

## **Greenlaw Mountain Hawk Watch Season Report - Fall 2018**

Our tenth season of fall observations has come to an end. Five species were recorded in record high numbers while counts for Broad-winged Hawk dropped an astonishing 83% below average. The number of observation hours logged were similar to 2016 and 2017, which represents an increase of more than 25% above earlier years. 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 48 days between August 23 and November 12 with a total of 342 observation hours logged. Thirty volunteer observers contributed a total of 422.5 hours of their time. The total number of migrating hawks counted for the season was 2663. A total of 16 raptor species were observed migrating past the site (species accounts can be found later in the report).

### **Count Protocols**

As in previous seasons, most of this year's counts were conducted on days considered to have favorable winds and lacked significant precipitation. However, in order to match the efforts made in 2016/17 we occasionally observed later in the day and during less than ideal conditions. 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 included Bald Eagle, Broad-winged Hawk, Red-tailed 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. The official counter used 10x binoculars and 25x wide angle spotting scope for scanning and/or identification.

### **A Quick Look at the Season**

#### **August**

Our observation season begins late in the month, so there is only a brief window of opportunity to observe migrant raptors. As is often the case, favourable conditions were in short supply during this period. However, a pretty good movement of early season raptors occurred on the 31st. Eighty-five migrant raptors were recorded on that day.

Only 20 observation hours were logged.

#### **September**

The month began with rather weak fronts producing very modest flights. The 8th

and 9th brought improved conditions and better flights. However, a sea-breeze developed east of the site around midday on the 9th halting the flight or diverting the hawks. Weak fronts and sea-breezes to our east dominated the remainder of the month. We did record some modest flights and there certainly was some excitement, but Broad-winged Hawks never showed in significant numbers. Needless to say, the relative lack of Broad-wings was very disappointing.

Resident Merlin, American Kestrel, and Sharp-shinned Hawk lingered longer than usual this year. At least one resident Merlin was sighted throughout the month.

Observation hours remained on par with September 2016 & 17.

## October

Flights this month were rather consistent producers with good numbers of hawks being recorded along with a nice variety of species being observed. The season's first **Golden Eagle**, a very distant bird, was observed on the 3rd. Moderate north winds on the 5th produced 77 Turkey Vultures, 41 American Kestrel (a new single day record), 3 Peregrines, 3 accipiter species along with several other species totaling 185 migrant raptors for the day. The following day produced the season's second **Golden Eagle (immature)**, which was visible for at least 25 minutes. Other highlights of the day included 6 Northern Goshawks (a single day record) and 2 late Broad-winged Hawks. The month continued to produce well with a record flight of Bald Eagle, average to above average numbers of the usual raptors which included some good vulture flights. A light morph female **Rough-legged Hawk** passed directly overhead at low altitude on the 26th. Non-raptor flights were interesting, particularly toward the end of the month. Strong fronts occurred during the last week creating powerful west to northwest winds which made it feel more like November.

The resident Northern Goshawks were visible this month. However, they weren't observed displaying as often as other years and they tended to be more distant.

Observation hours were slightly higher than 2016 & 2017 levels.

## November

This month's observations began with a very humble flight on the 1st. Conditions were not very good on this day and we didn't record many migrants. Nevertheless, we did have some excitement which included our first fall record of **Black Vulture**. This bird arrived from the east, passed slowly overhead at very low altitude and was viewable for 18 minutes. The 4th brought more heavy winds and a record flight of Bald Eagle. The 5th brought another light morph **Rough-legged Hawk**. Unfortunately, this one was very distant. On the 9th, we experienced light winds and a decent flight of Red-tailed Hawks (33). An **immature Golden Eagle** was also observed. The 11th brought additional heavy west winds and another **immature**

## **Golden Eagle.**

Pine Grosbeak were very common migrants this month.

The number of observation hours logged were significantly higher than 2016 & 17. Counts were our highest ever for the month. This was the result of a greater number of observation hours, a good push of Bald Eagles and maybe the strong fronts.

## **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 a broader front. When this occurs, detectability can be reduced. 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. 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.

