

Greenlaw Mountain Hawk Watch Fall 2016

Our eight season of fall observations has come to an end. Record high counts for several species were recorded while counts for other species were at or near record lows. Observation hours were increased by 25%. Volunteer participation remained strong. As always, migrating raptors were observed in close, up high, out on the horizon and on occasion, moving below the watch.

Data was collected on 46 days between August 27 and November 9 with a total of 324.25 observation hours logged. Thirty-three volunteer observers contributed a total of 466.5 hours of their time. The number of participants and their hours fall right in line with typical coverage at the watch. The total number of migrating hawks counted for the season was 8609. This count total was our highest on record. A total of 15 raptor species were observed migrating past the site.

Count Protocols

As in previous seasons, most of this year's counts were conducted on days considered to have favourable winds and lacked significant precipitation. However, in order to increase our observation hours we occasionally observed later in the day, during less than ideal conditions and maintained a strong effort into the second week of November. Hawks moving roughly east to west, or on occasion north to south, were considered migrants. The presence of resident raptors required some species to be watched more closely during certain portions of the season in order to ensure accuracy of our counts. Partial and full-year residents near the site include Bald Eagle, Broad-winged Hawk, Red-tailed Hawk, American Kestrel, Merlin, Osprey, Sharp-shinned Hawk, Cooper's Hawk, Northern Goshawk and Turkey Vulture. Eagles and vultures are typically the most difficult to monitor as the daily movements of these resident birds can be great. The official counter used 8x binoculars and 25x wide angle spotting scope for scanning and/or identification.

A Quick Look at the Season

August

The first day of counts occurred on the 27th. Favourable winds also occurred on the 29th and 30th. Small numbers of raptors were recorded. All of the usual resident raptors were present. The number of resident Sharp-shins, Kestrels and Merlins as well as their activity levels over the site was lower than our first few years, but similar to more recent years.

A total of 19 observation hours were logged. This fell below an average of 24 for the month. The number of hawks recorded was 87 which is also below average.

September

Like many years, daily counts conducted during the first two weeks of the month produced low to moderate numbers of early season migrants. Resident Osprey, Merlin, American Kestrel, and Sharp-shinned Hawk remained through this period. At least one resident Merlin remained through the third week of the month, which is

quite late for the location. All of these residents seemed to linger longer than previous years. A Cooper's hawk was observed several times and seemed to be spending most its time along the hills north of the watch. Daily counts were unimpressive through the period but it certainly wasn't boring. The first major event of the month occurred on the 15th with Broad-wings moving in good numbers. By day's end, we had a count of 1698. The largest kettle of the day contained approximately 400 birds, breaking the previous record. The second largest kettle of the day contained 200. Conditions turned poor for the next five days. Then on the 22nd we experienced a record flight. Conditions were near perfect for much of the day. A good push of raptors began early in the day and by the end of the ten o'clock hour it was looking like this could be one for the record books. The next 6 hours did not disappoint. Broad-wings continued to stream through sometimes forming large kettles. The largest kettle and stream of the day contained approximately 450 Broad-wings. A new record. By days end 4380 hawks were counted, shattering the old single day records for Broad-winged Hawk as well as combined species total. Smaller flights of Broad-wings also occurred on the 24th and 25th. On the 30th, an immature Golden Eagle was observed. Conditions that day were poor with only 9 hawks counted, but that one rare bird made it a great way to end the month.

Observation hours were well above average for the month (we were aiming for a 25% increase). Broad-winged Hawk, Northern Harrier and Bald Eagle were recorded in record numbers.

October

The month started with poor conditions for the first ten days keeping daily counts low. However, an immature Golden Eagle was observed for thirty minutes on the 5th. An immature Red-shouldered Hawk was also observed on this day. The buteo passed directly over the watch remaining in view for several minutes. This long period of rather flat winds was followed by north winds on the 11th producing a good push of birds. All thirteen of our regularly occurring raptors were observed on this day, which is a rare occurrence. Sharp-shins, Kestrels and Vultures moved in good numbers. good movements of Sharp-shins occurred on the 17th and 18th. The remainder of the month was somewhat slow, but steady. Five Northern Goshawk were observed on the 20th. Displaying hawks for the month included a Sharp-shin and a Cooper's Hawk. Large flocks of cormorant were observed on the 3rd, 14th, 18th, and 27th. Other birds of interest for the month included, Black-backed Woodpecker, Evening Grosbeaks, Pine Grosbeaks, both crossbills, Bohemian Waxwings, American Pipits, Horned Larks, a late Phoebe and a late Palm Warbler. A bird believed to be a shrike was observed during the second week of the month. This bird was observed briefly as it chased a songbird over a burnt section of the mountain and was never seen again.

The month came to a close with above average observation hours, which was due to the 25% increase target. Raptor counts were average. Red-tailed Hawk movement remained light throughout the period, which has become the norm. Northern

Harrier were recorded in record numbers.

