17	6.5	0	0	8	5	3	15	1	0	0	503	0	0	0	7	4	0	0	546
9/18	5.0	0	0	4	4	0	5	3	0	0	29	0	0	0	2	2	0	0	49
9/20	7.0	0	0	1	2	2	9	4	0	0	66	0	0	0	7	1	0	0	92
9/21	2.5	0	0	1	1	0	23	5	0	0	42	0	0	0	14	13	0	0	99
9/24	8.5	0	0	6	10	1	17	2	0	1	37	0	0	0	30	6	0	0	110
9/25	7.0	0	0	4	5	1	10	4	0	1	79	0	0	0	18	1	0	0	123
9/27	3.0	0	0	0	0	0	2	0	0	0	9	0	0	0	1	0	0	0	12
9/29	6.5	0	0	8	3	1	22	18	0	7	14	0	0	0	8	1	0	0	82
10/4	7.7	0	0	1	10	2	55	7	0	3	5	0	0	0	28	5	0	0	116
10/5	3.0	0	0	0	2	0	5	2	0	0	3	0	0	0	0	0	0	0	12
10/10	7.0	0	0	0	3	1	33	16	0	5	6	0	0	0	3	3	0	0	70
10/11	4.0	0	0	0	0	0	8	2	0	0	0	0	0	0	2	0	0	0	12
10/12	7.0	0	0	0	4	0	8	8	0	3	0	1	0	0	5	3	0	0	32
10/15	3.5	0	0	0	6	0	7	8	0	4	0	0	0	0	1	1	0	0	27
10/17	4.5	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	1	0	3
10/18	6.0	0	0	1	2	1	4	12	0	3	0	0	0	0	0	1	0	0	24
10/19	6.5	0	0	1	4	0	6	7	0	0	0	0	0	0	4	2	0	0	24
10/21	4.0	0	0	0	0	0	0	3	0	10	0	0	0	0	0	0	0	0	13
10/23	6.5	0	0	0	1	1	6	5	0	3	0	0	0	0	3	2	0	0	21
10/26	4.0	0	0	0	3	0	7	4	0	10	0	0	0	0	0	0	0	0	24
10/28	5.0	0	0	0	2	0	1	1	0	2	0	0	0	0	0	0	0	0	6
10/31	4.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11/1	1.0	0	0	0	4	0	3	2	0	7	0	0	0	0	0	1	0	0	17
11/2	2.8	0	0	0	0	0	0	0	0	3	0	0	0	0	0	0	0	0	3
11/3	6.3	55	5	0	3	1	14	8	0	33	0	6	0	2	0	0	0	0	127
11/5	2.5	0	0	0	2	0	6	2	0	1	0	0	0	0	0	0	0	0	11
11/6	3.0	0	0	0	1	1	2	0	0	9	0	3	0	0	1	1	0	0	18
11/8	5.0	0	0	0	7	0	2	1	0	29	0	53	0	0	0	0	0	0	92
11/9	2.5	50	120	0	1	0	0	1	0	5	0	4	0	0	0	0	0	0	181
11/12	2.0	0	0	0	0	2	2	0	0	0	0	0	0	0	0	0	0	0	4
11/13	5.0	0	0	0	1	0	0	2	0	14	0	15	0	0	0	1	0	1	34
11/16	5.5	2	0	0	2	0	1	0	0	7	0	7	0	0	0	0	0	0	19
11/20	4.0	0	0	0	0	0	2	0	0	1	0	1	0	0	1	0	0	0	5
43	**204.9**	**107**	**125**	**92**	**155**	**23**	**302**	**143**	**0**	**163**	**933**	**90**	**0**	**2**	**161**	**62**	**1**	**1**	**2360**

Lighthouse Point Fall 2019 - New Haven, Connecticut

Date	HRS	BV	TV	OS	BE	NH	SS	CH	NG	RS	BW	RT	RL	GE	AK	ML	PG	UR	TOTAL
8/11	2.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8/17	1.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8/23	5.0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
8/24	4.8	0	0	3	0	0	0	0	0	0	1	0	0	0	2	0	0	0	6
8/25	5.0	0	0	5	0	0	0	0	0	0	8	0	0	0	0	0	0	0	13
8/26	5.5	0	0	7	1	0	0	0	0	0	2	0	0	0	0	0	0	0	10
8/27	4.3	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1
8/28	0.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8/29	5.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8/30	6.0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	2	0	0	3
8/31	5.5	0	0	1	1	0	0	2	0	0	0	0	0	0	0	1	0	0	5
9/1	7.0	0	0	40	4	0	1	0	0	0	2	0	0	0	1	1	0	0	49
9/2	5.0	0	0	3	0	1	0	0	0	0	0	0	0	0	1	1	0	0	6
9/3	5.5	0	0	10	0	0	1	0	0	0	0	0	0	0	0	1	0	0	12
9/4	6.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9/5	9.0	0	0	67	1	0	1	2	0	0	0	2	0	0	0	0	1	0	74
9/6	6.0	0	0	38	5	0	1	0	0	0	0	0	0	0	0	1	0	0	45
9/7	6.5	0	0	40	7	0	1	9	0	0	0	0	0	0	7	0	0	0	64
9/8	6.0	0	0	23	0	0	2	3	0	0	0	0	0	0	3	1	0	0	32
9/9	7.0	0	0	72	0	0	18	7	0	0	0	0	0	0	1	3	2	0	103
9/10	6.3	0	0	10	2	1	2	0	0	0	0	0	0	0	2	2	0	0	19
9/11	6.0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	1	0	0	3
9/12	10.0	0	0	47	1	4	11	2	0	0	0	0	0	0	11	0	0	0	76
9/13	8.5	0	0	75	18	2	10	6	0	1	0	0	0	0	27	9	2	2	152
9/14	5.3	0	0	6	0	0	2	2	0	0	0	0	0	0	1	2	1	0	14
9/15	6.5	0	0	25	5	0	14	6	0	0	1	0	0	0	4	2	0	3	60
9/16	9.0	0	0	19	2	2	14	2	0	0	0	0	0	0	26	3	1	3	72
9/17	6.0	0	0	63	22	5	135	11	0	0	46	6	0	0	26	0	2	0	316
9/18	8.0	0	0	32	7	8	25	15	0	0	0	4	0	0	13	3	0	2	109
9/19	7.5	0	0	7	1	1	9	3	0	0	1	0	0	0	2	2	0	2	28
9/20	7.5	0	0	19	1	2	4	1	0	0	0	1	0	0	10	5	2	1	46
9/21	7.0	0	0	5	2	5	7	9	0	0	0	0	0	0	6	3	4	0	41
9/22	7.3	0	0	15	0	6	50	21	0	0	0	0	0	0	10	0	0	2	104
9/23	6.5	0	0	0	0	3	12	0	0	0	0	0	0	0	6	0	1	0	22
9/24	6.0	0	0	31	5	0	44	9	0	0	0	0	0	0	14	3	1	0	107
9/25	10.0	0	2	1	3	6	16	9	0	0	12	0	0	0	19	5	0	0	73
9/26	9.0	0	0	10	0	3	3	2	0	0	0	0	0	0	7	4	2	0	31
9/27	7.5	0	0	13	0	2	24	4	0	0	0	1	0	0	5	2	2	1	54
9/28	6.8	0	0	16	0	0	2	1	0	0	0	0	0	0	3	1	5	0	28
9/29	9.8	0	10	36	13	10	93	30	0	0	2	1	0	0	54	22	6	24	301
9/30	7.0	0	0	38	4	3	14	11	0	1	0	0	0	0	4	3	2	4	84
10/1	1.5	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	2
10/2	5.3	0	0	1	0	2	2	3	0	0	0	0	0	0	4	0	0	0	12
10/3	7.3	0	0	5	0	8	1	0	0	0	0	0	0	0	29	2	0	2	47
10/4	10.0	0	76	94	18	17	232	106	0	1	58	1	0	0	147	45	9	20	825
10/5	9.3	0	51	33	18	8	181	71	0	3	50	3	0	0	10	3	1	22	454
10/6	8.0	0	0	0	0	0	2	5	0	0	0	0	0	0	0	2	4	0	13
10/7	4.0	0	0	5	1	0	2	5	0	0	0	0	0	0	1	0	1	0	15
10/8	9.8	0	0	5	0	3	12	78	0	0	0	1	0	0	6	4	1	2	112
10/9	4.5	0	0	1	0	0	1	0	0	0	0	0	0	0	7	0	1	0	10
10/10	10.3	0	0	27	7	8	223	261	1	0	6	0	0	0	110	8	4	66	721
10/11	9.8	0	0	14	8	6	122	384	0	3	8	6	0	0	35	7	10	13	616
10/12	5.8	0	0	4	3	5	13	27	0	0	0	0	0	0	0	0	0	0	52
10/13	8.0	0	0	12	3	6	25	51	0	4	1	4	0	0	2	1	0	6	115
10/14	6.0	0	0	4	0	1	9	5	0	0	0	0	0	0	1	1	0	1	22
10/15	5.0	0	5	3	1	1	11	9	0	0	0	0	0	0	1	0	1	0	32
10/16	8.3	0	2	3	0	2	7	6	0	0	0	1	0	0	2	4	1	1	29
10/17	9.0	0	0	3	0	1	4	7	0	0	0	0	0	0	0	5	0	0	20
10/18	9.8	0	29	14	13	4	65	107	1	5	3	5	0	0	7	22	4	25	304
10/19	7.5	0	5	4	3	0	13	15	0	4	1	2	0	0	4	5	1	2	59
10/20	6.0	0	0	2	1	1	9	5	0	0	0	0	0	0	0	2	2	0	22
10/21	9.3	0	0	5	10	2	74	61	0	16	0	14	0	0	0	0	1	19	202
10/22	4.5	0	0	1	0	0	2	1	0	0	0	0	0	0	0	1	2	0	7
10/23	10.0	0	4	7	4	3	28	15	0	0	0	3	0	0	13	13	0	1	91
10/24	8.0	0	0	0	0	3	1	1	0	0	0	0	0	0	1	0	0	0	6
10/25	7.0	0	0	2	0	1	1	3	0	0	0	0	0	0	0	1	2	0	10
10/26	6.5	0	23	1	3	1	7	16	0	1	0	2	0	0	4	3	2	1	64
10/28	7.0	0	0	3	3	3	3	5	0	2	0	15	0	0	2	0	1	2	39
10/29	2.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10/30	4.8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10/31	3.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11/1	7.0	0	0	2	1	0	2	3	0	0	0	0	0	0	0	0	1	0	9
11/2	5.5	0	0	0	1	0	0	1	0	0	0	2	0	0	0	0	0	0	4
11/3	8.0	0	27	0	2	2	10	8	0	0	0	11	0	0	0	1	0	4	65
11/4	7.0	0	0	0	0	1	5	3	0	2	0	0	0	0	1	1	1	0	14
11/5	3.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11/6	9.0	0	2	1	2	2	10	7	0	0	0	7	0	1	0	2	1	2	37
11/7	6.8	0	0	1	0	7	1	1	0	0	0	0	0	0	0	3	0	0	13
11/8	8.0	0	11	0	4	5	14	22	0	10	4	23	0	1	4	2	5	17	122
11/9	5.8	0	0	0	0	1	7	3	0	0	0	5	0	0	0	1	0	0	17
11/10	2.8	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	2
11/11	5.8	0	8	1	0	1	3	2	0	0	0	0	0	0	0	0	0	0	15
11/12	2.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1
11/13	8.5	0	9	0	4	6	8	3	1	16	1	34	0	0	0	5	4	8	99
11/14	8.0	0	0	0	0	3	2	1	0	2	0	1	0	0	0	0	0	1	10
11/15	7.0	0	1	0	1	1	1	3	0	0	0	1	0	0	1	1	0	0	10
11/16	5.0	0	67	0	7	0	2	15	0	62	0	93	0	0	0	0	0	19	265
11/17	7.8	0	2	0	2	0	16	4	1	22	0	26	0	0	0	0	1	3	77
11/18	4.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11/19	4.0	0	0	0	0	0	3	0	0	0	0	0	0	0	0	0	0	0	3
11/20	5.0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1
11/21	5.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11/22	5.0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1	1	3
11/23	6.3	0	1	0	0	1	1	2	0	0	0	0	0	0	0	1	0	1	7
11/27	4.7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11/29	7.0	0	2	0	6	1	5	12	0	4	0	16	0	0	0	0	2	12	60
96	**614.2**	**0**	**337**	**1035**	**232**	**183**	**1658**	**###**	**4**	**159**	**208**	**291**	**0**	**2**	**657**	**229**	**99**	**295**	**6899**