The 2018 season count totals for most species were within their norms, which is encouraging. However, our 2016 through 2018 observation hours increased by approximately 25% over the 2009-2015 average. These additional hours occurred during conditions that were less favourable than our other hours. Fewer hawks per hour were observed during these conditions. Even so, such a substantial increase in observation hours should produce a higher number of hawks counted for the season.

The enormous drop in Broad-winged Hawk numbers has our attention. Canada Wildlife Service and the NB Dept. of Resources and Resource Development have been notified verbally.

At this point in time, we do not know the cause of this drop. It seems likely that the unusually weak fronts of September caused the birds to take a different route. During peak migration, sea-breezes developed repeatedly which could have forced this thermal-dependent species to move to extreme altitude or take a more inland route.

When Broad-wings move at extreme altitude, it is common to observe large flocks

passing overhead at or near the detectability limits of 8 or 10 power binoculars or even spotting scopes. In this case, most of the birds could be missed during midday periods, as the birds reach their greatest altitudes at this point in the day. However, we would expect some to be “picked up” by observers. Those seen would likely be moving in large flocks. As the air begins to cool in the late-afternoon and thermals begin to shut down, those high-flying Broad-wings should begin to appear at lower altitudes, often in great numbers.

Southerly flows, including sea-breezes, tend to produce more inland flights. Birds moving under such conditions are typically detected well north of the watch. As birds move to higher altitudes during the midday period, some might begin to appear overhead.

Throughout the peak of Broad-wing movements, we repeatedly looked for high flying birds. We also observed late in the day in an effort to spot birds coming down from great altitude. In addition, we worked hard to locate birds moving well north of the watch. A high-end spotting scope with a 25x eyepiece was used to scan the northern horizon. With such a scope, birds moving several kilometres away could be spotted. **No evidence of high altitude or inland flights were detected.**

All other species were recorded at, near, or above their norms. When considering this fact and all of our observation efforts, the disappearance of the Broad-wings remains a mystery.

The value of this project and its ability to detect trends increases significantly with the addition of each season’s data.

## **Threats**

Human caused threats to raptors include pesticide use, habitat destruction, invasive species (including cats), and collisions with structures and/or their support lines as well as power-lines. Extreme weather, as well as, other aspects of climate change are an increasing threat. An increasing number of studies are documenting major reductions and/or shifts of insect populations. Many birds of prey feed heavily on insects. Those that do not likely feed on other birds that prey heavily on insects.

## **Species Accounts**

### **Black Vulture**

Earliest Observation: November 1

Latest Observation: November 1

Single Day High Count: 1\*\*

Peak: This sighting represents our first fall record.

Season Total 1\*\*

It took ten years, but we finally got one.

### **Turkey Vulture**

Earliest Observation\*: September 24  
Latest Observation: November 9  
Single Day High Count: 77 (October 05)  
Peak: Mid-October  
Season Total: 374

Our second highest count and well above our average.

### **Osprey**

Earliest Observation: August 23  
Latest Observation: October 22  
Single Day High Count: 22 (September 12)  
Peak: September  
Season Total: 162

### **Bald Eagle**

Earliest Observation: August 23  
Latest Observation: November 12  
Single Day High Count: 26\*\* (November 4)  
Peak: October with a second peak occurring in early November  
Season Total: 199\*\*

For many years, we were intentionally overcautious while counting Bald Eagle. Only high flying birds moving east to west were deemed migrants. We now have a better handle on their movements, which is allowing our counts to be more representative of the actual number of eagles passing the site. This species also appears to have had a good year. In combination, these two factors led to a season total that is more than double the old record (set last year) and a new record single day high.

### **Northern Harrier**

Earliest Observation: August 31  
Latest Observation: November 9  
Single Day High Count: 8 (October 21)  
Peak: September/October  
Season Total: 95

### **Sharp-shinned Hawk**

Earliest Observation: August 30  
Latest Observation: November 11  
Single Day High Count: 39 (October 21)  
Peak: September/October  
Season Total: 572

### **Cooper's Hawk**

Earliest Observation: August 31  
Latest Observation: November 5  
Single Day High: 2 (October 15 & 21)  
Peak: Late October  
Season Total: 12

### **Northern Goshawk**

Earliest Observation: September 25  
Latest Observation: November 9  
Single Day High Count: 6\*\* (October 6)  
Peak: October  
Season Total: 28\*\*

A record single day high and season high were recorded.