November

The season came to an end with some moderate activity occurring during the first nine days of the month. Light to moderate Red-tailed hawk movement was documented. This movement likely continued after our season came to an end. Northern Harrier were observed on four of five count days. Our first fall record for Rough-legged Hawk occurred on the 6th.

Non-raptor sightings included an adult Northern Shrike, flocks of Pine Grosbeak, Evening Grosbeak, Snow Bunting and Bohemian Waxwing. Over one thousand cormorant were observed on the 1st.

Analysis of Flight Trends

Yearly flights are strongly influenced by weather. The number of birds counted in fall migration can directly reflect the weather's effect on wintering birds, spring migration, breeding success as well as its effect on daily flights. Unfavourable wind conditions occurring during migration can cause raptors to move over more of a broad front. When this occurs, detectability can be an issue (perhaps less so at our site). Deviation from 'normal' weather during the breeding season can strongly affect reproductive success and the number of immature birds counted during migration. These results can be favourable or adverse. Human influences can also impact flight trends. Typically, these trends can only be detected through long-term monitoring.

Extreme weather seems to be becoming the norm. Cold snowy winters, wet breeding seasons, post tropical events, draughts and major rain events have occurred repeatedly in recent years. Climatologists tell us that this will likely continue. Raptor populations could be adversely affected.

Season count totals for several species have dropped recently. Species with consistently low numbers from 2013 through 2016 include Sharp-shinned Hawk and American Kestrel. Prior to their drop, these counts had been steady or increasing. It is too early to draw conclusions or for alarm, but we will be looking at counts for these species closely.

Threats

Human caused threats to raptors include pesticide use, habitat destruction, invasive species, and collisions with structures or their support lines which includes power-lines. Extreme weather, as well as, other aspects of climate change are an increasing threat.

Personal Notes

My enthusiasm for raptor study is greater than ever. The privilege of working on this project continues to foster in me an ever-growing appreciation of the natural world and all of its complexities. I plan to continue as the official counter/co-ordinator working toward a greater understanding of and appreciation for birds of prey.

I hope to see all of you on the mountain next year and thank you for your help!

Species Accounts

Turkey Vulture

Earliest Observation*: September 16
Latest Observation: November 7
Single Day High Count: 39 (October 14)
Peak: Mid-October
Season Total: 249**

A record high season count likely due to increased hours.

Osprey

Earliest Observation: August 27
Latest Observation: October 11
Single Day High Count: 18 (September 22)
Peak: September
Season Total: 110**

A record low season count even with increased hours. Only three birds were recorded during the month of October, which is far below average.

Bald Eagle

Earliest Observation: August 29
Latest Observation: November 4
Single Day High Count: 11 (September 15)**
Peak: September
Season Total: 92 **

A record high season count that would have been record even without the increase in hours.

Bald Eagle are quite hard to monitor at our site. Only the most obvious migrants are counted. The actual number of these birds migrating past the hawk watch is almost certainly higher than our numbers indicate.

Golden Eagle

Earliest Observation: September 30
Latest Observation: October 5
Season total: 2**

Our first season with two sightings. Both birds were immature and were traveling well north of the watch.

Northern Harrier

Earliest Observation: August 27
Latest Observation: November 7
Single Day High Count: 8 (September 26 and October 27)
Peak: September/October
Season Total: 120**

A record high season count due in part to increased hours. Observations during the month of November suggested that they might have continued moving in significant numbers after our season ended.

Sharp-shinned Hawk

Earliest Observation: August 27
Latest Observation: November 7
Single Day High Count: 57 (October 11)
Peak: September/October
Season Total: 514

If we eliminate the individuals picked up during the 25% increase in hours, this would have likely been a record low year for this bird, continuing a downward trend.

Cooper's Hawk

Earliest Observation: August 30
Latest Observation: November 4
Single Day High: 2 (September 26, 27 & November 7)
Peak: Late September
Season Total: 16**

A record high season count which was likely due to increased observation hours.

Northern Goshawk

Earliest Observation: September 10
Latest Observation: November 9
Single Day High Count: 5 (October 20)
Peak: October
Season Total: 22

A record high season count due at least in part to increased hours.

Red-shouldered Hawk

Earliest Observation: September 2
Latest Observation: October 11
Single Day High Count: 1
Peak: Late Season is typical for this species.
Season Total: 3

A below average season count, but in line with the last few years.

Broad-winged Hawk

Earliest Observation: August 27
Latest Observation: October 14
Single Day High Count: 4292 (September 22)**
Peak: Mid-September
Season Total: 6990**

A record high season, as well as, single day counts were recorded. We also broke our site record for flock size when approximately 450 birds were observed in a kettle and attached stream.

Red-tailed Hawk

Earliest Observation: September 3
Latest Observation: November 9
Single Day High Count: 27 (November 7)
Peak: Late October/early November
Season Total: 211

One or more single day counts of at least 40 had been the norm during our first years. Some evidence is suggesting that these birds might be moving later in the season.

Rough-legged Hawk

Season Total: 1**

Our first fall record occurred on November 6. The bird was a dark morph observed at extreme distance as it moved along the hills well north of the watch.