Other: 10/4 1 Swainson's Hawk

Boothe Memorial Fall 2019 - Stratford, Connecticut

Date	HRS	BV	TV	OS	BE	NH	SS	CH	NG	RS	BW	RT	RL	GE	AK	ML	PG	UR	TOTAL
9/12	1.0	0	0	0	0	0	3	2	0	0	0	0	0	0	0	0	0	0	5
9/16	5.0	0	0	26	18	2	67	10	0	0	95	0	0	0	21	1	1	2	243
9/17	5.3	0	7	27	25	2	26	8	0	0	198	0	0	0	5	0	0	1	299
3	**11.3**	**0**	**7**	**53**	**43**	**4**	**96**	**20**	**0**	**0**	**293**	**0**	**0**	**0**	**26**	**1**	**1**	**3**	**547**

Fire Island Fall 2019 - Islip, New York

Date	HRS	BV	TV	OS	BE	NH	SS	CH	NG	RS	BW	RT	RL	GE	AK	ML	PG	UR	TOTAL
8/24	8.0	0	0	13	0	1	0	0	0	0	0	0	0	0	1	1	0	0	16
8/29	4.0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
9/3	4.8	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3
9/5	5.0	0	0	9	0	0	0	0	0	0	0	0	0	0	0	3	0	0	12
9/7	8.0	0	0	79	0	1	0	2	0	0	0	0	0	0	0	17	1	0	100
9/9	4.0	0	0	5	0	0	0	1	0	0	0	0	0	0	0	12	0	0	18
9/10	5.3	0	0	5	0	0	0	0	0	0	0	0	0	0	1	2	0	0	8
9/11	5.0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
9/12	5.5	0	0	1	0	0	0	0	0	0	0	0	0	0	0	4	0	0	5
9/13	6.0	0	0	7	0	0	0	0	0	0	0	0	0	0	2	14	0	0	23
9/14	5.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	12	0	0	12
9/15	6.0	0	0	2	0	0	1	1	0	0	0	0	0	0	0	10	2	0	16
9/16	6.0	0	0	2	1	1	0	0	0	0	0	0	0	0	0	12	1	1	18
9/17	8.8	0	0	85	0	6	3	2	0	0	0	0	0	0	31	54	0	2	183
9/18	6.5	0	0	8	0	3	0	1	0	0	0	0	0	0	1	23	1	0	37
9/19	5.0	0	0	2	0	0	1	1	0	0	0	0	0	0	3	10	0	0	17
9/20	8.0	0	0	2	0	1	3	0	0	0	0	0	0	0	2	19	3	0	30
9/21	6.0	0	0	0	0	2	1	0	0	0	0	0	0	0	7	4	1	0	15
9/22	7.5	0	0	1	0	0	0	0	0	0	0	0	0	0	0	7	0	0	8
9/23	4.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9/24	8.3	0	0	11	0	0	1	0	0	0	0	0	0	0	25	25	12	0	74
9/25	5.5	0	0	9	0	5	2	0	0	0	0	0	0	0	34	30	0	0	80
9/26	5.5	0	0	1	0	0	0	0	0	0	0	0	0	0	0	9	0	0	10
9/27	7.0	0	0	4	0	3	1	1	0	0	0	0	0	0	3	20	0	0	32
9/28	7.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1
9/29	9.3	0	0	48	2	8	0	1	0	0	0	0	0	0	4	51	20	0	134
9/30	5.0	0	0	12	0	5	2	0	0	0	0	0	0	0	2	4	2	0	27
10/1	6.5	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	2
10/2	4.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1
10/3	2.5	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
10/4	9.0	0	0	49	0	7	8	0	0	0	0	0	0	0	133	193	12	0	402
10/5	7.0	0	0	2	0	2	4	2	0	0	0	0	0	0	5	6	0	0	21
10/6	4.0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	2	1	0	4
10/7	4.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1
10/8	8.0	0	0	1	0	0	2	1	0	0	0	0	0	0	0	5	1	0	10
10/10	7.5	0	0	23	0	7	5	3	0	0	0	0	0	0	92	50	1	0	181
10/11	9.0	0	0	7	0	4	0	3	0	0	0	0	0	0	25	57	7	0	103
10/12	6.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	11	0	0	11
10/13	8.0	0	0	4	0	5	7	1	0	0	0	0	0	0	4	4	5	0	30
10/14	6.0	0	0	1	0	0	7	2	0	0	0	0	0	0	0	4	0	0	14
10/15	7.3	0	0	0	0	2	8	3	0	0	0	0	0	0	1	11	2	0	27
10/16	4.0	0	0	0	1	0	2	1	0	0	0	0	0	0	1	0	1	0	6
10/17	6.0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	3	4	0	8
10/18	9.3	0	0	4	0	7	10	7	0	0	0	0	0	0	9	48	5	0	90
10/19	6.5	0	0	1	0	6	1	2	0	0	0	0	0	0	3	5	1	0	19
10/20	5.0	0	0	2	0	0	0	3	0	0	0	0	0	0	0	4	0	0	9

