

Greenlaw Mountain Hawk Watch Fall 2013

Season five has come to an end. Counts for this year produced new highs as well as some lows. It was a very interesting year overall with a busy first half of the season followed by an unusual month of October. Much was learned as we transition from collection of base data to documenting trends. Public interest and participation continues to be high. The potential for learning continues to be great. Even with five years behind us, we are really just getting started.

Migrating raptors were counted on 38 days between August 23 to November 4 with a total of 259.5 observation hours logged. The total number of migrating hawks counted for the season was 6841. This year's count total was our second highest on record and we counted more birds of prey in total than many sites well to our south and west (due to the large numbers of Broad-wings counted at our site). Single day high counts for 2 species were recorded. We also recorded season low counts for 5 species.

Count Protocols

As in previous seasons, this year's counts were conducted on days considered to have favourable winds and a general lack of significant precipitation. Hawks moving roughly east to west were considered migrants. Because of the presence of resident raptors, some species were watched more closely during certain portions of the season to ensure accuracy of our counts. Partial and full-year residents near the site include Bald Eagle, Broad-winged Hawk, American Kestrel, Merlin, Osprey, Sharp-shinned 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.

A Quick Look at the Season

August

Early season counts went quite well with good winds occurring during the last week of the month. This resulted in a higher than average number of hawks counted. Resident raptors were present, however, their numbers seemed to be low and there were lower than usual activity levels over and around the site.

September

The first two weeks of the month produced modest flights of the usual raptors. The first good flight of Broad-wings occurred on the 15th with 276 counted for the day. On the 17th, cloudless skies and a relatively strong North wind produced 1885 Broad-wings. Kettles containing over 100 birds were observed several times. Mid-afternoon flights were very high. A few flocks could not be seen even with eight-power optics. Some birds remained high through late afternoon. One group of high flying birds, consisting of roughly 100 individuals, was still observed at great heights just before 6:00PM. Smaller groups of birds moving at lower altitudes were observed during the next hour. Several volunteers were onsite for much of the day, helping to spot the approaching raptors. The following day brought another 816 hawks (mostly Broad-wings). Counts then backed off for a day and then another 1107 hawks were counted on September 20th. Nearly all of them were counted before Noon. Since the official counter was the only observer that day, many birds could have been missed. Smaller flights followed for about one week, until a flight of 690 hawks was documented on the 26th. The official counter was, once again, the only observer. Movements of Kestrels and Sharp-shins were fairly steady through the month, but without any impressive flights other than a movement of 37 Kestrels. This flight occurred largely within a two hour period late in the day.

October

This was a month to be remembered. Weather was somewhat unusual with a general lack of favourable winds occurring during the daylight hours. Raptor movements for several species were very light. Low counts were observed almost right from the start. Sharp-shinned Hawk counts were often single digit. Typically in other years, we would see several days with counts of fifty or more. This month, however, finished off with only 132 counted in total. Prior to this year, this species lowest count for the month of October was 281. Red-tailed Hawk counts didn't fare any better. All of their single-day counts were single digit, well below their 'normal'. Only 45 were counted for the month. Prior to this year, their lowest count for October was 130. Peregrine Falcon counts were also quite low. Six were counted compared with a previous average of sixteen for the month. Cooper's Hawk counts were half their normal. We usually see several Red-shoulders, but only one was counted. Osprey numbers were also low. Surprisingly, the American Kestrel held its own. Population decline for this species has been widely reported for quite some time and our raptor counts were down overall, so low numbers for this month were expected. One other high point was a late group of 27 Broad-wings showing up on October 11th at 5:55PM, which was quite late in the day, as well as the year for this species. Non-raptor migrants were also in short supply this month. However, we did have some interesting non-raptor visitors drop in (i.e. Northern Shrike). We also enjoyed numerous close sightings of raptors despite the low counts.

November

Only 12.5 hours of observation were logged this month, still we did count some birds. This year's biggest flights of Red-tailed Hawks occurred on the third and fourth of the month. However, counts were not impressive in any way. We recorded a single Red-shouldered Hawk, a couple of Goshawks and a few other species. The last migrant of the year was a lone Turkey Vulture.

As has been the case in previous years, the trails leading to the site produced some birds of interest. A Blue-winged Warbler was likely the most exciting.