American Kestrel

Earliest Observation: August 27
Latest Observation: October 17
Single Day High Count: 18 (September 22)
Peak: September into the first days of October
Season Total: 147

Not our lowest season count, but it almost certainly would have been without the

extra hours. Poor winds occurred during early October, likely contributing to the low numbers recorded.

Merlin

Earliest Observation: September 2
Latest Observation: October 26
Single Day High Count: 6 (October 14)
Peak: Late September and the first half of October
Season Total: 34

A below average count likely due in part to poor winds during early October.

Peregrine Falcon

Earliest Observation: September 22
Latest Observation: October 19
Single Day High Count: 2 (September 22 & October 5)
Peak: Early October
Season Total: 11**

A record low season count. Poor winds during the first week of October were likely a factor.

Unidentified Accipiter
Season Total: 7

Unidentified Buteo
Season Total: 2

Unidentified Falcon
Season Total: 4

Unidentified Eagle
Season Total: 1

Unidentified Raptor
Season Total: 73

Combined Season Total For Migrating Raptors: 8609**

The record single day count for Broad-winged Hawk is largely responsible for this record.

* Earliest and latest observations, as well as totals refer only to hawks counted as migrants.

** A record high or low count.

Special thanks to all the volunteers including: Laraine Townsend, Karen Miller Mike Bamford, Richard Tarn,, Hank and Caroline Scarth, Bev and Mark Schneider, Isaac McPhee, Ed and Pat Kaine, Chuck and Jeanette Perry, Bruce and Pam Henderson, Erin Wallace, Nicole Fowler, Dave ?, Ann and Donald MacPhail, Craig Brown, Kathleen King, Heather ?, Ian Stead, Pete Jolly, Andrew Macfarlane, David Putt, Brennan Obermayer, Colin Macfarlane, Kevin and Colleen Gick, Sandra and David Welch, and anyone that I might have missed. Sorry for not having a couple last names. Some of the writing on our sign in book was hard to read.
Thank you all!

The volunteer of the year award goes to Laraine Townsend. Year after year, she visits the watch regularly contributing greatly to the success of the project.

We also thank the landowners who have granted permission for volunteers and the Official Counter to cross their land to reach the summit including Dr. and Mrs. Goff and Dr. and Mrs. Wildish. As well, we thank Mr. Tom Beckerton for allowing us to locate the watch on his property.

Additional thanks to committee members Hank Scarth, Jim Wilson, Jan Riddell, Don MacPhail, Joanne Savage and Maureen Boone.

Support for this year's counts came from the **New Brunswick Wildlife Trust Fund** (NBWTF), the New Brunswick Environmental Damages Fund, private donors and our volunteers.

The NBWTF gets its money from the sale of hunting, trapping and fishing licences as well as conservation license plates. Please consider supporting projects like the Greenlaw Mountain Hawk Watch through the purchase of these plates. Thank you!

Feedback is welcomed.

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Greenlaw Mountain Hawk Watch – Yearly Count Totals

Species	Year 2016	Year 2015	Year 2014	Year 2013	Year 2012	Year 2011	Year 2010	Year 2009	Average 2009-2015
Turkey Vulture	249**	218	197	173	239	144	90*	99	176
Osprey	110*	132	130	166	245	132	151	111*	147
Bald Eagle	92**	58	42	41*	50	44	52	46	53
Golden Eagle	2**	1	1	0	0	1	0	0	<1
Northern Harrier	120**	76	63	52	61	60	76	39*	68
Sharp-shinned Hawk	514	524	496*	520	602	848**	661	593	595
Cooper's Hawk	16**	7	6*	9	13	11	14	11	11
Northern Goshawk	22**	11	12	15	9*	19	11	13	14
Red-shouldered Hawk	3	1*	2	3	5	7	10**	5	5
Broad-winged Hawk	6990**	3791	1704	5405	2100	5835	2240	1457	3690
Red-tailed Hawk	211	106*	148	132	332	241**	222	152	193
Rough-legged Hawk	1**	0	0	0	0	0	0	0	<1
Swainson's Hawk	0	0	1**	0	0	0	0	0	<1
American Kestrel	147	158	155	200**	173	199	193	129*	169
Merlin	34	35	44	42	48**	33*	43	38	40
Peregrine Falcon	11*	24**	24	12	23	24	24	13	19
Gyr Falcon	0	0	0	0	0	1**	0	0	<1
Snowy Owl	0	0	1**	0	0	0	0	0	<1
Unidentified Accipiter	7	6	1	0	3	2	5	1	3
Unidentified Buteo	2	1	3	0	2	4	5	3	3
Unidentified Falcon	4	6	3	4	4	2	3	1	3
Unidentified Eagle	1	2	0	1	1	0	1	3	1
Unidentified Raptor	73	68	60	66	69	65	88	55	68
Unidentified Owl	0	0	1	0	0	0	0	0	<1
Total	8609**	5225	3094*	6841	3979	7672	3889	2760	5259
Observation Hours	324.25	262.75	275.75	259.5	257	258	266.25	256.75	270

** Record high count

* Record low count