Fire Island Fall 2019 - Islip, New York

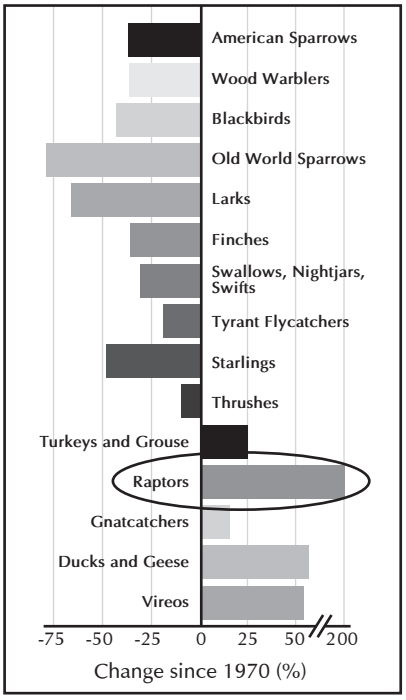
Date	HRS	BV	TV	OS	BE	NH	SS	CH	NG	RS	BW	RT	RL	GE	AK	ML	PG	UR	TOTAL
10/21	6.5	0	0	1	0	4	2	8	0	0	0	0	0	0	6	21	2	0	44
10/22	5.5	0	0	0	0	0	0	1	0	0	0	0	0	0	0	8	1	1	11
10/23	7.0	0	0	3	0	2	7	4	0	0	0	0	0	0	15	35	2	0	68
10/24	5.8	0	0	0	0	2	0	0	0	0	0	0	0	0	0	1	1	0	4
10/25	6.0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	2	1	0	5
10/26	7.0	0	0	3	0	5	9	9	0	0	0	0	0	0	4	8	2	0	40
10/28	4.5	0	0	3	0	6	3	5	0	0	0	0	0	0	1	7	0	0	25
10/29	1.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10/31	2.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11/1	8.0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	6	1	0	8
11/2	4.3	0	0	0	0	1	1	0	0	0	0	0	0	0	0	1	0	0	3
11/3	7.0	0	0	0	0	5	5	0	0	0	0	0	0	0	6	16	3	0	35
11/4	5.5	0	0	0	0	0	1	1	0	0	0	0	0	0	0	1	0	0	3
11/6	7.0	0	0	0	0	1	6	1	0	0	0	0	0	0	0	5	0	0	13
11/7	4.0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	1	0	0	2
11/8	8.5	0	0	0	0	4	3	0	0	0	0	1	0	0	0	8	3	0	19
11/9	3.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	1	0	3
11/13	7.5	0	0	0	2	4	0	0	0	0	0	0	0	0	0	6	0	0	12
11/16	5.0	0	0	0	0	3	4	0	0	0	0	1	0	0	0	1	1	0	10
11/17	3.0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	3	0	0	4
11/20	3.5	0	0	0	0	0	3	0	0	0	0	0	0	0	0	1	0	0	4
11/21	5.0	0	0	0	0	1	9	3	0	0	0	0	0	0	0	0	0	0	13
11/23	4.0	0	0	0	0	2	3	0	0	0	0	1	0	0	1	1	0	0	8
11/29	3.0	0	0	0	2	0	1	0	0	0	0	0	0	0	0	0	0	0	3
11/30	3.5	0	0	0	0	0	2	0	0	0	0	0	0	0	0	2	0	0	4
71	413.8	0	0	418	8	118	130	71	0	0	0	3	0	0	423	884	103	4	2162

Fort Tilden Fall 2019 - Queens, New York

Date	HRS	BV	TV	OS	BE	NH	SS	CH	NG	RS	BW	RT	RL	GE	AK	ML	PG	UR	TOTAL
9/7	6.0	0	0	102	1	0	0	0	0	0	0	1	0	0	3	3	1	0	111
9/24	5.5	0	6	20	0	0	2	1	0	0	0	1	0	0	18	16	1	0	65
9/29	6.5	0	1	33	0	1	6	3	0	0	0	0	0	0	12	7	2	0	65
10/4	10.5	0	1	52	4	3	30	6	0	0	6	0	0	0	264	128	6	0	500
10/5	3.5	0	0	1	1	0	6	2	0	0	1	0	0	0	3	1	0	0	15
10/8	6.0	0	0	1	0	0	1	0	0	0	0	0	0	0	1	2	1	0	6
10/10	6.0	0	0	6	0	4	6	3	0	0	0	0	0	0	60	22	0	0	101
10/11	6.0	0	2	1	0	5	14	2	0	0	0	0	0	0	7	1	0	0	32
10/12	5.5	0	0	1	0	1	4	6	0	0	0	0	0	0	0	0	0	0	12
10/13	7.0	0	0	6	0	1	11	7	0	0	0	1	0	0	6	8	2	0	42
10/18	8.5	0	0	1	0	4	18	10	0	0	0	1	0	0	14	26	2	0	76
10/21	5.5	0	0	5	2	2	17	3	0	0	0	1	0	0	1	4	2	0	37
10/23	7.0	0	0	0	0	5	17	3	0	0	0	0	0	0	11	22	2	0	60
10/26	5.0	0	0	3	0	3	13	4	0	0	0	2	0	0	0	0	0	0	25
11/13	6.5	0	0	0	0	4	4	1	0	3	0	7	0	0	1	2	1	0	23
15	95.0	0	10	232	8	33	149	51	0	3	7	14	0	0	401	242	20	0	1170

Headlines Scream: "Raptors Increase 200% from 1970-2017" What Do Hawk Counts Say?

This past year a number of very important articles have been published. One article on the changes in bird populations since 1970 by K. Rosenberg, and 10 other credited authors was published in the highly respected journal *Science* and is available on line at: https://www.birds.cornell.edu/home/bring-birds-back/. It documents an overall net decline of 29% in North American birds—a net decline of 2.9 billion birds—with the largest losses in sparrows and grassland birds effecting both native and invasive species, with most of the losses occurring in the East. But it also described increases in breeding wetland birds (ducks & geese), woodpeckers and raptors, partially offsetting the losses in other species.



Most birders and raptor enthusiasts are concerned with population trends of birds and therefore it behooves us to pay close attention to this study. Every major news outlet and most magazines carried a story about this study. Unfortunately, most of these stories did not go much beyond the headline—30% decline in North American birds over the past 50 years. Few even mentioned the secondary findings.

This was a major study—to my mind, of unprecedented scope. It gathered population data on ALL the birds in North America over the past 50 years! Where did they get the data? How did they analyze it? What about that increase in raptors? Exactly what species and what data was it based on?

But, an increase in raptors? Now that would be interesting to the readers of this NorthEast Hawk Watch report. So I decided to look into it more closely. In the general press, there was abundant coverage of this article and its conclusions. The Cornell Lab. published an article on the paper in *Living Bird* (available at https://www.allaboutbirds.org/news/vanishing-1-in-4-birds-gone). None of the articles described in detail the data and methods used to draw the conclusions, they just re-stated (and sometimes mis-stated) the conclusions in the published article. Even the original peer-reviewed article, published in *Science*, left me unsatisfied. It wasn't until I got to the Supplemental Material that my opinion of the study began to take shape.

The article is based on two data sets. One, dating from 1970 and including population data on 529 species, was based on published materials from 13 sources such as North American Breeding Bird Surveys (BBS), Audubon Christmas Bird Counts (CBC), Partners in Flight (PIF) and Birds of North America (BNA). The other data set was based on NOAA-NEXTRAD data from 2007 to 2018. The radar was used essentially as a check on the accuracy of the data compiled from the main published sources. In both sources the data is complex. The bird population data is based on sources with different data collection methods and published in different forms and the published article did not describe how they managed to put this data together and come up with a simple number to summarize the overall change in population for each species or group of related species, but did give some indication of the sophisticated statistics used.

The *Living Bird* article has a summary graphic highlighting the species groups that showed increases: Waterfowl +50%, Raptors +200% and Turkeys +200% among others. The label for the figure says "…..Hawks and falcons benefited greatly from focused conservation policy, such as Endangered Species legislation and the banning of harmful pesticides such as DDT….." THAT +200% is the big hook that convinced me to investigate further and discuss it in this forum. A +200% increase in raptors is no small deal even over 50 years, and certainly contrary to my observations across the same time period.

The *Living Bird* article and the paper itself, cited the +200% increase in raptors. The 'Change Since 1970' figure is directly from the Rosenberg article.

In Table S2 of the "Supplementary Materials" Rosenberg gives a more detailed look at the family groups:

Table S2 Family Common Name	Number species	Change Millions	Change %	% of species in Decline
New World Vultures	2	9.4	265%	0%
Osprey	1	0.4	304%	0%
Hawks	16	5.5	78.80%	19%
Falcons & Caracaras	6	0.03	0.50%	33%
Owls	11	1.7	15.90%	64%
Barn Owls	1	0.1	212%	0%

Table S2 shows percent change for six families ranging from 0.5% to 304%. Does the 200% increase in Raptors refer to all or several of these families, collectively? Using the numbers from Table S2, I calculated the original population for each family and added them as the highlighted numbers on Table 2.

I then looked at combinations of families and found the percent change. The resulting percent increase varied from 35% to 95%.

% Change Raptors 48 yrs- Rosenberg Data	
Osprey, Hawks & Falcons	+49%
Osprey, Hawks, Falcons & Vultures	+95%
Osprey, Hawks, Falcons & Owls	+35%
Osprey, Hawks, Falcons, Vultures & Owls	+65%

Table 3. Raptor percentage changes calculated from Rosenberg's data

So I can find no basis in this table for the statement that Raptors have increased by 200% since 1970. (I have left out Rosenberg's 90% Credible Intervals because he did not appear to use them in his conclusions.) The closest we can come to the +200% increase in raptors cited in the Rosenberg graphic and quoted in the *Living Bird* article, is to include the first four families, but omit the owls in the last two families. And we still only get a 95% increase…I'm stumped about where the 200% increase came from.

