

MOUNT LORETTE, SPRING 2012

With notes on the Steeples, BC site

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Summary and highlights

This was the 21st consecutive year that a spring count has been held at Mount Lorette, and is the 5th consecutive extended count at the site. As started last year the count period was again March 1 to April 22. Like the 2008-2010 counts the 2012 count may also be anomalously low, probably as a result of persistently poor weather conditions throughout much of the period. The count of 1034 Golden Eagles is 66.7% below the long-term average and is the second lowest ever at the site. The strong declining trend for the species since 1996 is essentially unaffected. The count of Red-tailed Hawks was the highest ever at the site. A third extended spring reconnaissance count at Steeples Ridge in BC on the western flanks of the Rocky Mountains near Cranbrook, BC, again yielded significantly higher age ratios for Golden Eagles than at Mount Lorette, which possibly suggest different breeding ranges for eagles moving on the western and eastern flanks of the Rockies.

Introduction

The Mount Lorette site is located in the Kananaskis Valley in the Front Ranges of the Rocky Mountains (50°58'N 115°8'W) 70km due west of Calgary and immediately north-east of the Nakiska Ski Hill on Mount Allan. At this point the valley trends north-south and cuts obliquely across the NW-SE oriented trend of the Front Ranges. To the east of the observation site the Fisher Range has an average elevation of about 2500m with Mount McDougall rising to 2726m. Mount Lorette itself is 2487m and is a geological continuation of the of the Fisher Range across the Kananaskis Valley to the NW. To the west the mountains of the Kananaskis Range are somewhat higher and include Mount Kidd (2958m), Mount Bogart (3144m) and Mount Allan (2819m). The observation site is in a cleared area on the valley floor known as the Hay Meadow at about 1433m. The site allows 360° views of the surrounding mountains and allows monitoring of raptors moving along the mountain ridges to the east and west, and especially those crossing the valley between Mount Lorette and the north end of the Fisher Range. The site is unique in that it allows observation of approximately the same high percentage of a population of migratory Golden Eagles both in spring and fall at exactly the same site, which has in the past been occupied for up to 190 days in a year. When downslope cloud obscures these mountains an alternate site at Lusk Creek, 13km NE of the Hay Meadow site, is used to observe birds moving along the westernmost foothills ridge that have been displaced to the east from the Front Ranges. Birds seen here when active observation is occurring at Hay Meadow are not included in the official count.

Migrating Golden Eagles were first seen moving over Mount Lorette on March 20, 1992, and the first extended (33 day, 280 hour) count was conducted that fall and yielded 2661 migrant raptors of which 2044 were Golden Eagles. Subsequently, full-season spring counts were conducted annually at Mount Lorette to 2007, with an average time spent at the site of the 15 counts being 79.9 days (863.5 hours). From 2006 to 2009 the principal fall observation site was moved to the Piitaistakis-South Livingstone location close to the Municipality of the Crownsnest Pass in SW Alberta, during which time extended comparison counts were conducted at Mount Lorette during the main period of Golden Eagle migration. The Lorette counts in 2006, 2007 and 2008 were conducted between March 01 and April 15 and comprised 44 days, 46 days and 48 days of active observation respectively. **Table 1** summarizes all the spring counts since 1993 conducted at Mount Lorette to date. It is clear that the counts conducted in 2008, 2009 and 2010 are anomalously low compared to all previous counts and the spring 2011 count. The combined species count for the years 2008, 2009 and 2010 (with comparison for Golden Eagle in parentheses) are only 39% (39%), 30.5% (29.4%) and 40% (43.7%) of the average for the years 1993-2007 and the 2011 counts. By contrast the fourth lowest spring count at the site in 2007 is 68.2% (65.6%) of average. The anomalous nature of the three counts probably results from a combination of poor weather conditions and, in some cases, observer inexperience, but whatever the cause it seems prudent at this time to exclude these counts from the statistical comparisons with subsequent counts. The spring 2011 count was conducted between March 01 and April 22, one week longer than those from 2008-2010, and the spring 2012 count has used the same time period. **Table 2** summarizes the counts conducted at Mount Lorette for the period March 1 to April 22 (excluding 2008-2010). This report gives data variances of the current count (number, median passage dates, age ratios) for the period March 01-April 22 with averages for the same period of the 16 years 1993-2007 and 2011. Once again because of logistical considerations no count was held this season at the Piitaistakis-South Livingstone site, and so this report concerns only the count at Mount Lorette and the extended reconnaissance count conducted by Vance Mattson at the Steeples site on the western flank of the Rocky Mountains in British Columbia.

At Mount Lorette observers spent a total of 48 days (495.4hours) of a possible 53 days at the site between March 01 and April 22, the days and hours being 3.4% below average and 9.7% below average respectively. At the Steeples reconnaissance count in BC Vance Mattson spent 32 days (98.5hours) of a possible 48 days at the site between March 1 and April 17. This is the third consecutive spring season that this count has been held.

Mount Lorette, Alberta

Weather

Table 3 summarises the weather data from this season's count. As with most of the recent spring counts at the site the weather again played a critical role, although it was not as severe as the previous year. Despite above average snowfall on the mountains to the west of the site, there was only 2-3 cm of snow on the ground when the count began. As happened last year, a total of 5 days were completely lost to adverse weather (heavy snow on March 5, 22, 23 and April 5, and persistent rain on April 12) and counts on five further days (March 30, April 4, 14, 17 and 20) were significantly shortened because of the weather. A total of 20 active observation days (41.7%) experienced some snow (17 days), rain (2 days) and snow and rain (1 day). The coldest temperature, however, was a relatively mild -17°C early on March 24 and, apart from March 1 (-15°C) the temperature never subsequently fell below -12°C . The warmest temperature was 18°C on the last day of the count, and on only three days (March 1, 6 and April 4) did the temperature fail to rise above freezing. In general the temperatures during the count were normal to above normal. Ridge wind information was taken from the Environment Canada weather station (Nakiska Ridgetop) situated 4 km west of the Hay Meadow site on Olympic Summit (Mount Allan) at 2543 m. These data indicated that winds from the W-SSW prevailed on 41 days

(85.4%), those in the quadrant N-E (mainly N-NE) prevailed on 5 days (10.4%), and the winds were variable on 2 days (4.2%). More specifically SW winds were the most common (17 days, 35.4%) followed by SW-SSW (9 days, 18.75%). On active observation days ridge wind speeds were moderate to strong (11-41+ km/h) 37.5% of the time and strong (>41 km/h) for 20.8% of the time and 9 days experienced gusts of 100 km/h or more with a maximum gust of 169 km/h on March 9. Moderate winds (11-40 km/h) occurred on 6.3% of active days, light to moderate (1-40 km/h) winds occurred 29.2% of the time while calm-light winds (0-10 km/h) occurred on only one day (2.1%). One day (2.1%) had winds that varied between light and strong and 2 days (4.2%) had very variable wind velocities. Generally ridge wind velocities were higher than the average for the count period as a whole. Only 2 active days (4.2%) had a cloud cover between 0 and 20% all day, while 7 days (14.6%) experienced cloud cover between 80 and 100% all day. A total of 37 days (77.1%), however, experienced 100% cloud for at least part of the day. The eastern ridge system (Fisher Range and Mount Lorette) was at least partly obscured on 24 active days (50%), and 40-100% obscured on 14 days (29.2%) which is higher than average.

