

Brockway Mountain Hawk Watch



Summary for Spring 2013 Hawk Count

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Introduction

In 2010, Copper Country Audubon and Laughing Whitefish Audubon launched the Keweenaw Raptor Survey (KRS), a three-year survey at Brockway Mountain (Copper Harbor, Michigan) to study spring raptor migration in the Keweenaw Peninsula (Haas & Gayk 2010). Results from the 2010 through 2012 surveys have been published in previous reports (Henschell 2010, Green 2011 & 2012). Subsequently strong local interest lobbied to continue the count on Brockway Mountain and with the continued support of Copper Country Audubon along with Copper Harbor Birding, a spring count was again conducted in 2013 from West Bluff as the Brockway Mountain Hawk Watch. This report is the summary results of that effort.

The Count

Systematic counts were conducted daily from 15 March to 15 June, 2013 (the “count season”) from West Bluff (the “count site”), a vantage point on Brockway Mountain located at N47.46399, W87.969541 (approximately 4 miles west of the town of Copper Harbor) and stationed 1328 feet above mean sea-level and approximately 728 above the average surface elevation of Lake Superior. The defined survey count period each day (the “survey period”) is as follows: 15 March thru 31 March, 0900 – 1500 EST (Eastern Standard Time); 1 April thru 31 May, 0800 – 1600 EST; 1 June thru 15 June, 0800 – 1400 EST. Unlike the abnormally mild spring of 2012, this year was one of the latest springs in recent history for the Keweenaw and the region in general. As a result there were many more weather-related closures of the count. Sixteen days in all were eliminated from the count this year, a stark contrast from the single day missed a year ago. Surveys were conducted on 77 count days in the season, accounting for a total of 532.25 count hours. A web log was kept at the Brockway Mountain Hawk Watch website <http://brockwayhawkwatch.org/>, and daily count data were posted on the HMNA web site <http://hawkcount.org/>.

In addition to myself as principal counter, substitute counters included Joseph Youngman, Louie Dombroski and Debra Mues with supplementary help from Charlene Brennan, Skye Haas, David Essian, Zach Gayk, Vic Berardi and Robert Visconti. As with the previous surveys, a count shelter was erected on-site for temporary relief from cold, windy & rainy weather conditions, this year weighted down with cables and cement blocks to reduce the likelihood of a repeat of events of 2012 when the shed blew over in strong winds.

Species Accounts

A standardized hourly count for all species of diurnal raptors (i.e., birds belonging to orders *Accipitriformes* and *Falconiformes* with appropriate changes in taxonomic order applied) was conducted in accordance with protocols defined by HMANA 2006 and Haas & Gayk 2010. Where any potential ambiguity existed between protocols, Haas & Gayk 2010 was used. As aids to field identification, Sibley 2000, Wheeler 2003, Liguori 2005 and Clark 2001 (for aging Bald Eagles) were used. Eastbound and westbound raptor flights were recorded on separate data forms (with weather data and observer details on a third sheet). Over the course of the spring 2013 survey 25,763 eastbound raptors of 17 species (Appendix B.1) and 5,399 westbound raptors of 14 species (Appendix B.2) were observed migrating past the count site. This report will borrow quite a bit from last year’s summary (Green, 2012) in regards to general outline: common and scientific name, the two-letter HMANA designation (HMANA 2006), and pertinent notes about this season’s count, with appropriate references to previous season’s counts particularly in comparing early arrival dates and peak flights. Also, with this being just the fourth year of continuous surveying, I tried not to depend too much on averages as one would expect there to be quite a range in the year-to-year totals for each species. Most species were recorded in numbers

above those seen in the three years of the KRS and quite a few of the single-day highs were raised as well. Appendix A shows the results for all raptor species and a summary table is included at the end of this report.

Black Vulture (*Coragyps atratus*) “BV”

One of the overall highlights of the spring was the sighting of a Black Vulture May 27, which was seen the following day sitting in a large tamarack in the middle of Copper Harbor. This is the second record for the count; the other being April 25, 2011.