### **Red-shouldered Hawk**

Earliest Observation: September 4  
Latest Observation: November 8  
Single Day High Count: 1 (multiple)  
Peak: Late Season is typical for this species.  
Season Total: 5

### **Broad-winged Hawk**

Earliest Observation: August 30  
Latest Observation: October 6  
Single Day High Count: 101\*\* (September 9)  
Peak: Mid-September  
Season Total: 600\*\*

We usually see several thousand Broad-wings. Very low numbers resulted in a record low season count as well as a record low single day high count.

### **Red-tailed Hawk**

Earliest Observation: September 13  
Latest Observation: November 12  
Single Day High Count: 33 (November 9)  
Peak: Late October/early November  
Season Total: 272

This year's total was well above average. However, it should be noted that movements of this species are becoming somewhat unpredictable throughout much of Eastern North America. Counts have dropped in general and it seems that increasing numbers of this partial migrant are either moving late, not migrating as far as they used to or not migrating at all. A changing climate is a possible cause.

### **Rough-legged Hawk**

Earliest Record: October 26  
Latest Record: November 5  
Single Day High Count: 1  
Peak: This species is known for late season movements.  
Season Total: 2\*\*

For some reason, this species has been hard to come by during fall counts at this site. The season total was a record high.

### **Golden Eagle**

Earliest Observation: October 3  
Latest Observation: November 11  
Single Day High Count: 1 (multiple)  
Peak: The numbers of these birds recorded at this location are too small to indicate a peak. However, this species is known for being a late season mover throughout North America.  
Season total: 4\*\*

A record high season total.

### **American Kestrel**

Earliest Observation: August 31  
Latest Observation: October 27  
Single Day High Count: 41\*\* (October 5)  
Peak: September - October  
Season Total: 164

The October 5 count was a record single day high.

### **Merlin**

Earliest Observation: October 30  
Latest Observation: November 12  
Single Day High Count: 4 (September 24, October 5 & 21)  
Peak: Late September through October  
Season Total: 45

### **Peregrine Falcon**

Earliest Observation: August 19  
Latest Observation: November 8  
Single Day High Count: 6 (October 1)  
Peak: Late September - Early October  
Season Total: 28

Unidentified Accipiter  
Season Total: 2

Unidentified Buteo  
Season Total: 4

Unidentified Falcon  
Season Total: 15

Unidentified Eagle  
Season Total: 3

Unidentified Raptor  
Season Total: 76

**Combined Season Total For Migrating Raptors: 2663\*\* (record low)**

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

\*\* A record high or low count.

**Personal Notes**

My enthusiasm for raptor study grows greater with every year. 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.

As always, I encourage readers of my posts, as well as participants to provide feedback on the project. It is helpful for me to know what people like, do not like, and/or do not understand. I am happy to answer questions on migration, identification and other topics. Responses might be slow on occasion (during data collection), but I will try to get back to anyone that writes.

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

Special thanks to all the volunteers including: Laraine Townsend, Mike Bamford, Hank and Carolyn Scarth, Chuck and Jeanette Perry, Bruce and Pam Henderson, Ian Stead, Suzanne Bonnell, Pamela Watters, Phil Riebel, Laurie Comeau, Richard Blacquiere, Patrick and Lise Richards, Julie and Micheal Bauer, Heather Dyble, Jim Russel, Janet Burnham, Susan Tart, Deana and Peter Gadd, Bev and Mark Schneider, Karl Kristen Gjdsje, Walter Emrich, Paul Manz, Ron Wilson and anyone that I might have missed. Thank you all!

Once again, 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. As well, we thank Mr. Tom Beckerton for allowing us to locate the watch on his property.

Additional thanks to committee members Hank and Carolyn Scarth, Jim Wilson, Chuck Perry, Don MacPhail 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 licenses as well as conservation license plates. Please consider supporting projects like the Greenlaw Mountain Hawk Watch through the purchase of conservation plates. Thank you!

Todd Watts  
Project Co-ordinator and Official Counter  
Greenlaw Mountain Hawk Watch  
Saint John Naturalists' Club  
[buteobuz@gmail.com](mailto:buteobuz@gmail.com)  
506 321-2125