Analysis of Flight Trends

Yearly flights are strongly influenced by weather. The number of birds counted in migration can directly reflect the weather's affect on breeding success as well as its affect on daily flights or both. Unfavourable wind conditions occurring during migration can cause raptors to move over more of a broad front. When this occurs, a smaller portion of the population will likely be counted. 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.

Some of this year's numbers almost certainly show the effects of relatively poor weather during this year's breeding season. A general lack of favourable winds occurred during the first half of October. That likely combined with the effects of poor breeding success, producing the low number of hawks counted during the month of October.

Importance of Greenlaw Mountain Hawk Watch Data

Raptor populations can be negatively impacted by forestry practises, pesticide use, the placement of structures in migration routes and other human activities. The data collected through this project contributes important information about raptor populations, their migration routes and the timing of

migration. These efforts support the identification of species in decline and inform recovery efforts.

Greenlaw Mountain is the northeastern most hawk watch site in North America. The majority of 'our' hawks are likely just starting their journey. The majority of hawk watches, however, observe hawks that have been traveling for days, weeks or even months. We might be the most strategically placed to observe hawks early in migration.

Personal Notes

It is a privilege to be able to conduct this project and I am thrilled that we are generating so much knowledge of regional hawk migration and raptor populations. It is my intention to do all that I can to keep the project going and to further develop our regional understanding of and appreciation for birds of prey. Continuing to build our database will show important trends in raptor populations and their movements. The project is still very young and much more work needs to be done.

We have five years worth of data behind us, yet I often feel like we are really just getting started. The flights documented in these first years really only represent base data. In my opinion, we are just starting to understand hawk migration along this part of the bay.

Counting hawks on the mountain is a constant learning experience and I feel as though we learned more this year than any year except our first. Broad-wings were documented this year in numbers similar to the 'big flights' of 2011. When those big flights were first recorded, we did not know if they were a twenty-year event or something rather common. Evidence is starting to suggest that it might be more of the later. The late-day, as well as, late-in-the season flights of Broad-winged Hawks documented this year are also providing great opportunities for learning. Seeing large flocks of Broad-wings moving very late in the day suggests to me that we might need to extend our observation periods during peak season. Some of these birds remained at high altitudes much later in the day than I expected. Another thing to watch is the reoccurrence of late in the season flights (Late-September/early October for Broad-wings). They are starting to suggest the presence of birds from Nova Scotia. The 'unusual' flights of hawks this October are also great learning opportunities. All of these things demonstrate how much learning potential there is or perhaps more to the point, how little we know.

This project is supported by the New Brunswick Wildlife Trust Fund. Additional support comes from individual supporters and our volunteers.

Thanks and Recognition

Special thanks go out to all of the volunteers. They often leave the hawk watch thanking the official counter for the experience, but the greatest thanks goes to them. Their help is critical to our success. No one person, no matter how skilled and dedicated, can possibly see and identify all of the hawks. Thanks also to the hawk watch committee members. They have volunteered many hours to the administration of this project. Hank Scarth chairs the committee and has been instrumental in our success. Additional thanks goes to the property owners and our supporters. We couldn't do this without you!

Conclusion

We are seeking feedback on this project. Please let us know your thoughts on the daily reports, flight forecasts, your experiences at the hawk watch or any other aspect of the project. We also welcome letters of support, as they help us in our pursuit of funding. Our mission is far from complete. We are

just starting to get a handle on hawk migration through New Brunswick.
We hope to see everyone again next year!

Species Accounts

Turkey Vulture

*Earliest Observation**: August 25

Latest Observation: November 4

Single Day High Count: 22 (October 6)

*Peak***: Early October

Season Total: 173

This year's counts were down from last, but still show a clear upward trend.

Osprey

Earliest Observation: August 23

Latest Observation: October 12

Single Day High Count: 14 (August 23)

Peak: Early September

Season Total: 166

This species appears to have moved earlier in the season than previous years. The total number of individuals counted was slightly above our previous average.

Bald Eagle

Earliest Observation: August 23

Latest Observation: November 4

Single Day High Count: 9 (September 15)

Peak: No clear peak period was observed for this season.

Season Total: 41

This year's counts were our lowest ever recorded for this species.

Golden Eagle

No records this season.