Turkey Vulture (*Cathartes aura*) “TV”

A total of 2,163 eastbound Turkey Vultures were tallied this spring, well above any previous total for the species and representing about 8% of the overall number of raptors counted in 2013. It appears TVs will always be a bit of an enigma and how to handle their movements will apparently be a bit baffling to some observers. It is my contention that when we try to interpret this activity, we are injecting observer bias into the process, which is the very thing we are trying to avoid by having a protocol. The first TV this spring was recorded April 3, later than the record early sighting of March 19 a year ago but similar to early dates from 2010 and 2011. The peak flight was 139 May 9, a new single-day high. Looking at previous seasons, peaks have been all over the map but have been generally in the mid-April to early-May time frame. The 776 westbound vultures made up about 14% of that flight.

Osprey (*Pandion haliaetus*) “OS”

Ospreys were very well represented in this year’s count with the 175 eastbound migrants tallied substantially higher than the *combined* total for the three years of the KRS, making for difficult comparisons between this year and prior springs. The first Osprey seen was April 16, about on par with previous springs. Also a new single-day high, the peak count was 19 on May 14 (note the 2011 season total was 21!) and they continued to move in small numbers to the end of the count. Twenty-one westbound Ospreys were seen, which appropriately was a much higher total than in previous seasons.

Golden Eagle (*Aquila chrysaetos*) “GE”

In all 81 eastbound Golden Eagles were recorded in 2013, a total that is about two and half times the previous high of 31 in 2010. While the bulk of the migration was observed up to about the end of April, there were stragglers seen well into May (14 total seen in that month). The first was seen March 17, and as with BEs this early date is rather arbitrary as there would presumably be individuals of both species migrating before the time frame of the count. The peak flight was 7 April with 3 birds. Looking at previous seasons, the biggest flights have been in a broad time frame from almost the start of the count through the first ten days or so of April. There was an equally impressive 38 Golden Eagles tallied moving westbound. The breakdown with regards to age class for eastbound eagles was 41 juveniles, 12 subadults, 24 adults and 4 of unknown age.

Northern Harrier (*Circus cyaneus*) “NH”

Harriers were the one species that had a somewhat lackluster season, perhaps affected by the gaps in coverage during a snowy April. In all 134 eastbound harriers were seen with the first coming past the watch April 14. This is the latest date for the first arrival in the four years of the count and almost a month later than last year’s early date of March 17. The peak passage was the 22 tallied April 30, substantially later than the early to mid-April peaks of previous counts. Only three westbound Harriers were noted this year. The age/sex breakdown for eastbound migrants was as follows: 28 juveniles, 26 females, 33 males, 43 brown individuals and 4 of undetermined age or sex.

Sharp-shinned Hawk (*Accipiter striatus*) “SS”

For the spring 2,987 eastbound Sharpies were accumulated, representing about 12% of the total number of raptors seen from West Bluff in 2013. The earliest was recorded March 29, similar to the arrival date for 2011

but about a week and a half later than 2010 and the record early date of March 17 last year. The single-day high for the spring was 523 April 28, the second highest one-day effort on record. This peak is actually a touch earlier than the first week of May high counts from other years. There were pretty decent numbers seen through May, slowing to a trickle for June. Westbound Sharp-shins totaled 352, about 6.5% of the total westbound flight. Looking at the age breakdown, while a large portion of the count was designated as unknown, the remainder shows a skewing to the adult age class (74%). I'm not sure if this a true picture of the proportion or some bias in how they are counted.

Cooper's Hawk (*Accipiter cooperii*) "CH"

Never a common species, the 21 eastbound Cooper's Hawks recorded for this spring is a pretty respectable total at this site. The early arrival date of April 7 equals the previous early date seen in 2011. No clear peak was noted but a season-high of 3 was recorded April 27. Three westbound Cooper's were noted. For eastbound migrants, 7 were juveniles, 11 were adults and 3 were designated as unknown age.

Northern Goshawk (*Accipiter gentilis*) "NG"

A record 40 eastbound Northern Goshawks were seen in 2013, about a third more than the previous high of 29. The first was observed March 17, a typical early sighting date with the high tally of 4 achieved twice; April 16 and April 21. Sightings were scattered throughout the spring but there were more seen in April than any other month as in two of the three previous springs; in 2010 there were more seen in March. Five westbound Goshawks were noted. Of those aged, 24 were juveniles and 13 were adults.