Rosenberg also includes a graph for the population trend for all species, not just hawks (Figure 1. on p.46). It was widely reproduced in news reports of Rosenberg's article. While there is no outward evidence, we have to assume that it is based on the calculated bird populations for the last 48 years. If that is so, it shows good news and bad news. The bad news is the loss of billions of individual birds over the time period. But the good news is that the decline is slowing! Just estimating approximately from the curve, a billion birds were lost in the first 10 years, but, as a rough estimate only 0.2 billion in the last 10 years. I found no mention of this very important change in trend in the article. Surely a marked decrease in the loss of birds is as important as the previous loss of birds. The origin of this curve is not obvious however. In my discussion of the Osprey below we will see that his trend for that species is based only on the first and last 3 years of the data. This approach ignores any patterns during the middle 42 years.

I wondered how I could compare the Rosenberg findings with hawk count data. Hawk count data are migration counts, whereas Rosenberg's numbers, which rely heavily on the BBS, are for breeding birds. While not all hawk species are migrants, we expect that the percent change we observe in hawk counts should be similar to the population changes calculated by Rosenberg. Hawk count data predominantly counts

Rosenberg Data - 48 Years 1970-2017 Family Com Name	Number species	Change Millions	Change %	% of species in Decline	1970 Population in Millions (calc-DP)	2017
New World Vultures	2	9.4	265.30%	0%	3.5	12.9
Osprey	1	0.4	304.40%	0%	0.13	0.53
Hawks	16	5.5	78.90%	19%	7	12.4
Falcons & Caracaras	6	0.03	0.50%	33%	6	6.03
Owls	11	1.7	15.90%	64%	10.7	12.4
Barn Owls	1	0.1	211.60%	0%	0.05	0.15

Table 2. Taken from Rosenberg's Table S2 plus calculations for populations that I made from his data

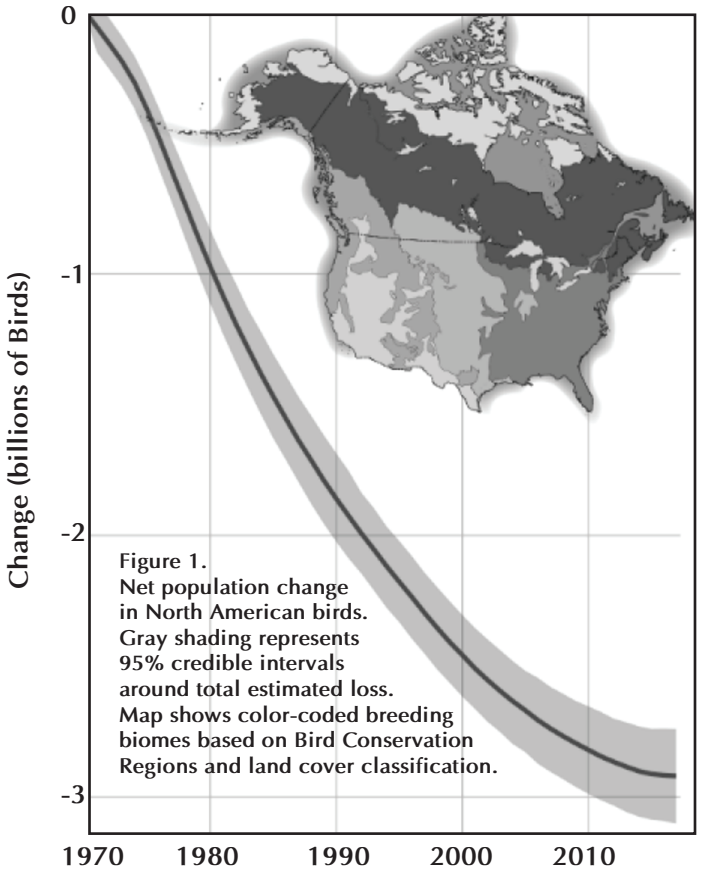


Figure 1.
Net population change in North American birds. Gray shading represents 95% credible intervals around total estimated loss. Map shows color-coded breeding biomes based on Bird Conservation Regions and land cover classification.

passage birds from a source region north of the count location, and not all the individuals in the source region will pass the same count location from year to year, or may even short-stop and not pass south of the latitude of the count location at all. In addition, the Rosenberg conclusions and data is for all of North America and no hawk count location counts raptors from all of North America.

Because of space limitations in this publication we will only consider the trends in Osprey and Vultures seen at hawk watches. The hawk watch trends from selected watches for the other hawks and falcons is available at: http://www.battaly.com/nehw/reports/panko/raptors+200pc.pdf

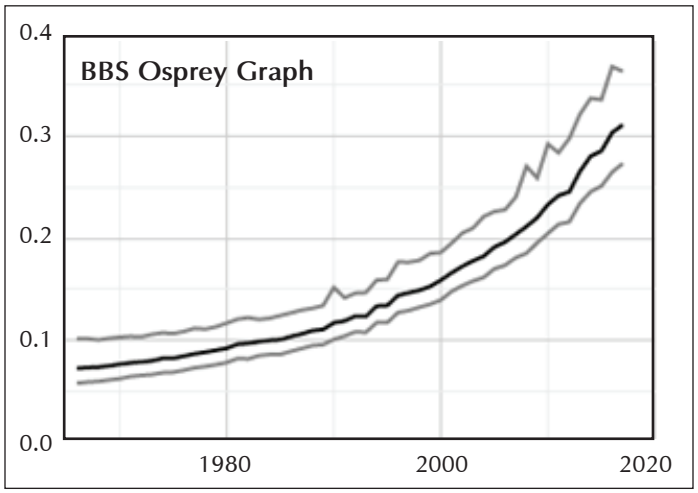
Osprey Population Levels & Migration Counts:

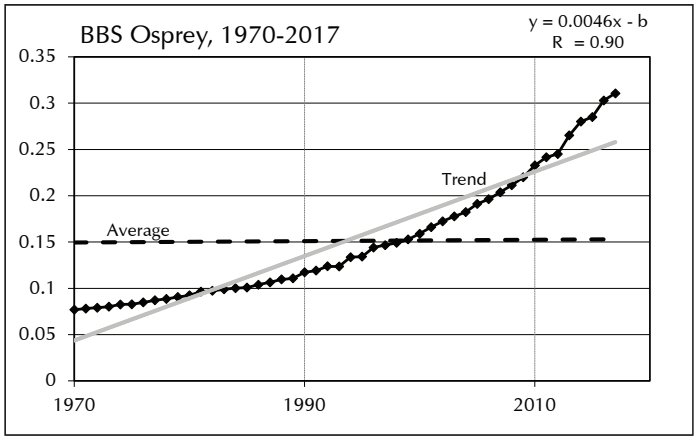
Any birder in the Northeast will tell you that the Osprey population is increasing on the basis of breeding season observations. A local breeding bird atlas area here in Westchester County NY, that never had any breeding Osprey, now has two nests with a third nest just a half mile out of its borders. This in a densely populated suburban area that has an interstate, two NYS Parkways, numerous heavily traveled state roads, and no major water bodies. It does have the cell towers that Osprey find so attractive. This area is not unique. It is happening all over NY and CT and, likely the whole Northeast. Yet hawk watches in the Northeast report a decrease in Osprey over the last 25 years. How these observations can be resolved with the pronounced and almost universal decline in Osprey counts at hawk watches is the outstanding puzzle of hawk watching, IMHO. (NEHW report pg 24, http://www.battaly.com/nehw/reports/NEHW2018.pdf).

Rosenberg, et al Results

Two factors make Osprey an interesting example to examine. 1) This taxonomic family consists of only one species. 2) For Rosenberg's list of sources, only the BBS has information on hawk populations.

The BBS provides a graph of its Osprey data. The Y-axis is labeled N, the letter often used to represent a species population. When the data base is queried, this is labeled as RA, and not N. So the dark line may not be a direct plot of their data but a number statistically calculated from their data. The grey lines are a representation of the uncertainty they see in the accuracy of their data.





Rosenberg states that he usually averaged the first three years and last three years and used the averages to calculate the percent change in population. Using the first graph I estimated the values for 1970 and 2017 and got a value of 303.9% for the change over the 48 years which is very close to Rosenberg's value of 304.4%. Elsewhere in this article I used the values at the ends of the Trend Line to calculate the percent change. If we use an exponential fit to this data (R2=0.98), which is better than the linear fit (R2=0.90), we get a percent change of 370%.