Northern Harrier

Earliest Observation: August 24

Latest Observation: November 4

Single Day High Count: 7 (October 12)

Peak: September/October

Season Total: 52

This year's counts were below average, likely a predictable outcome of a very wet breeding season for this ground nester.

Sharp-shinned Hawk

Earliest Observation: August 23

Latest Observation: November 4

Single Day High Count: 49 (September 19)

Peak: September

Season Total: 520

Our lowest count ever for this species and well below our average of 676. This species might have also moved early(as well as in low numbers).

Cooper's Hawk

Earliest Observation: September 14

Latest Observation: October 19

Single Day High: 3 (September 19)

Peak: No clear peak.

Season Total: 9

This year's counts were our lowest ever.

Northern Goshawk

Earliest Observation: September 28

Latest Observation: November 7

Single Day High Count: 3 (October 21)

Peak: October

Season Total: 15

A slightly higher than average number.

Red-shouldered Hawk

Earliest Observation: September 9

Latest Observation: November 4

Single Day High Count: 1

Peak: Late Season is typical for this species. However, our numbers are not adequate to represent a peak.

Season Total: 3

This year's counts were our lowest ever for this species..

Broad-winged Hawk

Earliest Observation: August 23

Latest Observation: October 21 (quite late)

Single Day High Count: 1885 (September 17)

Peak: Mid-September

Season Total: 5405

Very good numbers for this species. This years total is similar to the previous season high count set in

2011. Future counts could show that this is a fairly typical number. Some of the late movements of this species at our site are very interesting. Much more study is needed.

Red-tailed Hawk

Earliest Observation: August 24

Latest Observation: November 4

Single Day High Count: 23 (November 4)

Peak: Early November

Season Total: 132

Our lowest season total for this species. Prior to this season, our average was 237.

Rough-legged Hawk

This raptor has yet to be counted during the fall season. Several have been observed moving past our site during spring migration.

American Kestrel

Earliest Observation: August 23

Latest Observation: October 27

Single Day High Count: 37 (September 27)***

Peak: Mid-September to early October

Season Total: 200***

Our highest season count beating the prior record by one.

Merlin

Earliest Observation: August 30

Latest Observation: October 23

Single Day High Count: 12 (September 27)***

Peak: Early through mid- October

Season Total: 42

A fairly average count.

Peregrine Falcon

Earliest Observation: August 23

Latest Observation: October 23

Single Day High Count: 2 (September 17)

Peak: September/October

Season Total: 12

Our lowest recorded season total. 21 was our previous average.

Unidentified Accipiter

Season Total: 0

Unidentified Buteo

Season Total: 0

Unidentified Falcon

Season Total: 4

Unidentified Eagle

Season Total: 1

Unidentified Raptor

Season Total: 66

Combined Season Total For Migrating Raptors: 6841

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

** Peaks for each species listed above are for this year. Peaks can vary from one year to the next.

*** Denotes a record count.

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Greenlaw Mountain Hawk Watch- Yearly Count Totals

Species	Year 2013	Year 2012	Year 2011	Year 2010	Year 2009	Average 2009-2013
Turkey Vulture	173	239	144	90	99	149
Osprey	166	245	132	151	111	161
Bald Eagle	41	50	44	52	46	47
Golden Eagle	0	0	1	0	0	<1
Northern Harrier	52	61	60	76	39	58
Sharp-shinned Hawk	520	602	848	661	593	645
Cooper's Hawk	9	13	11	14	11	12
Northern Goshawk	15	9	19	11	13	13
Red-shouldered Hawk	3	5	7	10	5	6
Broad-winged Hawk	5405	2100	5835	2240	1457	3407
Red-tailed Hawk	132	332	241	222	152	216
Rough-legged Hawk	0	0	0	0	0	0
American Kestrel	200	173	199	193	129	179
Merlin	42	48	33	43	38	41
Peregrine Falcon	12	23	24	24	13	19
Gyrfalcon	0	0	1	0	0	<1
Unidentified Accipiter	0	3	2	5	1	2
Unidentified Buteo	0	2	4	5	3	3
Unidentified Falcon	4	4	2	3	1	3
Unidentified Eagle	1	1	0	1	3	1
Unidentified Raptor	66	69	65	88	55	69
Total	6841	3979	7672	3889	2769	5030
Observation Hours	259.5	257	258	266.25	256.75	259.5