General flight dynamics March 1 to April 22

A total of 1260 migrant raptors of 14 species were counted on 48 active observation dates between March 1 and April 22 (**Table 4**). The combined species total was 59.1% below the long-term average for the period March 1 to April 22 at the site and the count was the second lowest spring count for the site. Including the 5 days lost because of weather, a total of 10 days had no raptor passage, and a total of 29 days (60.4%) in the count period had counts of 10 birds or less. By March 17 only 106 migrants had been counted, but the following day saw the passage of 186 birds (of which 180 were Golden Eagles) which proved to be the highest count of the season, but was only half (-50.2%) of the average maximum for all spring counts. Only two other days saw the passage of more than 100 birds: March 24 (163, 155 Golden Eagles) and March 27 (137, 125 Golden Eagles). The combined species total for March was 828 which is 66% below the average of all counts, and is the second lowest March count ever. By contrast, April movement was generally more sustained under more clement weather conditions, with 175 birds moving between April 6 and 8, 49 birds on April 15 and 22 on April 22 which was the last day of the count. The combined species median passage date was March 27 which was 3 days later than the long-term average (excluding the short counts 2008-2010).

Of the 14 species that regularly occur during the period (**Table 2**) only Red-tailed Hawk (52 : +83.7%) had a count that was significantly above the long-term average (excluding 2008-2010), while 2 American Kestrels (+88.2%) and 3 Peregrine Falcons (+200%) were non-significantly above average. Sharp-shinned Hawk (25: -6.8%) was marginally below average, but all other species were well below: Osprey 1 (-50%), Bald Eagle 90 (-53.9%), Northern Harrier 2 (-57.3%), Cooper's Hawk 6 (-18.6%), Northern Goshawk 16 (-32.8%), Rough-legged Hawk 7 (-59.1%), Golden Eagle 1034 (-66.7%), Merlin 5 (-29.2%), Gyrfalcon 1 (-27.3%) and Prairie Falcon 1 (-57.9%). Neither Turkey Vulture (it was seen for the first time in the count period last year) nor Ferruginous Hawk was recorded (it has occurred in three previous counts for the period), and Broad-winged Hawk and Swainson's Hawk remain unrecorded for the count period.

The final count was Turkey Vulture 0, Osprey 1, Bald Eagle 91, Northern Harrier 2, Sharp-shinned Hawk 25, Cooper's Hawk 6, Northern Goshawk 16, *Accipiter* sp. 7, Broad-winged Hawk 0, Swainson's Hawk 0, Red-tailed Hawk 52, Ferruginous Hawk 0, Rough-legged Hawk 7, *Buteo* sp. 3, Golden Eagle 1034, eagle sp. 4, American Kestrel 2, Merlin 5, Gyrfalcon 1, Peregrine Falcon 3, Prairie Falcon 1, *Falco* sp. 0, indeterminate raptor 0, for a total of 1260 migrant raptors.

Detailed daily summaries of weather and flight dynamics can be found on the spring 2012 blog on the RMERF website www.eaglewatch.ca

Golden Eagle

Observers counted a total of 1034 migrating Golden Eagles on 36 days between March 1 and April 22, with the highest single-day count of 155 occurring on March 24 (**Figure 1**). The total was 66.7% below the long-term average and the high count was 61.7% below average. Only 2 other days saw passage of at least 100 birds: March 24 (155) and March 27 (125). The March passage was particularly low with only 771 birds being counted (66.4% below the average of all March counts and the second lowest ever behind the 684 counted in 2009). The flight comprised 767 adults, 56 subadults, 70 juveniles, 2 undifferentiated immature birds and 139 birds of unknown age yielding an immature:adult ratio of 0.17 which is the highest spring ratio ever recorded and 110.9% above average.

MOUNT LORETTE, SPRING 2012 GOLDEN EAGLE n = 1034

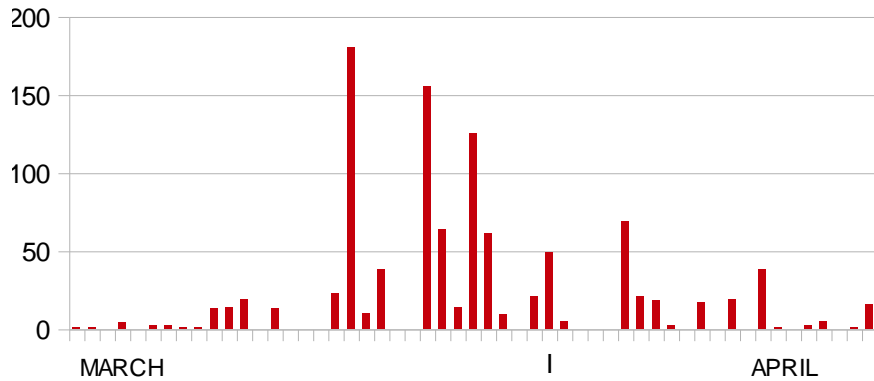


Figure 1

MOUNT LORETTE, SPRING 2012 GOLDEN EAGLE n = 1024

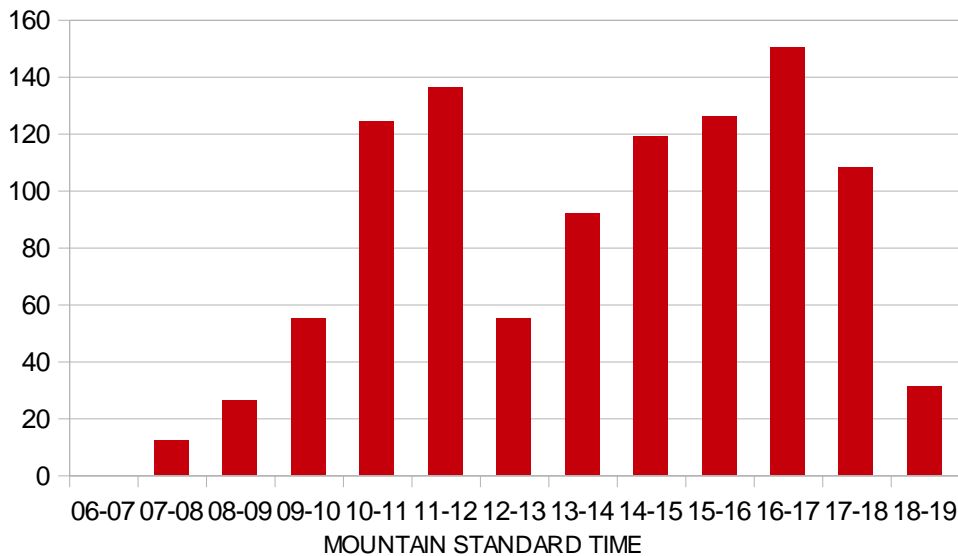


Figure 2

The hourly cumulative counts (**Figure 2**) differ significantly from the average positively-skewed normal distribution curve with hourly counts steadily increasing throughout the day, peaking around 1600 and falling thereafter. This season's chart has a distinct bimodal distribution with an increase to a

peak at 1100-1200 (124 birds) followed by a sharp drop at 1200-1300 (55 birds) after which the hourly counts rise steadily and reach a peak at 1600-1700 (150 birds). This pattern, together with the low count, almost certainly results from the poor weather conditions that produced a very sporadic movement this spring. The highest cumulative hourly counts (all times are Mountain Standard Time) were 150 from 1600 to 1700, 136 from 1100 to 1200 and 55 from 1000 to 1100 and 1500 to 1600. No birds were recorded before 0700 while 31 occurred after 1800. The highest single-hour passage was a very low 62 birds between 1100 and 1200 on March 19, and the second highest count was 48 birds between 1400 and 1500 on the same day. The species median passage date of March 25 is two days later than average: adults were two days later than average on March 22 and immature birds were five days earlier than average on April 9.