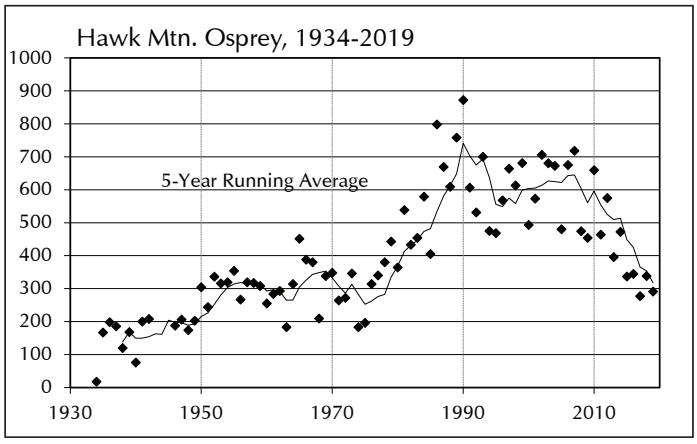
I do not know enough about the BBS data to speculate what bias, if any, the BBS counts are subject to, but two factors may be significant. Osprey may breed more commonly along roads, making them more noticeable on BBS routes. Osprey nests and their presence are easily detected compared to other raptors.

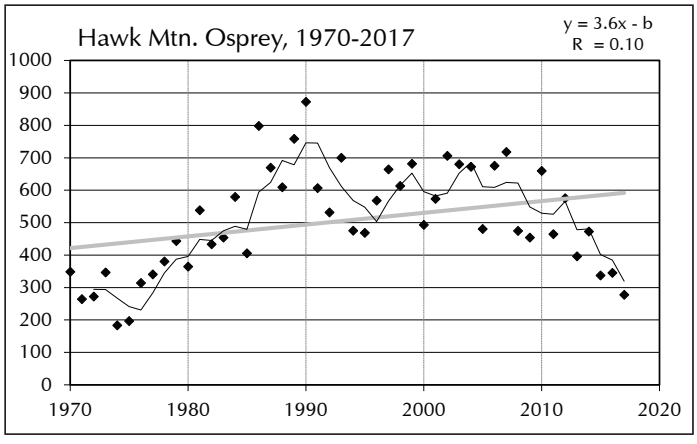
For the remaining analysis I will be assuming that Rosenberg's numbers are a direct and simple calculation from the BBS numbers. It gets a little more complicated to verify this in his other groups, as they involve more than one species.

Hawk Watch Data

To examine the Osprey trends in hawk watch data, I looked at several representative sites across the continent, and then looked at the NEHW compilation of northeastern sites.

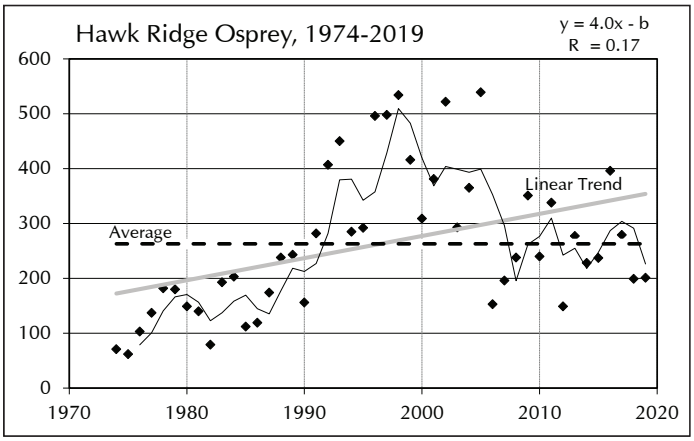
Hawk Mountain shows an interesting pattern: This begins 35 years earlier than that considered by Rosenberg. After WWII and until the mid '70's the Osprey count looks relatively constant. *Silent Spring* was published in 1962 and DDT outlawed in the US in 1972. And we see a rapid rise in population after 1976, peaking in 1990. Then a period of constant counts from 1990 to 2010. And an apparent decline since 2010. It presents a much more complex picture of Osprey numbers in the northeast than Rosenberg's over-simplified +304.4% does for the period 1970-2017.



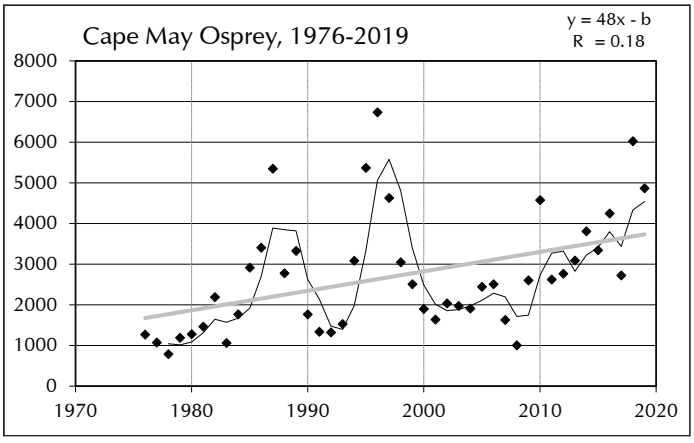


If we average the years around 1970 and 2017, as with the BBS data, we get a percent change of 0% and if we plot a trend line we get a slight but insignificant increase. This increase, from the trend line, though insignificant, is +40% which demonstrates the difference between averaging the end years or using the linear regression. But the data from Hawk Mountain only reflects the Osprey population of the northeast, and likely only the inland portion of that population, and Rosenberg's conclusions are for all of North America but only the years 1970-2017.

Hawk Ridge in Duluth MN also measures a northern, inland population, and its graph is remarkably similar to Hawk Mtn's. From the 70's we first see a rise, then a steady portion in the 90's, to a decline down to the current levels. This is for a period of 46 years, overlapping with 44 years of the time period used by Rosenberg. If we use the linear trend line to get a percent value for the overall period, it is 100%, not close to his 300%.



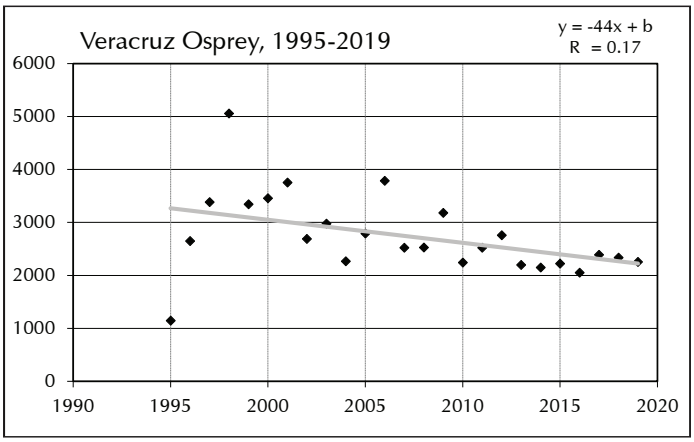
For a look at the coastal population we can look at **Cape May**. Its count starts in September and therefore may miss some early migrating adults. This graph shows a great deal of variation, possibly because weather sometimes brings otherwise uncounted offshore migrants in close enough to be counted at Cape May. It does not show the trends evident in the Hawk Mtn. data. It does show an increase of +124% from 1976 to 2017, and a significantly strong increase from 2010 to 2019.

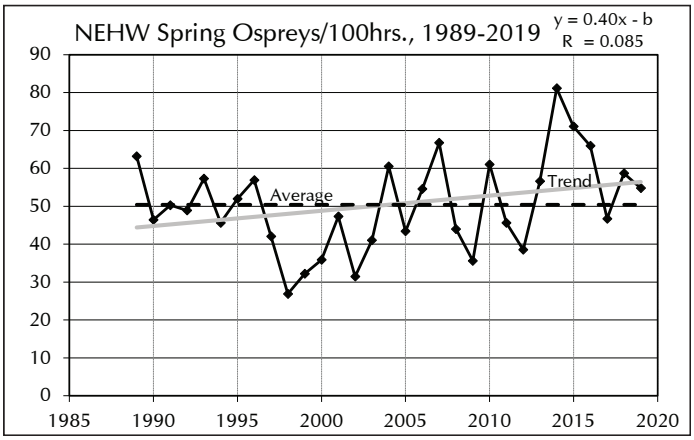


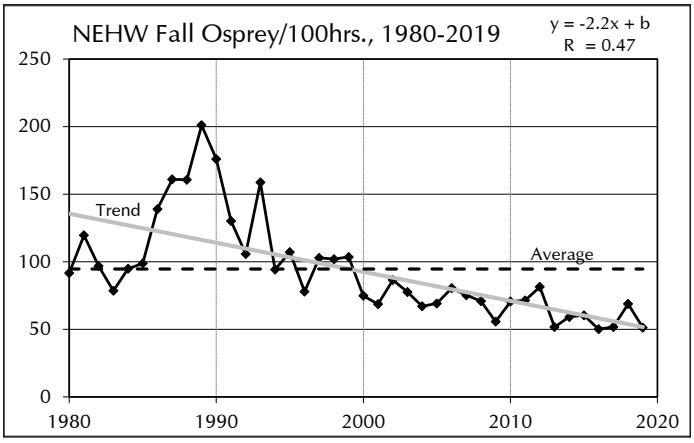
The Osprey counted at Cape May and Hawk Mtn. are likely breeders from the northeast. If we look at Veracruz perhaps we will see a wider picture of the North American continent.