Bald Eagle (*Haliaeetus leucocephalus*) "BE"

For the spring 1,440 eastbound Bald Eagles were recorded; a total almost 25% above the previous high and representing 5.6% of all birds tallied this year. Seen throughout the entire count period, the biggest single tally was 95 birds on April 26. I think that is one of the truly impressive qualities of this count; how this species moves in volume throughout the spring as a whole. Interestingly, in 2010 and 2012 March was the best month for eagles while in 2011 and 2013 April saw more eagles than any other month. The age class breakdown this year was as follows: 251 juveniles (17.9%), 812 subadults (57.8%), and 341 adults (24.3%). Bald Eagles made up a pretty substantial component of the westbound flight with the 379 accounting for 7% of that movement.

Red-shouldered Hawk (*Buteo lineatus*) "RS"

Red-shoulders are an uncommon species at this site. It was nice to see 21 eastbound RS this spring, the highest for the count thus far. The first was seen April 7, much later than the record early March 16 last year but closer to the arrival dates of the other two KRS counts. The 4 recorded May 7 equaled the previous single-day high. Seventeen juveniles were noted to go along with the 4 adults spotted. No westbound Red-shoulders were seen this year.

Broad-winged Hawk (*Buteo platypterus*) "BW"

A total of 15,653 eastbound Broad-wings were observed this season, some 6% above the total for 2012 and represents just over 60% of the entire flight for 2013. Peaking at 1,997 May 7, this is the second highest one-day count to date. While the peak flight is the typical time frame for the species, the early arrival date of April 26 is the latest for the four years of the count. Similar to other seasons, juvenile Broad-wings continued to come through into June with the tally for that month just under 6000 BWs. As discussed earlier with regards to Sharp-shins, the age breakdown for Broad-wings is also strongly skewed, with just over 80% aged as adult. This can be explained in part by the fact that most of the June flight was recorded as unknown age when presumably most of these birds would have been juveniles. Interestingly, the 2012 adult percentage (74%) is comparable even with a much larger percentage overall being successfully aged (73% as compared to 40% this year). As expected the largest portion of the westbound flight involved Broad-wings, the 3,326 making up about 62% of the westbound tally.

Swainson's Hawk (*Buteo swainsoni*) "SW"

Five eastbound Swainson's Hawks were seen this year, about a typical number for this site. All were associated with large movements of Broad-wings, with the first coming by the watch on April 30, a representative early arrival date. All were dark-morphs with 2 juveniles and 3 adults noted. No westbound Swainson's were recorded.

Red-tailed Hawk (*Buteo jamaicensis*) "RT"

A record 2,182 Red-tails were recorded going eastbound this year, about 74% above the previous high and making up just over 8% of the total for 2013. The early arrival was March 29, equaling the mark in 2011 but a week later than 2010 and almost two weeks later than the record March 17 arrival last year. The peak flight was 175 April 26, the second highest single-day event for the species. Red-tails migrate on a broad front throughout much of April and into May so this year's peak flight was in the midst of that time frame. I was however, surprised at how late into the season adults appeared to still be on the move. A good number of dark-morphs were seen this year (I find it inexplicable that none were seen last year), 17 in total with 13 adults tallied. Several partially albino individuals were also observed. Light morphs broke down to 323 juveniles (15%), 1694 adults (78%) and 148 of unknown age. In conversations with Vic Berardi, he cautions against designating any light-morphs to the "Western" subspecies as the "Eastern" Red-tail of northeast Canadian populations (unofficially *B. j. abieticola*) can be similar and may not be reliably separable in the field. I saw two or three such individuals but recorded them just as light morph individuals. Red-tails made up just over 7% of the westbound total.

Rough-legged Hawk (*Buteo lagopus*) "RL"

A total of 385 eastbound Rough-legs were seen this season, eclipsing the previous record count by almost 62%. The earliest recorded was March 23, about a week later than last year's record arrival date but on par with other springs. Remarkably, after not seeing one for about three weeks, the final day of the count brought a tardy individual to be the last bird recorded for the season. The largest single flight was 62 birds on April 28, a record for one day. Broken down to color morphs, 81.3% were light-morphs and 18.4% were dark-morphs (just one individual not given color morph designation). Of those aged, 8% were juveniles and 92% were adults. In all, 92 westbound Rough-legs were recorded, accordingly a much higher number than seen in past springs.