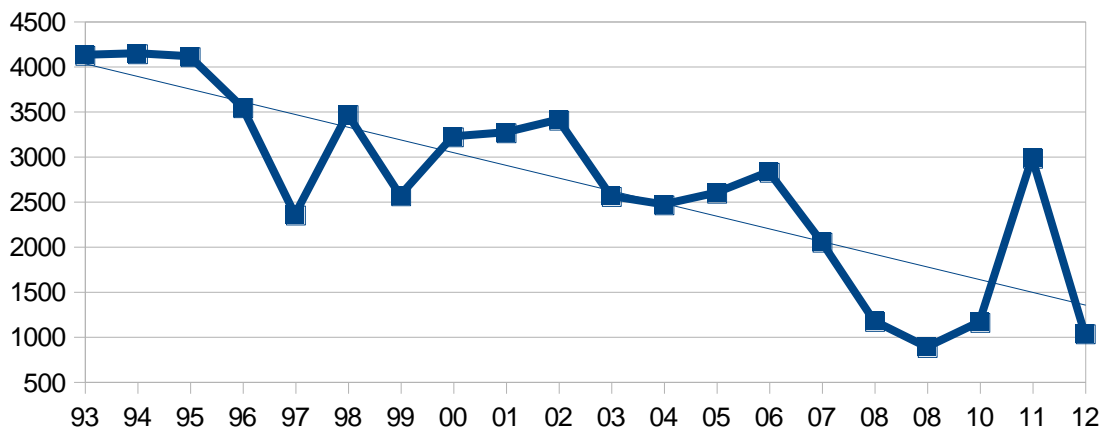
Spring Golden Eagle Trend

Figure 3A shows the trend of all Golden Eagle counts at the Mount Lorette site since 1993 for the period March 1 to April 22. As this period captures about 97% of the total Golden Eagle movement it is essentially identical to the trend derived from using data from complete counts. For reasons discussed in the Introduction, the years 2008, 2009 and 2010 that yielded anomalously very low counts have been omitted on **Figure 3B**.

Last spring's (2011) Golden Eagle count of 2982 was the highest at the site since 2002, but this season's count of 1034 is a return to the series of anomalously low counts that occurred between 2008 and 2010 and is the second lowest spring count ever at the site. The weather at the site since 2008 has generally been worse than average and birds may have been deflected to more easterly routes in greater numbers than usual, but the weather last year was similar, as was the weather in 1997 and 1999 and all of these counts (2982, 2352 and 2565 respectively) were significantly higher than those of the period 2018-10 and for this spring's count. The linear trend line (**Figure 3A**) shows a significant decline over the last 20 years (and especially since 1995) and removal of the previous anomalous low counts (**Figure 3B**) only slightly tempers but does not change this trend. The future of this population of migratory Golden

MOUNT LORETTE, GOLDEN EAGLE, SPRING COUNTS March 01 to April 22

1993-2012 (all counts)



Eagles should still be of serious concern.

Figure 3A

MOUNT LORETTE, GOLDEN EAGLE SPRING COUNTS March 01 to April 22
1993-2012 (omitting anomalously low counts in 2008, 2009 and 2010)

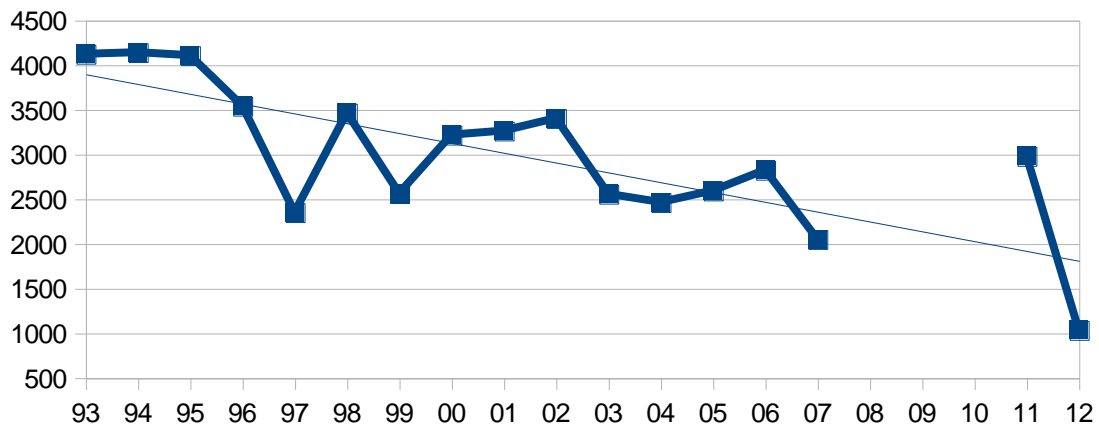


Figure 3B

Golden Eagle Age Analysis

Figure 4 shows the ratio of immature and adult Golden Eagles from 1994 to 2012. The top line (red) plots data from complete counts at Mount Lorette to 2007 and from the Piitaistakis-South Livingstone site 2007-2010. The lower line (blue) plots age data from Mount Lorette for the period March 1 to April 22. Data from 2009 and 2010 are included as they conform to the trend established at the contemporaneous full counts at Piitaistakis-South Livingstone, but data from the 2008 Lorette count are significantly anomalous to the trend and are excluded here. The trend from complete counts almost certainly reflect the breeding cycles of the northern Snowshoe Hare population. This probably peaked

MOUNT LORETTE, GOLDEN EAGLE Immature: adult age ratios, spring 1994 to 2012
full count (red), March 01-April 22 (blue)

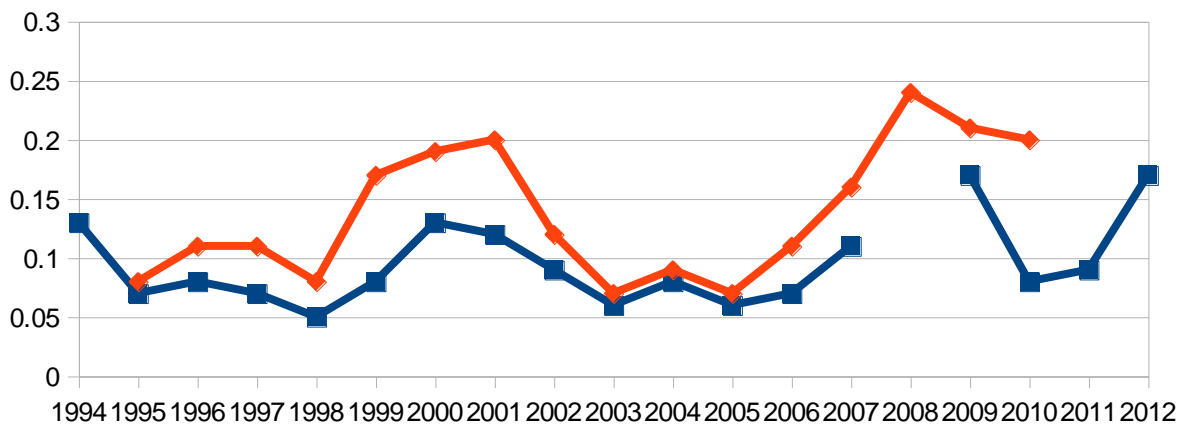


Figure 4

around the time counts started at Mount Lorette (1992, although age data from the first few years counts there are not reliable enough to be included) and fell to 1995 rising again to a second peak around 2000/01, that then fell to 2003 before rising to the latest peak in 2008 with the ratio falling over the next two years. This would indicate that two more or less eight-year cycles have occurred during the life of the project so far. Many immature Golden Eagles (subadults and juveniles) move north in the second half of April and during May which is why the age ratios from the shorter count are lower. It is very gratifying, however, to see that data from the period March 1 to April 22 closely follow the trend established from the full count data. This suggests that we can successfully continue to monitor these trends by counting from March 1 to April 22, although it is to be hoped that at some time we will be able to resume full counts at the site. The age ratio from the current count indicates that breeding success is increasing again with numbers beginning to rise towards the next peak which is expected be around 2016.