The **Veracruz** data, like Cape May, is a reasonable sample—averaging over 2000 Osprey per year and it likely represents a breeding population from a broad inland portion

of North America. It suffers from only having counts for 25 years. The wide variation in the counts from 1995 to 1998, makes it impossible to reasonably calculate a percent change using start and stop years. But it is obvious that the trend is down over the last 20 years. A regression line through the data shows a decrease of about 30% over 25 years.







The graphs above are from Trudy Battaly's compilation of all of the hawk watches of the northeast as given in this issue. In order to compensate for new hawk watches and ones that change their coverage significantly, the total hawks are divided by total hours of watching and multiplied by 100. They are somewhat contradictory. The numbers of Osprey coming north in spring are not changing significantly over the last 31 years, while the fall Osprey going south through our area seem to be decreasing significantly over the last 40 years. There could be a number of reasons for this; 1) The Osprey may use different routes coming north in the spring than going south in the fall, which we know to be true, 2) there could be a decline in breeding success resulting in a decline in the fall migrating population, while over-wintering success is increasing, keeping the breeding (spring) population constant. Whatever the causes for these curves, neither serve to confirm Rosenberg's thesis that their population is increasing by 300%.

Summarizing for Osprey:

We have a rather complex picture from the different data available:

Rosenberg (1970-2017) +304.4%
Likely based mostly on BBS (inland & roadside) data

BBS (1970-2017) +300%
Mostly inland and roadside data, continent-wide

Hawk Mtn. (1970-2017) +40%
Mostly inland and northeastern population

Hawk Ridge (1974-2019) +100%
Mostly inland and north-central population

Cape May (1974-2019) +120%
Coastal and northeastern population

Veracruz (1995-2019) -30%
Mostly inland and central population

NEHW-Spring (1989-2019) +
Possibly a slight increase—statistically insignificant

NEHW-Fall (1980–2019) -
Significant decrease of 60% over the last 40 years

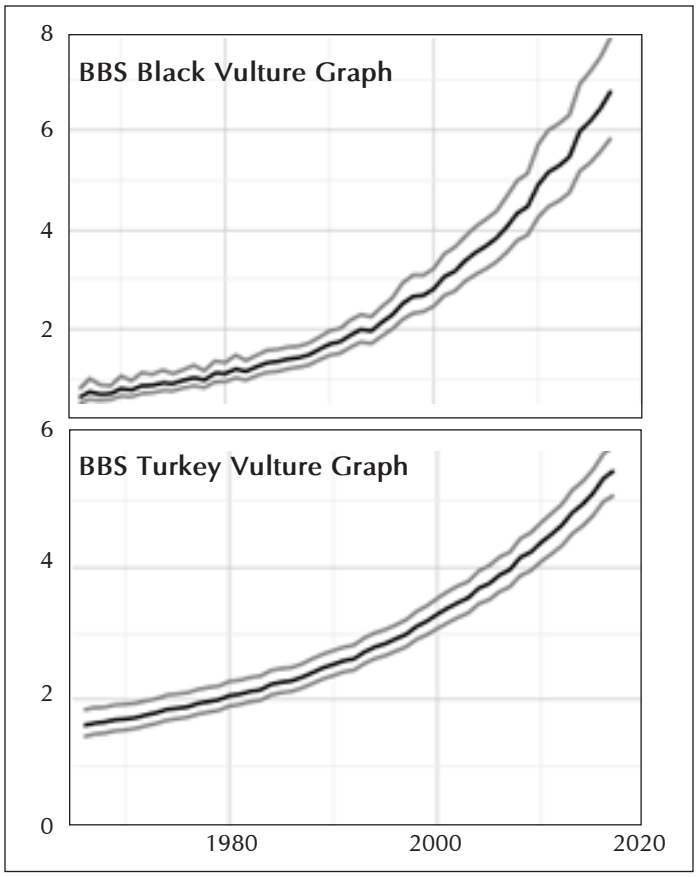
My calculations of the change in the number of hawks at particular watches are done differently from Rosenberg's. I mostly used a regression line for the period and site in question and used the difference in the beginning and ending of the line rather than comparing the average the first three years to that of the last three years.

Considering all the data, I would lean toward the hawk watches and estimate an increase in Osprey population through the '90s followed by a steady period and a decrease in the 2000's, resulting in an overall net increase of about 50% since the 1970's.

Vultures

Rosenberg, et al Results

Rosenberg groups BVs and TVs together and reports a +265.3% increase over the 48 years from 1970 and implying a current populations of about 12.4 million. Throughout the report Rosenberg gives numbers that imply much greater accuracy than I think they deserve. His own Credible Intervals for vultures indicate the value 264.3 is good only within a 30% range with 90% confidence. So 265.3% might better be stated as somewhere between 235% and 295%. Thus, the value of 265.3% implies knowledge of its precision to a much greater extent than he actually claims. I will write it as 260%. A similar argument applies to the values cited above and below.

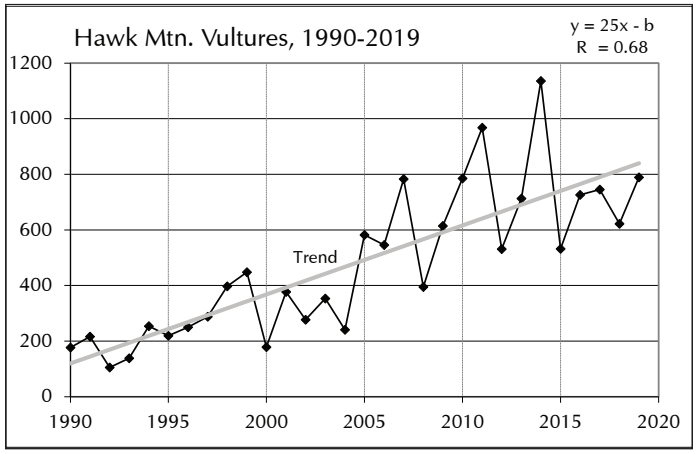


The BBS graphs for the Vultures are given above. These graphs are labeled N along the Y-axis, with no units of measure. N is normally used to indicate population but I do not know if the numbers are actual estimates of numbers of vultures in millions or are actually different units of measure. Therefore, I can't combine them to get a BBS estimate for the percent change of vultures during this period. Also, being 1966-2017, the BBS period is a little longer than Rosenberg's. But from the graphs we can estimate a change in TVs of 230%, and a change of BVs of 1,000% over the period. Rosenberg, presumably using this same BBS data, reported a change of their sum to be 265.3% for the period 1970-2017 and a change of 9.4 million in population. Reading these graphs, and assuming the y-axis is millions, I get a change of 420% and 9.9 million over the slightly longer 1966-2017 year period. The 9.9 million is very reasonable, compared to Rosenberg's 9.4 million for a slightly shorter time period, but I am unable to explain why I get a percent change for the combined species of 420% compared to Rosenberg's 265.3% for the slightly shorter time period. It should also be noted that this BBS data puts the total number of BVs at 6.7 million and the TVs at 5.4 million. 20% more BVs than TVs? Certainly not in the Northeast in 2017, but they are a more southerly species than the TVs so this may be accurate.

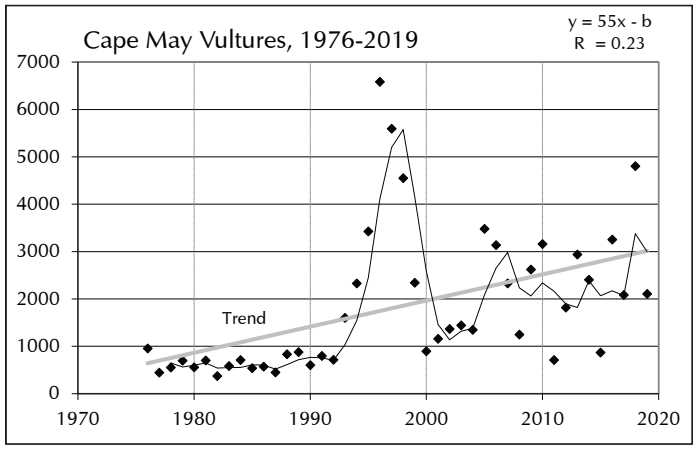
Hawk Watch Data

How well do the hawk counts reflect the change in population of vultures over the years? First, we'll look at the premier, longest hawk watch—Hawk Mountain.

Unfortunately data from **Hawk Mountain** for all the years of Rosenberg's study is not available. Hawk Mountain recorded some Vultures in the early years but seemed not to count them from the mid 60's to mid 80's, so the picture from Hawk Mountain is not as good for the Vultures as it was for the Osprey.