American Kestrel (*Falco sparverius*) "AK"

Another species seen in record numbers, 259 eastbound Kestrels came by the watch this spring. This is 127% above the 114 established as the high mark in 2011. Predictably, the single-day high count of 45 birds on April 30 is also a record (Note the total for the entire season in 2012 was 67!). With just a few seasons to work with, there is no strong peak evident for this species but for the most part, the bulk of the flight is from mid-April into early May so this year's peak sits nicely within that time frame. The earliest Kestrel seen was April 16, well after last year's record of March 17 and in fact is the latest arrival date of the four years of the count. The breakdown as to sex was 94 females (36%), 103 males (40%) and 62 of unknown sex. Just 6 westbound Kestrels were noted.

Merlin (*Falco columbarius*) "ML"

Fifty-two eastbound Merlins were tallied in 2013; 10 more than the previous high of 42 recorded in 2010. The first was March 29, similar to arrival dates from 2010 and 2011 but notably later than the record early March 17 from 2012. A single-day record of 7 was seen April 30; otherwise there was no strong peak seen with small numbers migrating by the watch throughout the spring. Most individuals seen were brown with just 5 adult males noted. Only 3 westbound Merlins were recorded this spring.

Peregrine Falcon (*Falco peregrinus*) “PG”

Peregrines were another species that reached a high mark this spring, with the 70 eastbound migrants recorded. This is 88% of the cumulative total (80) for the three years of the KRS. The early arrival date of April 17 matched last year’s early date (and incidentally, the same SEAD from Binford, 2006). The single biggest flight day was 15 birds on April 30, a record for the count. This species has a much tighter time frame of movement than any other migrant with 91% of the flight coming through in a three-week period from late-April to mid-May. Three westbound Peregrines were seen in 2013.

Unidentified Accipiter “UA”, Unidentified Buteo “UB”, Unidentified Falcon “UF” Unidentified Eagle “UE” & Unidentified Raptor “UR”

In all, 95 total eastbound and 7 total westbound raptors were tallied; all westbound birds were UE. Of the eastbound total of 95, the breakdown was 1 UB, 5 UE and 89 UR. It can’t be stressed enough that all effort should be undertaken to ID any and every bird before it is placed in any of these categories. It is a concern to have unidentified birds within any one category approaching numbers for known species (for example, the total for eastbound UE is close to that for GE in 2012), because it brings into question the validity of the total for that species.

Non-raptors

In addition to the standardized raptor counts, daily simultaneous counts were conducted for all other bird species that were detected visually or aurally during the count season in accordance with KRS protocol (Haas & Gayk 2010). A tabulation of the first and last observation for 115 non-raptor species recorded at West Bluff during the survey period is presented in Appendix C. The maximum daily count with date of peak occurrence is supplied in this table. Season totals are provided for all species, but it is important to use discretion in interpreting them, recognizing that some totals are closer to true values (Canada Goose, Sandhill Crane), and detected individuals are not necessarily unique as there is no guarantee that they were not observed subsequently.

Some impressive totals for several species were noted including 13,848 Canada Geese, 896 Sandhill Cranes, 617 Common Loons and 45 American White Pelicans. Notable species were Cackling Goose, Glaucous Gull, Short-eared Owl, Townsend’s Solitaire and Western Meadowlark (It is worth noting other rare or uncommon birds from nearby Copper Harbor included Eared Grebe, Spotted Towhee, Yellow-headed Blackbird and Eurasian Tree Sparrow).

Weather

Weather measurements, including wind speed, wind direction, temperature, barometric pressure, percentage of sky covered by cloud-form, visibility, and precipitation type (e.g., haze, rain, snow) were taken at the top of each count hour throughout the count season. These measurements provide atmospheric context for the migration observed each count day. A summary of these variables is presented as Appendix D, reworked a bit from previous seasons to give a more complete picture of the weather on any given day.

There was a marked difference in conditions this spring, particularly in contrast to last year but also when comparing 2013 to “normal” or “typical” springs. While March was probably near average in terms of snowfall and temperature, April was cold and snowy, limiting coverage in that month. In fact, 9 of the total of 16 days missed entirely due to weather were in the month of April. Other than a window of two or three days around

the end of the first week of the month, the first half of May was quite cold as well with an abundance of north winds. The last half of May and most of June saw much improved conditions.

Even given the apparent lateness of the spring, the effect was varied. If we treat last spring as an outlier, most early arrival dates and the dates of peak flights were on par with the other years of the KRS. Some exceptions to this are the early arrival date and peak flight date of Harriers and the early arrival dates for Broad-wing and Kestrel, all later than in other springs. Sharpies actually peaked earlier than in other springs. Keep in mind too that we are dealing with only a handful of yearly data.