Bald Eagle

The count of 91 Bald Eagles made on 28 days between March 6 and April 22 (**Figure 5**) was the 4th lowest spring count at the site and exceeded only the anomalously low counts of 2008 (86), 2009 (76) and 2010 (88). The count is 48.7% below the long-term average of all counts, and 53.9% below the average excluding 2009-10. The highest daily count was only 9 birds on March 27 which is 59.4% below the average high count for the period. The flight comprised 66 adults, 5 subadults, 16 juveniles 2 undifferentiated immature birds and 2 birds of unknown age giving an overall immature:adult ratio of 0.35 which is almost coincident with the long-term average ratio (+0.2%). The median passage date for the species was April 6, eight days later than average; the adult bird median was one day earlier than average on March 28 while immatures were nine days later than average on April 10.

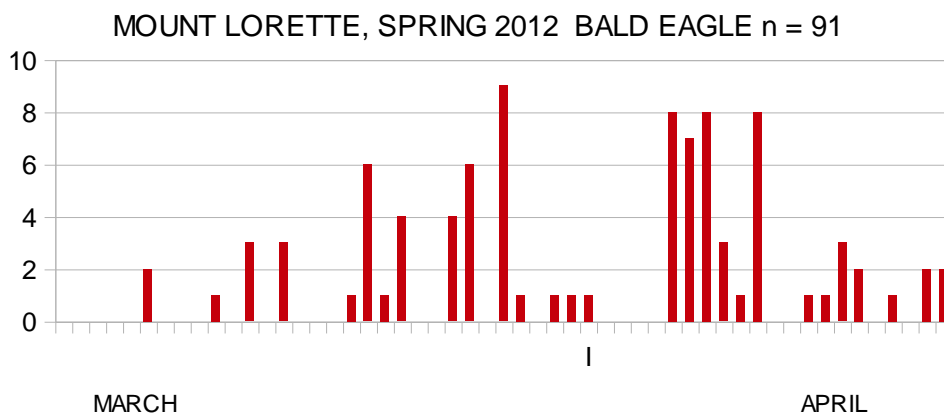


Figure 5

Other species

Turkey Vulture Not recorded this season. Previous records were single birds recorded on April 13, 1993 and March 31, 2011.

Osprey

The only Osprey recorded occurred on April 11, 6 days earlier than the average first occurrence date at the site, and only 2 days later than the earliest occurrence at the site (April 9, 1994). The count is 50.0% below average for the period.

Northern Harrier

Only two birds, both adult males, were recorded, 1 on April 6 and 1 on April 15. The first bird appeared 1 day later than the average first occurrence date for the site. The total is 57.4% below the average count for the period.

Sharp-shinned Hawk

The count of 25 birds on 13 days between March 24 and April 22 was 6.8% below average and the first bird appeared 2 days earlier than average. The highest daily count was 4 on April 11. The flight comprised 13 adults, 2 juveniles and 10 unaged birds giving an age ratio of 0.15. The median passage date for the species was April 9, four days earlier than average, and adults were five days early on April 9.

Cooper's Hawk

A total of 6 Cooper's Hawks were seen on 6 days between March 16 (16 days earlier than the average first occurrence) and April 20, with both April 13 and 20 yielding 2 birds. The flight comprised 5 adults, 1 juvenile and 2 indeterminate birds giving an age ratio of 0.2. The median passage dates for the species and adults were three and five days earlier than average on April 13 and 14 respectively.

Northern Goshawk

The total of 16 birds seen on 9 days between March 27 (15 days later than average) and April 19 was 32.8% lower than average; a maximum count of 4 birds occurred on April 15. The flight comprised 11 adults and 5 birds of unknown age. The median passage for the species was April 8 and for adults April 7, which are nine and eleven days later than average respectively.

Broad-winged Hawk

Not recorded this season. The only previous records for the period were single birds seen on April 21 1994 and April 13 1996.

Swainson's Hawk

This late migrant has never been recorded during this count period.

Red-tailed Hawk

The count of 52 birds on 12 days between March 31 (seven days later than average) and April 22 was the highest ever for the period and 83.7% above average. The highest daily count was 14 on April 7 which is 190.9% above average and six more than the previous highest daily count. The flight comprised 50 "Western Red-tails" (*B.j.calurus*): 41 light morphs (40 adults and 1 juvenile), 5 rufous (intermediate) morphs (4 adults, 1 juvenile), and 4 dark morphs (2 adults and 2 indeterminate birds); 1 adult dark-morph "Harlan's Red-tail" (*B.j.harlani*), and 1 indeterminate dark morph bird. The combined immature:adult ratio of 0.04 is 20% below average for the period. The median passage date of the species was April 7 which is two days earlier than average, and for adults was April 7 which is coincident with the long-term average.

Ferruginous Hawk

Not recorded this season. Previous records for the period are 1 on April 9 1994, single birds on April 6

and 7 1995 and 1 on April 15 2001.

Rough-legged Hawk

After a record count of 40 birds last year, this season produced only 7 birds which is the second lowest total ever (after 4 in 1993) and 59.1% below average. Birds were counted on 6 days between March 27 (6 days later than average) and April 7 (12 days earlier than the average late bird), and the highest daily count was only 2 birds on March 27. The median passage date for the species was March 29, eleven days earlier than average and the flight comprised 6 light morph and 1 dark morph bird, which is close to the average ratio between the morphs (+0.8%).

American Kestrel

There were 2 records of single adult male birds on April 6 (10 days earlier than the average first occurrence) and April 7. The total is 88.2% higher than the average count of a species that has been unrecorded for the period on 6 previous counts.

Merlin

Only 5 birds were seen on 4 days between March 18 (3 days earlier than average) and April 20, a total that is 29.2% below average. All birds were assigned to the race *columbarius* and comprised 2 adult males and 3 birds of indeterminate age and sex.

Gyrfalcon

The only record was an adult grey morph bird seen on April 11, 17 days later than the average first record for the season. The count is 27.3% below average.

Peregrine Falcon

A total of 3 birds, 2 adults and 1 of indeterminate age, was counted, a total that is 200% above the average count and equals the previous highest counts for the species in 1993, 1995 and 2004. One bird occurred on March 28 (12 days earlier than average) and 2 on April 14.

Prairie Falcon

A single bird seen on April 11 was the only record for the season, a total that is 57.9% below average.