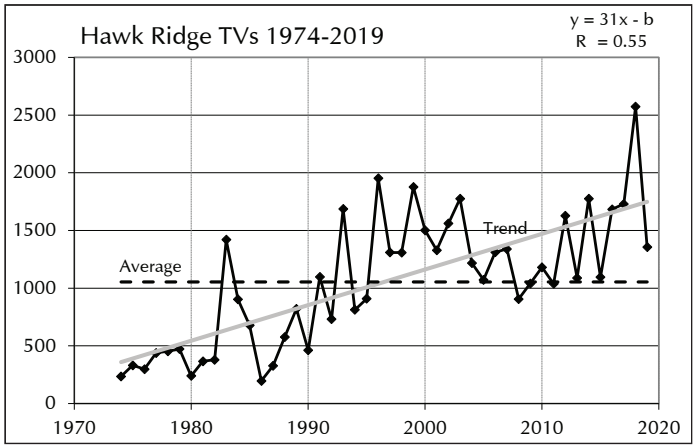


The trend at Hawk Mountain is stark and huge. I would tend to believe it is mostly due to a slow start up in counting vultures in the 80's and 90's except the trend is exactly similar and continues through to 2019. This gives an increase of 900% for Vultures counted at Hawk Mountain from 1987 to 2019. But this is certainly an exaggeration as they counted as many as 200-300 some years back in the '50's. But there is no way to include this data and estimate the change observed since 1970, since the vultures were, in fact, not counted. But whatever numbers did pass would reduce the 900% change considerably. So I will put the value in parentheses, and consider it not (900%) but a large positive value at any rate.

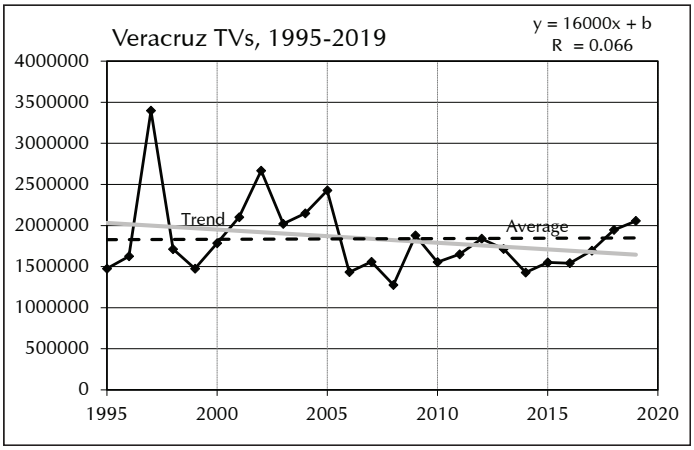


There is no reason to expect **Cape May** would be a good reflection of the Vulture population of the northeast and, indeed, its data looks very problematical. I see a steady period from 1976 to 1992. Then a huge positive excursion from 1995 to 1998. And then a relatively steady period with a great deal of variation from 1999 to 2019. The trend line shows an overall increase over the period of 350% but I would be hesitant to say any more than it shows a large increase. I think the number of vultures counted at Cape May are strongly influenced by weather conditions. So much so that the uncertainty in any trend it shows is very large.

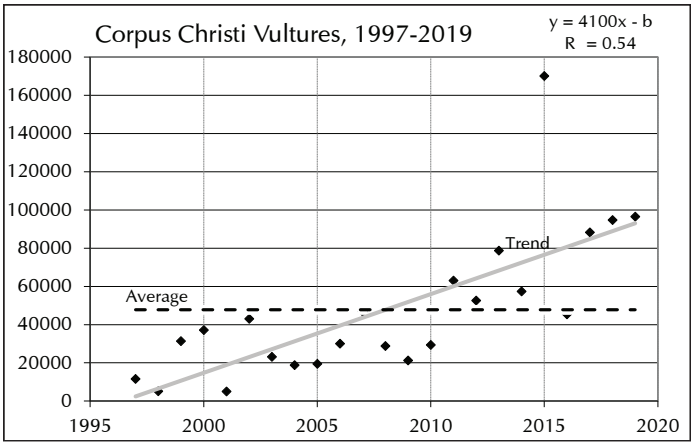
Hawk Ridge MN, only counted 2 BV over its 46 years. So the graph given is only for TVs. The regression line shows a change of 270% over that time period. This is rather close to Rosenberg's 260%, especially considering that no BVs were included. It certainly looks like the northern population of TVs is increasing rapidly and Rosenberg's estimate looks good.



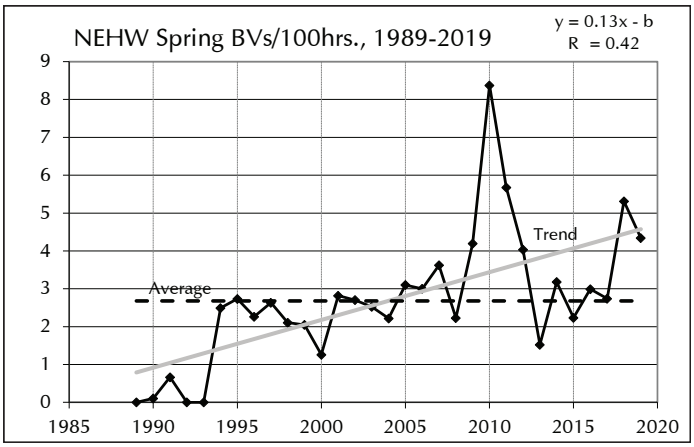
We also have the data from **Veracruz**. There are some factors to be aware of when interpreting this data. 1) Veracruz probably counts birds from the widest portion of North America compared to any other hawk watch. 2) But it does not count migrants from all of North America. Some TVs & other hawk species stop migrating before getting to Veracruz, and some take routes that do not pass Veracruz. 3) The data from Veracruz extends from 1992-2019 but much of the data from 1994 is missing. So I've taken the data from the two Veracruz sites from 1995-2019, a total of 25 years. Rosenberg's data represents the years 1970-2017 or 48 years. Surprise! Veracruz's count of TVs shows a very small decline over the 25 years. Possibly the proportion of TVs short-stopping and overwintering north of Veracruz is increasing because of climate change. BVs are not counted at Veracruz because they are generally local and not migrant.

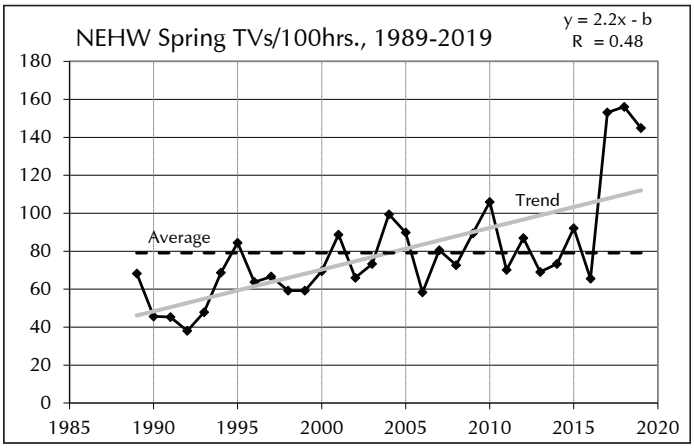


Faced with the difficulty of reconciling the hawk watch data, I looked at another southern hawk watch—Corpus Christi. At **Corpus Christi** they do count migrating BVs and average about 430/year while they average 47,000 TVs/year. Birds of the World says that BVs do not migrate but may withdraw from northern and higher elevation breeding locations. This would explain the low numbers counted at Corpus Christi and make the hawk count data for this species entirely unreliable. Thus the BBS data would be the only good source of population data.



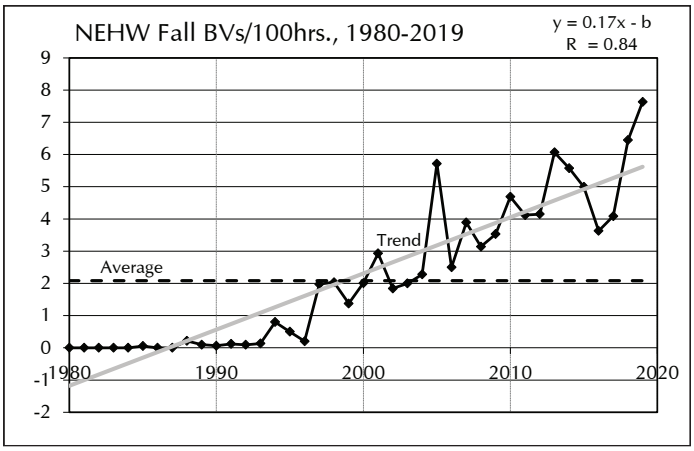
Again when looking at hawk watch data I used the trend line to estimate the population trends. For Corpus Christi we get a 5,700% increase in both vultures but 99% of this is due to TVs. Perhaps in the early years of the watch (1997 & 98) the vultures were not counted or were not migrating past Corpus Christi for some reason, but these years lead to the totally unrealistic estimate of an increase of 5,700% for TVs in the years 1997-2019.