Visitors

Much of the first half of the spring saw few visitors other than snowmobilers because of the poor weather and limited access to West Bluff. Numbers during April were the most affected by these factors as the number of snowmobilers dwindled to zero and the road continued to be mostly snow covered. In fact, there were a number of days in April when I saw nary a soul. Access by car did not happen until the first week of May and even then, because of poor weather, there were not a lot of visitors to the mountain until after the middle of the month. From Memorial Day onward there were probably a typical number of people visiting Brockway on a daily basis. Nearly 900 visitors were tallied in all, however this represents only a portion of the total visitors to Brockway Mountain during the count period. Daily visitor totals are presented in Appendix E.

Acknowledgements

Just in the last year, ownership of West Bluff and surrounding 320 acres has been transferred to Eagle Harbor Township who, along with Michigan DNR (MI DNR Trust Fund Grant), the Michigan Nature Conservancy, the Houghton Keweenaw Conservation District, the Keweenaw Land Trust and Copper Country Audubon partnered in the continued protection of Brockway Mountain as part of the Keweenaw Coastal Wildlife Corridor. We thank them for the continued use of the site for the purposes of the hawk watch as well as the preservation of this spectacular scenic byway for the enjoyment by the general public.

The Brockway Mountain Hawk Watch organizing committee included Karen Karl, Debbie Mues, Hannah Rooks, Joseph Youngman, Bill Deephouse and Dana Richter. Support for the Brockway Mountain Hawk Watch was provided by the memberships of Copper Country Audubon and Copper Harbor Birding. Bill Deephouse and Dana Richter handled the funds and administered the count. Ken & Vicky Stigers of the Pines Resort once again generously supplied lodging for the counter. Use of the snowmobile was provided this year by the Copper Harbor Trails Club. Thank you.

Of course, I would be remiss if I did not single out the individuals who gave of their time and made my job that much easier and enjoyable. Substitute counters this spring included Joseph Youngman, Louie Dombroski, and Debra Mues with help from Vic Berardi, Charlene Brennan, David Essian, Zach Gayk, Skye Haas and Robert Visconti. A most gracious thank-you to all of you. Also, many thanks go to Karen Karl for her help and cheerfulness throughout the spring as well as Bill and Bonnie Degowski for their generosity and technical support.

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Summary Table (from APPENDIX A): Migrant Raptors – Brockway Mountain Hawk Watch, Spring 2013.

SPECIES	FIRST DATE	MAX	MAX DATE	LAST DATE	EAST TOTAL	WEST TOTAL
Black Vulture	27 May	1	27 May	27 May	1	0
Turkey Vulture	3 Apr	139	7 May	15 Jun	2163	776
Osprey	16 Apr	19	14 May	15 Jun	175	21
Bald Eagle	15 Mar	95	26 Apr	15 Jun	1440	379
Northern Harrier	14 Apr	22	30 Apr	14 Jun	134	3
Sharp-shinned Hawk	29 Mar	523	28 Apr	15 Jun	2987	352
Cooper's Hawk	7 Apr	3	27 Apr	11 Jun	21	3
Northern Goshawk	17 Mar	4	16 Apr, 21 Apr	9 Jun	40	5
Red-shouldered Hawk	7 Apr	4	7 May	8 Jun	21	0
Broad-winged Hawk	26 Apr	1997	7 May	15 Jun	15653	3326
Swainson's Hawk	30 Apr	2	7 May	31 May	5	0
Red-tailed Hawk	29 Mar	175	26 Apr	15 Jun	2182	385
Rough-legged Hawk	23 Mar	62	28 Apr	15 Jun	385	92
Golden Eagle	17 Mar	7	3 Apr	27 May	81	38
American Kestrel	16 Apr	45	30 Apr	15 Jun	259	6
Merlin	29 Mar	7	30 Apr	11 Jun	52	3
Peregrine Falcon	17 Apr	15	30 Apr	31 May	70	3
Unidentified Accipiter	--	--	--	--	0	0
Unidentified Buteo	--	--	--	--	1	0
Unidentified Falcon	--	--	--	--	0	0
Unidentified Eagle	--	--	--	--	5	7
Unidentified Raptor	--	--	--	--	89	0
TOTAL					25763	5399