Observers

Principal Observers: Cliff Hansen (13 days), Terry Waters (9.5 days), Bill Wilson (8 days), Joel Duncan (6 days), George Halmazna (5 days), Jim Davis (4 days), Alan Hingston (1.5 days), Doug Pedersen (1 day)

Assistants: Cliff Hansen (7 days), Kevin Barker and Chris Hunt (4 days), Brian McBride and Anita Walker (2 days), Pat Bulman, Ron Dutcher, Alan Hingston and Doug Pedersen (1 day)

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Steeple Ridge extended reconnaissance count, British Columbia (Vance Mattson)

Introduction

In the fall of 2009, Vance Mattson conducted the first extended reconnaissance count at or near the Steeples Ridge which is located on the east side of the Kootenay Valley (Rocky Mountain Trench) 25 km NE of Cranbrook, British Columbia. Three sites were used to monitor raptor movement along, or just north of, the NNW-SSE oriented Steeples Ridge which forms the southern part of the Hughes Range on the western flank of the Rocky Mountains. Of significance is that it is located about 80 km almost due W of the Piitaistakis-South Livingstone site giving the possibility of simultaneously monitoring movement along the eastern and western flanks of the Rocky Mountains at the same latitude. Vance spent 41 partial days (148 hours) at 3 sites between September 18 and November 12, 2009, with 95% of the time being spent between 1300 and 1800 and recorded 453 migrant raptors of 12 species. An extended spring reconnaissance count was conducted at the site for the first time in 2010, and 2012 was the third count there (**Table 5**).

During the spring 2012 season Vance Mattson conducted a 32 day (98.5 hours) extended reconnaissance count out of a possible 49 days between March 1 and April 17 (**Table 7**). All observation was conducted at the Scarface (Bill Nye) site. Between 1 and 6 hours at an average of 3.08 hours a day were spent at the site with most observations conducted between 1300 and 1800. Details of the site are as follows:

Scarface/Bill Nye (49° 45' 11.10"N, 115° 38' 49.14"W, 1041m)

The Scarface site (named due to a prominent 'scar' on the face of the mountain), is a convenient option from Wasa Lake. Following Lazy Lake Road east toward Lazy Lake, the site is located south of an unmarked back road approximately 10km from the Lazy Lake Road turn off on Wasa Lake Park Drive on the southern edge of Wasa Lake. The site is located about 5km southeast from the back road turnoff, although it may require detailed instructions to arrive there. The site offers views of the birds as they pass over, or in front of, the ridge. 'Scarface Peak' (2400m) is the most westerly and visibly craggy peak of Mount Bill Nye (2600m).

Weather

A record total of 16 days (March 5, 11, 13, 15, 16, 17, 20, 26, 28, 29, 31, April 1, 4, 14, 15, 16) were completely lost to adverse weather conditions when the ridges were obscured on heavily overcast days that often produced snow and rain. The planned last day of the count, April 18, was lost because the observer had a prior commitment. Hourly weather data were not gathered but daily weather summaries were produced (**Table 6**). The temperature high for the count was 21°C on April 10 and the lowest maximum daily temperature was 1°C on March 2 and 21. Average high temperatures on active observation days in March were 5.6°C (range 1°C to 12°C) and 8.9°C in April (range 2°C to 21°C). Ridge winds were assessed as S on 21.9% of active observation days; as W or calm each 18.75% of the time, SW 9.4% of the time (compared with 42.3% last year), NW, S-SW and variable each 6.25% of the time and W-NW, W-SW, SE and NE each 3.13% of the time. Winds from a mainly westerly direction (SW-NW) therefore prevailed for 46.9% of the time. These winds were assessed as strong 46.9% of the time, as moderate 31.25% of the time, as calm 18.75% of the time and moderate to strong 3.12% of the time. Only one day (April 8) was completely cloudless (oddly, this was also the only cloudless day last year), 56% of days saw cloud cover of 80-100% and 40.6% of days had cloud cover of less than 80%. The ridges were completely clear on 21 active observation days (65.6%), they were partially clear on 10 days (31.25%) and were completely obscured on one day (3.13%).

General flight dynamics

Consistent with the last two years, raptor movement along the western flanks of the Rocky Mountains appears to occur more sporadically than along the eastern flanks, and appears to be strongly weather

dependent. As in the past two years, what appears to be a bottleneck effect is observed. Attention to the forecast as far south as Missoula, Montana provides a fairly accurate predictor of raptor movement: if conditions of snow and rain conditions are observed to the south, raptor movement is likely to be very sparse. Once the entire valley opens, from Missoula to Whitefish and Eureka, raptor movement will predictably ensue. In 2012, the bottleneck effect was seen on two occasions: once between March 7 and 12, with 68 raptors moving after 4 days of cloudy conditions and/or snow, and again between March 18 and 25, when 222 raptors moved after 5 days of mainly inclement weather. These two peaks account for 73% of total migration numbers seen this spring. While specific wind conditions and direction do not seem to play a strong role in raptor movement, raptors do appear to migrate during clearer, sunnier conditions.

Count Summary

The count produced a total of 393 migrant raptors of 11 species with a high single day count of 124 birds on March 25 (**Table 7**). Of this total 236 (60.2%) were Golden Eagles and 112 (28.5%) were Bald Eagles. Including the 4 unidentified eagles, eagle species together comprised 89.57% of the total flight which is identical to the 89.6% eagles recorded at Mount Lorette, although there Golden Eagles (1034) greatly outnumbered Bald Eagles (91). Other migrants were 9 Turkey Vultures (8 adults, 1 juvenile), 2 Ospreys, 1 adult male Northern Harrier, 7 Sharp-shinned Hawks (3 adults, 4 indeterminate), 2 adult Northern Goshawks, 11 Red-tailed Hawks (10 *B.j.calurus*: 7 adult light morphs and 3 dark morphs (2 adults and 1 indeterminate), and 1 adult dark morph *B.j.harlani*), 7 Rough-legged Hawks (4 light and 3 dark morphs), 1 adult female American Kestrel and 1 adult Peregrine Falcon. The results of all three spring counts at the site are summarized on **Table 5**.

Golden and Bald Eagles

The 236 migrant Golden Eagles were recorded on 23 of a possible 32 active field days (71.9%) with a highest single day count of 92 on March 25 and with the second highest count of 21 on March 22. Only 7 days (21.9%) had double-digit counts this season. The flight comprised 186 adults, 5 subadults, 40 juveniles and 5 birds of indeterminate age giving an immature:adult ratio of 0.24. This is significantly higher than the 0.17 recorded at Mount Lorette which may, as noted in last two year's spring reports, suggest a different provenance for the birds, although it might also result from the shorter and more sporadic nature of the observations here.

A total of 112 migrant Bald Eagles were recorded on 21 days (65.6%) with a single day high count of 27 on March 25. The only other day with a double-figure count was March 19 when 15 birds were recorded. The flight comprised 73 adults, 15 subadults and 49 juveniles giving an immature:adult ratio of 0.53 compared to a ratio of 0.35 at Mount Lorette.

Principal Observer at Steeples

Vance Mattson

Appendix

List of Tables

Table 1 Mount Lorette. Summary of spring counts 1993-2012

Table 2 Mount Lorette. Summary of spring counts 1993-2011, March 01-April 22 (excluding 2008-10)