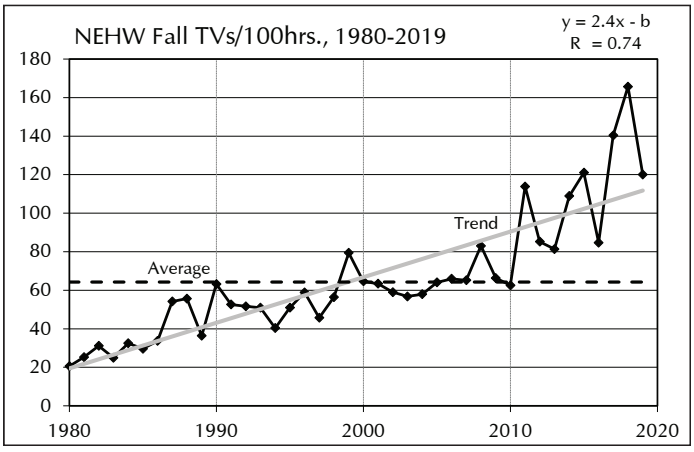




Above are the graphs of the NEHW spring data for BVs and TVs. Both show increases over the last 31 years that are significant. But if you notice the average numbers of both

you'll see that the numbers of BVs are less than 5% of the TVs, making their contribution to the sum of vultures insignificant. But adding them in does increase the statistical significance slightly. When they are added there seems to be an increase of about 140% in the last 31 years.





Above is the fall data from all the northeast hawk watches for both BVs and TVs. Both show statistically significant increases and, unusual with hawk watch data, both the fall and spring show the same trend of approximately the same magnitude. As with the spring data the number of BVs is insignificant compared to the TVs, but again, when the two are added there is a slight increase in statistical significance. The increase in the sum is about 474% over 40 years. Rosenberg found an increase of only 260% over a slightly longer period of 44 years. But the NEHW and Rosenberg's results are consistent if we assume most of the increase in vultures is in the northern portion of their range due to climate warming, with little or no loss in the southern portion of their range.

Summarizing for Vultures:

Rosenberg: (1970-2017) +265.3% 48 years
Increase of 9.4 million (TVs & BVs combined)

BBS (TVs only): **(1966-2017) +230% 52 years**
Increase of 3.7 million to 5.4 million total in 2017

BBS (BVs only): **(1966-2017) +1,000% 52 years**
Increase of 6.1 million to 6.7 million total in 2017

BBS (BV & TV): **(1966-2017) +420% 52 years**
Increase of 9.8 million to 12 million total in 2017

If the axis of the BBS data is really only hundreds of thousands instead of millions, all BV population numbers are multiplied by 1/10. The percentages remain the same and the combined total is 6.1 million and the percent change comes out to 240%....much closer to Rosenberg's 265.3%. I have emailed the BBS to clarify this, but I have not yet succeeded in reaching them.

Hawk Watch Vulture Numbers

Mostly TVs because of the tendency of BVs not to migrate long distances

Hawk Mtn. (1990-2019) +900% 30 years
TVs + BVs; Likely a distorted overestimate

Cape May (1976-2019) +350% 44 years
TVs + BVs; but counts at Cape May are very variable—weather effects?

Hawk Ridge (1974-2019) +270% 46 years
Just TVs; Consistent with Rosenberg's conclusions

Veracruz (1995-2019) -? 25 years
TVs; perhaps a slight decline, but no statistically significant trend. This is very different from all other estimates. Perhaps increased over-wintering north of Veracruz is the factor reducing its count.

Corpus Christi (1997-2019) +5,700% 23 years
TVs + BVs; But numbers for initial years are likely too low for unknown reasons giving a totally unrealistic percent change

NEHW-Spring (1989-2019) +140% 31 years
Increase in both BVs & TVs

NEHW-Fall (1980-2019) +470% 40 years
Increase in both BVs & TVs

Thus the hawk watches considered here do not do much to confirm or contradict Rosenberg's conclusions. Many do not count BVs because they do not migrate long distances and the values for TVs for other watches are suspect for one reason or another. However, the hawk watches that count vultures from the northern portion of their range are in reasonable agreement with the trends noted by Rosenberg.

Summary

My experience watching birds over the same period as the Rosenberg study confirms his overall conclusion of a marked decrease in bird populations over the last 50+ years. If I were guessing, I would even guess that his 30% decrease is an underestimate.

But I find his calculation of a 200% increase in raptors hard to believe and when I tried to substantiate it using his own data, I was unable to. In this section we looked at two taxonomic groups that accounts for most of his increase in raptors—the Osprey and the vultures. I found that the BBS data that he used for the Osprey did yield a 300% increase if you used just the years at the beginning and end of the period to characterize the change over the period. When I surveyed the hawk watch count data a much more complex history of the Osprey emerged with periods of steady population, growing population and decreasing population that was not evident in the BBS data and shows a population decline in the recent 20 years while still having a population 50% to 100% above 1970's, and a steady or declining population at Veracruz since the mid-1990's. Our own NEHW data disagreed, showing a steady Osprey population in spring since the 1990's and a declining population in the fall since the 1980's.

The other taxonomic group that showed a large increase in Rosenberg's study, that would account for the +200% increase in raptors, were the vultures. Using the same BBS data that he used I was unable to obtain the same increase he did, and in fact, got a larger one. Using count data from a number of hawk watches was difficult for a number of reasons. First of all BVs are not true obligate migrants so their population is not reflected in hawk watch migration counts but they do seem to be increasing in the north. The much more common, breeding and migrating, TVs do seem to be increasing in hawk watch counts but it is hard to pin down a rate to compare with Rosenberg's +260% rate. Again the NEHW data tends to be more consistent and shows a 140% increase in spring over the much shorter time period of 1989-2019, and the fall shows much larger increase of +420% over the years 1980-2019.

In summary I found no justification for Rosenberg's +200% increase in raptors. His Osprey increase rests on BBS data, but seems to be inconsistent with hawk watch counts. I could not justify his BV + TV rate of change with BBS data or hawk count data but both show an overall population increase since 1970. If there has been an increase in raptors since 1970, it would be mainly driven by these two groups of raptors. Check out the web for my investigation for the hawks and falcons at http://www.battaly.com/nehw/reports/panko/raptors+200pc.pdf

But the amount of change that they show over the period is much smaller and couldn't account for the +200% overall increase in raptors.

Drew Panko

. . . From the President continued from page 1

" . . . In 1971 Neil published a brief letter in a regional publication inquiring about sightings of migrant hawks in Connecticut. Four people responded: Don Hopkins of Windsor; Gerald Mersereau of Tariffville; Polly Body of Newton; and Michael Harwood of Washington. That simple inquiry spawned a lifetime of friendships, an incredible citizen science organization, (the New England Hawk Watch (NEHW), now known as the NorthEast Hawk Watch serving 8 states), and changed the course of hawk watching and raptor conservation . . . Hopkins, Mersereau and now Currie began planning a regional hawk watch for Fall 1971. Ornithologist [Aaron M.] Bagg urged them to study fall migration throughout New England, theorizing that many birds from eastern Canada were funneled into southwestern New England each fall. Neil, a biologist with scientific training, played an important role in the new effort, joined by Jan and Stuart Mitchell and Mort and Helen Bates. The New England Hawk Watch (NEHW) began in the Connecticut River Valley and centered on Mt. Tom in Massachusetts, the best-known migration site in the six-state area at that time . . . In1983 Neil Currie, Don Hopkins and Gerry Mersereau were the first recipients of HMANA's highest honor, the Maurice Broun Award, given to "honor individuals who have made outstanding, long-term or major contributions of time and effort to HMANA itself or the goals of HMANA: hawk migration study, raptor conservation. No one deserved it more."

Thank you Neil . . . and a huge thank you to Paul Roberts who recently retired from his long-time role of NEHW President. Paul's leadership has guided us well for many years. I am honored to step into his shoes.

Iain MacLeod
NEHW President

. . . From the Editor continued from page 1

Have the raptors really increased 200%, like Rosenberg states in his 2019 paper? A quick look at the species on our Watch List will certainly raise questions about that! Drew's column is definitely a must-read!

Thank you for keeping the count and making all this possible. It's no secret, you really count hawks because you just love the experience—when an eagle takes a fish from an Osprey, a Peregrine attacks a Bald Eagle, a Merlin zooms past your shoulder to grab a Myrtle, or a Gos glares down at you as it glides overhead. Thank you for remembering to count.

Trudy Battaly,
Hawk Migration Report Editor
merlin@pipeline.com

Sharp-shinned Hawk by Brian Rusnica

Thank YOU For Your Gifts!

In 2019-20, 40 people made financial gifts to NEHW in addition to their membership dues. Your gifts are vitally important to our efforts and we thank you: Harvey Allen, Martha Allen, Anonymous, Ajit Antony, Trudy Battaly, Julie Brown, Gail Cameron, Judith Cinquina, Joy Filler, Nancy Given, Barbara J. Goodchild, David Goodine, Ursula Goodine, Gary Goodness., Laurie Goodrich, Else Greenstone, Nora E. Hanke, Bill Hanley, Russ Johnson, Lloyd Klinger, Frankie Knibb, Nigel Kraus, Susan Llorca, William Loomis, Lisa R. Lozier, Iain MacLeod, Michael Marsano, David D. Matsushita, Thomas McCullough, Megan Megrath, John Merrill, Doris Metraux, Martin Moore, Kathy Olson, John M. Parker, Gerhard Patsch, John Sharp, George J. Steele, Todd Watts, Joe Wojtanowski.

Merlin by Brian Rusnica

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Cooper's Hawk by Brian Rusnica