Table 3 Mount Lorette. Summary weather data, spring 2012

Table 4 Mount Lorette: Daily count numbers, spring 2012

Table 5 Steeples. Summary of spring counts 2010-2012

Table 6 Steeples. Summary weather data, spring 2012

Table 7 Steeples. Daily count numbers, spring 2012

TABLE 1

Mount Lorette, spring counts 1993-2011

| YEAR | DAYS | HRS | TV | OS | BE | NH | SS | CH | NG | BW | SW | RT | FH | RL | GE | AK | ML | GY | PG | PR | UA | UB | UE | UF | UU | TOTAL |
|--------|------|-------|----|-----|------|-----|------|-----|-----|----|----|-----|----|-----|-------|-----|-----|----|----|----|----|----|----|----|----|-------|
| 1993 | 48 | 392.7 | 1 | 5 | 169 | 4 | 39 | 19 | 54 | 0 | 0 | 34 | 0 | 4 | 4140 | 0 | 9 | 0 | 3 | 4 | 0 | 1 | 0 | 3 | 0 | 4489 |
| 1994 | 70 | 648.7 | 0 | 7 | 229 | 12 | 62 | 23 | 44 | 2 | 0 | 50 | 1 | 22 | 4213 | 2 | 2 | 3 | 0 | 14 | 2 | 1 | 0 | 0 | 0 | 4689 |
| 1995 | 65 | 582 | 0 | 10 | 176 | 9 | 73 | 11 | 46 | 1 | 0 | 43 | 2 | 25 | 4143 | 5 | 17 | 1 | 6 | 6 | 0 | 0 | 0 | 0 | 0 | 4574 |
| 1996 | 80 | 728.3 | 0 | 12 | 266 | 13 | 106 | 20 | 25 | 3 | 3 | 23 | 0 | 15 | 3671 | 7 | 8 | 1 | 4 | 4 | 3 | 2 | 0 | 0 | 0 | 4186 |
| 1997 | 75 | 680.6 | 1 | 7 | 224 | 7 | 53 | 12 | 21 | 1 | 0 | 35 | 0 | 15 | 2461 | 9 | 9 | 1 | 1 | 3 | 2 | 4 | 0 | 4 | 0 | 2870 |
| 1998 | 72 | 650.4 | 0 | 8 | 164 | 16 | 40 | 10 | 9 | 2 | 1 | 34 | 0 | 30 | 3613 | 6 | 7 | 1 | 1 | 2 | 1 | 4 | 0 | 2 | 0 | 3951 |
| 1999 | 90 | 907 | 1 | 8 | 210 | 17 | 155 | 44 | 14 | 5 | 2 | 82 | 1 | 18 | 2817 | 16 | 8 | 0 | 1 | 4 | 2 | 1 | 0 | 0 | 3 | 3409 |
| 2000 | 85 | 933.4 | 1 | 21 | 237 | 14 | 74 | 21 | 11 | 0 | 2 | 30 | 1 | 26 | 3436 | 13 | 11 | 1 | 1 | 2 | 0 | 4 | 3 | 0 | 8 | 3917 |
| 2001 | 90 | 1037 | 0 | 6 | 276 | 9 | 56 | 18 | 32 | 4 | 0 | 50 | 2 | 26 | 3525 | 6 | 12 | 3 | 4 | 0 | 5 | 2 | 4 | 0 | 2 | 4042 |
| 2002 | 82 | 914.1 | 0 | 12 | 265 | 7 | 77 | 8 | 33 | 0 | 0 | 32 | 0 | 21 | 3518 | 8 | 11 | 4 | 2 | 2 | 3 | 1 | 1 | 2 | 5 | 4012 |
| 2003 | 86 | 939.2 | 2 | 6 | 209 | 12 | 39 | 9 | 12 | 4 | 0 | 34 | 1 | 17 | 2591 | 7 | 9 | 2 | 2 | 0 | 5 | 2 | 1 | 0 | 6 | 2970 |
| 2004 | 86 | 1068 | 0 | 7 | 200 | 8 | 58 | 12 | 23 | 0 | 0 | 39 | 0 | 11 | 2539 | 2 | 8 | 0 | 3 | 3 | 1 | 1 | 2 | 2 | 6 | 2925 |
| 2005 | 94 | 1238 | 1 | 28 | 235 | 10 | 82 | 25 | 57 | 2 | 1 | 28 | 2 | 28 | 2667 | 9 | 10 | 3 | 3 | 2 | 3 | 3 | 6 | 1 | 7 | 3213 |
| 2006 | 93 | 1214 | 2 | 11 | 234 | 7 | 61 | 18 | 27 | 1 | 1 | 28 | 0 | 26 | 2918 | 4 | 16 | 1 | 2 | 0 | 9 | 3 | 8 | 0 | 3 | 3380 |
| 2007 | 83 | 1019 | 4 | 8 | 212 | 6 | 62 | 18 | 27 | 1 | 1 | 70 | 0 | 17 | 2141 | 9 | 20 | 3 | 2 | 5 | 8 | 0 | 0 | 1 | 6 | 2621 |
| 2008 | 44 | 493.3 | 0 | 0 | 86 | 1 | 1 | 1 | 2 | 0 | 0 | 3 | 0 | 1 | 1171 | 0 | 2 | 0 | 1 | 0 | 3 | 2 | 3 | 2 | 3 | 1282 |
| 2009 | 40 | 450 | 0 | 0 | 76 | 0 | 6 | 5 | 7 | 0 | 0 | 6 | 0 | 3 | 882 | 0 | 1 | 0 | 0 | 1 | 4 | 1 | 5 | 1 | 1 | 999 |
| 2010 | 46 | 519 | 0 | 0 | 88 | 1 | 1 | 0 | 21 | 0 | 0 | 14 | 0 | 7 | 1160 | 0 | 1 | 1 | 0 | 1 | 1 | 2 | 13 | 0 | 1 | 1312 |
| 2011 | 48 | 556.1 | 1 | 1 | 192 | 5 | 41 | 8 | 17 | 0 | 0 | 45 | 0 | 40 | 2982 | 1 | 4 | 1 | 2 | 2 | 1 | 6 | 13 | 0 | 0 | 3362 |
| TOTALS | 1377 | 14971 | 14 | 157 | 3748 | 158 | 1086 | 282 | 482 | 26 | 11 | 680 | 10 | 352 | 54588 | 104 | 165 | 26 | 38 | 55 | 53 | 40 | 59 | 18 | 51 | 62203 |

TABLE 2

Mount Lorette, spring counts March 01-April 15

| YEAR | DAYS | HRS | TV | OS | BE | NH | SS | CH | NG | BW | SW | RT | FH | RL | GE | AK | ML | GY | PG | PR | UA | UB | UE | UF | UU | TOTAL |
|--------|------|-------|----|----|------|----|-----|----|-----|----|----|-----|----|-----|-------|----|----|----|----|----|----|----|----|----|----|-------|
| 1993 | 38 | 313.8 | 1 | 1 | 159 | 2 | 32 | 12 | 47 | 0 | 0 | 26 | 0 | 4 | 3930 | 0 | 7 | 0 | 2 | 2 | 0 | 1 | 0 | 3 | 0 | 4229 |
| 1994 | 45 | 422.3 | 0 | 1 | 210 | 5 | 14 | 6 | 37 | 0 | 0 | 24 | 1 | 10 | 3949 | 0 | 1 | 2 | 0 | 10 | 2 | 1 | 0 | 0 | 0 | 4273 |
| 1995 | 42 | 401.5 | 0 | 0 | 150 | 1 | 10 | 2 | 41 | 0 | 0 | 19 | 2 | 15 | 4006 | 0 | 8 | 0 | 1 | 3 | 0 | 0 | 0 | 0 | 0 | 4258 |
| 1996 | 44 | 415.7 | 0 | 2 | 226 | 5 | 17 | 3 | 20 | 1 | 0 | 13 | 0 | 7 | 3397 | 0 | 3 | 0 | 0 | 3 | 3 | 1 | 0 | 0 | 0 | 3701 |
| 1997 | 41 | 388.3 | 0 | 0 | 198 | 1 | 7 | 1 | 13 | 0 | 0 | 18 | 0 | 10 | 2269 | 1 | 4 | 1 | 0 | 2 | 2 | 1 | 0 | 1 | 0 | 2529 |
| 1998 | 45 | 394.5 | 0 | 0 | 130 | 2 | 13 | 0 | 7 | 0 | 0 | 15 | 0 | 19 | 3401 | 0 | 5 | 1 | 0 | 2 | 0 | 1 | 0 | 1 | 0 | 3597 |
| 1999 | 44 | 465.8 | 0 | 0 | 175 | 8 | 8 | 6 | 8 | 0 | 0 | 39 | 0 | 14 | 2495 | 0 | 6 | 0 | 0 | 2 | 1 | 1 | 0 | 0 | 1 | 2764 |
| 2000 | 41 | 467.8 | 0 | 0 | 193 | 2 | 14 | 5 | 7 | 0 | 0 | 11 | 0 | 22 | 3050 | 1 | 3 | 0 | 0 | 1 | 0 | 3 | 2 | 0 | 2 | 3316 |
| 2001 | 43 | 504 | 0 | 0 | 198 | 3 | 2 | 2 | 11 | 0 | 0 | 13 | 1 | 17 | 3098 | 1 | 6 | 3 | 0 | 0 | 0 | 0 | 4 | 0 | 1 | 3360 |
| 2002 | 45 | 503.3 | 0 | 0 | 226 | 2 | 22 | 2 | 18 | 0 | 0 | 17 | 0 | 7 | 3252 | 2 | 7 | 3 | 0 | 1 | 3 | 0 | 0 | 2 | 5 | 3569 |
| 2003 | 42 | 482.3 | 0 | 0 | 170 | 3 | 7 | 2 | 10 | 0 | 0 | 20 | 0 | 12 | 2536 | 1 | 4 | 2 | 0 | 0 | 2 | 1 | 1 | 0 | 0 | 2771 |
| 2004 | 44 | 552.5 | 0 | 1 | 163 | 1 | 15 | 2 | 16 | 0 | 0 | 28 | 0 | 9 | 2432 | 0 | 6 | 0 | 2 | 1 | 0 | 1 | 1 | 2 | 3 | 2683 |
| 2005 | 46 | 595.7 | 0 | 0 | 166 | 1 | 11 | 1 | 43 | 0 | 0 | 8 | 0 | 4 | 2570 | 0 | 4 | 3 | 0 | 0 | 0 | 1 | 6 | 0 | 4 | 2822 |
| 2006 | 46 | 594.3 | 0 | 0 | 176 | 3 | 26 | 9 | 19 | 0 | 0 | 18 | 0 | 22 | 2794 | 0 | 9 | 1 | 1 | 0 | 2 | 3 | 8 | 0 | 2 | 3093 |
| 2007 | 46 | 566 | 0 | 0 | 175 | 2 | 16 | 3 | 11 | 0 | 0 | 29 | 0 | 12 | 1972 | 0 | 8 | 3 | 1 | 2 | 0 | 0 | 0 | 0 | 1 | 2235 |
| 2008 | 44 | 493.3 | 0 | 0 | 86 | 1 | 1 | 1 | 2 | 0 | 0 | 3 | 0 | 1 | 1171 | 0 | 2 | 0 | 1 | 0 | 3 | 2 | 3 | 2 | 3 | 1282 |
| 2009 | 40 | 450 | 0 | 0 | 76 | 0 | 6 | 5 | 7 | 0 | 0 | 6 | 0 | 3 | 882 | 0 | 1 | 0 | 0 | 1 | 4 | 1 | 5 | 1 | 1 | 999 |
| 2010 | 46 | 519 | 0 | 0 | 88 | 1 | 1 | 0 | 21 | 0 | 0 | 14 | 0 | 7 | 1160 | 0 | 1 | 1 | 0 | 1 | 1 | 2 | 13 | 0 | 1 | 1312 |
| 2011 | 41 | 468.8 | 1 | 0 | 174 | 3 | 18 | 6 | 14 | 0 | 0 | 29 | 0 | 23 | 2920 | 0 | 3 | 1 | 1 | 2 | 1 | 5 | 12 | 0 | 0 | 3213 |
| TOTALS | 823 | 8999 | 2 | 5 | 3139 | 46 | 240 | 68 | 352 | 1 | 0 | 350 | 4 | 218 | 51284 | 6 | 88 | 21 | 9 | 33 | 24 | 25 | 55 | 12 | 24 | 56006 |

TABLE 3

Mount Lorette, spring counts March 01-April 22 (excluding 2008-2010)

| YEAR | DAYS | HRS | TV | OS | BE | NH | SS | CH | NG | BW | SW | RT | FH | RL | GE | AK | ML | GY | PG | PR | UA | UB | UE | UF | UU | TOTAL | |
|----------|------|-------|--------|-------|-------|-----|------|-----|-------|--------|---------|------|--------|-------|--------|------|-------|-------|-------|-------|-------|-------|-------|--------|--------|--------|--|
| 1993 | 43 | 369.4 | 1 | 3 | 167 | 3 | 37 | 19 | 51 | 0 | 0 | 31 | 0 | 4 | 4124 | 0 | 8 | 0 | 3 | 4 | 0 | 1 | 0 | 3 | 0 | 4459 | |
| 1994 | 52 | 495.9 | 0 | 4 | 218 | 10 | 45 | 18 | 41 | 1 | 0 | 36 | 1 | 20 | 4142 | 0 | 1 | 3 | 0 | 11 | 2 | 1 | 0 | 0 | 0 | 4554 | |
| 1995 | 46 | 459.6 | 0 | 4 | 164 | 1 | 31 | 6 | 44 | 0 | 0 | 32 | 2 | 18 | 4108 | 1 | 11 | 0 | 3 | 6 | 0 | 0 | 0 | 0 | 0 | 4431 | |
| 1996 | 50 | 492.5 | 0 | 4 | 238 | 8 | 28 | 4 | 20 | 1 | 0 | 18 | 0 | 11 | 3543 | 0 | 5 | 0 | 1 | 3 | 3 | 1 | 0 | 0 | 0 | 3888 | |
| 1997 | 48 | 460.3 | 0 | 2 | 212 | 4 | 16 | 5 | 16 | 0 | 0 | 21 | 0 | 12 | 2352 | 2 | 7 | 1 | 0 | 2 | 2 | 1 | 0 | 1 | 0 | 2656 | |
| 1998 | 52 | 458.5 | 0 | 0 | 149 | 6 | 20 | 4 | 7 | 0 | 0 | 21 | 0 | 29 | 3466 | 0 | 7 | 1 | 1 | 2 | 0 | 1 | 0 | 2 | 0 | 3716 | |
| 1999 | 50 | 529.4 | 0 | 0 | 184 | 10 | 9 | 6 | 9 | 0 | 0 | 46 | 0 | 15 | 2565 | 1 | 6 | 0 | 0 | 2 | 1 | 1 | 0 | 0 | 1 | 2856 | |
| 2000 | 48 | 554.6 | 0 | 1 | 204 | 5 | 28 | 7 | 9 | 0 | 0 | 14 | 0 | 24 | 3219 | 5 | 5 | 1 | 0 | 1 | 0 | 3 | 3 | 0 | 4 | 3533 | |
| 2001 | 50 | 586.8 | 0 | 1 | 237 | 4 | 29 | 7 | 25 | 0 | 0 | 30 | 1 | 21 | 3265 | 2 | 8 | 3 | 1 | 0 | 0 | 0 | 4 | 0 | 2 | 3640 | |
| 2002 | 52 | 587.6 | 0 | 1 | 240 | 4 | 32 | 5 | 25 | 0 | 0 | 25 | 0 | 9 | 3405 | 2 | 7 | 3 | 0 | 1 | 3 | 1 | 0 | 2 | 5 | 3770 | |
| 2003 | 49 | 569.8 | 0 | 1 | 184 | 5 | 10 | 4 | 12 | 0 | 0 | 24 | 0 | 14 | 2558 | 1 | 5 | 2 | 0 | 0 | 5 | 1 | 1 | 0 | 3 | 2830 | |
| 2004 | 51 | 646.9 | 0 | 6 | 173 | 1 | 24 | 7 | 20 | 0 | 0 | 32 | 0 | 11 | 2465 | 1 | 8 | 0 | 3 | 2 | 0 | 1 | 2 | 2 | 4 | 2762 | |
| 2005 | 53 | 697.4 | 0 | 1 | 182 | 2 | 16 | 2 | 44 | 0 | 0 | 15 | 0 | 8 | 2594 | 0 | 6 | 3 | 0 | 0 | 1 | 1 | 6 | 0 | 4 | 2885 | |
| 2006 | 53 | 694.3 | 0 | 2 | 190 | 4 | 31 | 10 | 22 | 0 | 0 | 18 | 0 | 24 | 2826 | 0 | 12 | 1 | 1 | 0 | 5 | 3 | 8 | 0 | 3 | 3160 | |
| 2007 | 50 | 622.6 | 0 | 1 | 189 | 3 | 32 | 6 | 19 | 0 | 0 | 45 | 0 | 14 | 2051 | 1 | 13 | 3 | 1 | 2 | 1 | 0 | 0 | 0 | 3 | 2384 | |
| 2008 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2009 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2010 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2011 | 48 | 556.1 | 1 | 1 | 192 | 5 | 41 | 8 | 17 | 0 | 0 | 45 | 0 | 40 | 2982 | 1 | 4 | 1 | 2 | 2 | 1 | 6 | 13 | 0 | 0 | 3362 | |
| T 93-07 | 747 | 8225 | 1 | 31 | 2931 | 70 | 388 | 110 | 364 | 2 | 0 | 408 | 4 | 234 | 46683 | 16 | 109 | 21 | 14 | 36 | 23 | 16 | 24 | 10 | 29 | 51524 | |
| Av 93-07 | 49.8 | 548.4 | 0.1 | 2.1 | 195.4 | 4.7 | 25.9 | 7.3 | 24.3 | 0.1 | 0.0 | 27.2 | 0.3 | 15.6 | 3112.2 | 1.1 | 7.3 | 1.4 | 0.9 | 2.4 | 1.5 | 1.1 | 1.6 | 0.7 | 1.9 | 3434.9 | |
| | -3.6 | 1.4 | 1400.0 | -51.6 | -1.7 | 7.1 | 58.5 | 9.1 | -29.9 | -100.0 | #DIV/0! | 65.4 | -100.0 | 156.4 | -4.2 | -6.3 | -45.0 | -28.6 | 114.3 | -16.7 | -34.8 | 462.5 | 712.5 | -100.0 | -100.0 | -2.1 | |

TABLE 4

Mount Lorette, comparison of spring count periods 1993-2011 (excluding 2008-2010)

| YEAR | DAYS | HRS | TV | OS | BE | NH | SS | CH | NG | BW | SW | RT | FH | RL | GE | AK | ML | GY | PG | PR | UA | UB | UE | UF | UU | TOTAL | |
|---|-------|-------|-------|--------------|-------|--------------|--------------|--------------|-------|-------|---------|--------------|-------|--------------|-------|--------------|--------------|-------|--------------|-------|-------|-------|-------|-------|-------|-------|--|
| A Full counts | 1247 | 13508 | 14 | 157 | 3498 | 156 | 1078 | 276 | 452 | 26 | 11 | 657 | 10 | 341 | 51375 | 104 | 161 | 25 | 37 | 53 | 45 | 35 | 38 | 15 | 46 | 58610 | |
| B March 01-April 15 | 693 | 7537 | 2 | 5 | 2889 | 44 | 232 | 62 | 322 | 1 | 0 | 327 | 4 | 207 | 48071 | 6 | 84 | 20 | 8 | 31 | 16 | 20 | 34 | 9 | 19 | 52413 | |
| C March 01-April 22 | 795 | 8782 | 2 | 32 | 3123 | 75 | 429 | 118 | 381 | 2 | 0 | 453 | 4 | 274 | 49665 | 17 | 113 | 22 | 16 | 38 | 24 | 22 | 37 | 10 | 29 | 54886 | |
| % diff B cf A | 55.6 | 55.8 | 14.3 | 3.2 | 82.6 | 28.2 | 21.5 | 22.5 | 71.2 | 3.8 | 0.0 | 49.8 | 40.0 | 60.7 | 93.6 | 5.8 | 52.2 | 80.0 | 21.6 | 58.5 | 35.6 | 57.1 | 89.5 | 60.0 | 41.3 | 89.4 | |
| % diff C cf A | 63.8 | 65.0 | 14.3 | 20.4 | 89.3 | 48.1 | 39.8 | 42.8 | 84.3 | 7.7 | 0.0 | 68.9 | 40.0 | 80.4 | 96.7 | 16.3 | 70.2 | 88.0 | 43.2 | 71.7 | 53.3 | 62.9 | 97.4 | 66.7 | 63.0 | 93.6 | |
| % diff C cf B | 114.7 | 116.5 | 100.0 | 640.0 | 108.1 | 170.5 | 184.9 | 190.3 | 118.3 | 200.0 | #DIV/0! | 138.5 | 100.0 | 132.4 | 103.3 | 283.3 | 134.5 | 110.0 | 200.0 | 122.6 | 150.0 | 110.0 | 108.8 | 111.1 | 152.6 | 104.7 | |
| Bold numbers indicate species showing a significant increase of at least 30% for the period March 01-April 22 compared to March 01-April 15 | | | | | | | | | | | | | | | | | | | | | | | | | | | |

TABLE 5

Mount Lorette, Alberta, spring 2011

March 01 to April 22 (48 days, 556 hours)

| Date | HRS | TV | OS | BE | NH | SS | CH | NG | BW | SW | RT | FH | RL | GE | AK | ML | GY | PG | PR | UA | UB | UE | UF | UU | TOTAL |
|--------------|----------------------|----------|----------|------------|----------|-----------|----------|-----------|----------|----------|-----------|----------|-----------|-------------|----------|----------|----------|----------|----------|----------|----------|-----------|----------|----------|-------------|
| 2011-03-01 | NO OBSERVATION | | | | | | | | | | | | | | | | | | | | | | | 0 | |
| 2011-03-02 | NO OBSERVATION | | | | | | | | | | | | | | | | | | | | | | | 0 | |
| 2011-03-03 | 10.25 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 |
| 2011-03-04 | NO OBSERVATION | | | | | | | | | | | | | | | | | | | | | | | 0 | |
| 2011-03-05 | 10.67 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2011-03-06 | 11.58 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 |
| 2011-03-07 | 10.5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| 2011-03-08 | 11.25 | 0 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 7 |
| 2011-03-09 | 10.75 | 0 | 0 | 2 | 0 | 0 | 0 | [1] | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4 |
| 2011-03-10 | NO OBSERVATION | | | | | | | | | | | | | | | | | | | | | | | 0 | |
| 2011-03-11 | 11.25 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4 |
| 2011-03-12 | 12 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 73 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 74 |
| 2011-03-13 | 12.33 | 0 | 0 | 13 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 103 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 117 |
| 2011-03-14 | 8.75 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 |
| 2011-03-15 | 11.25 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 58 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 60 |
| 2011-03-16 | 6 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 5 |
| 2011-03-17 | 12.25 | 0 | 0 | 3 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 72 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 76 |
| 2011-03-18 | 11.5 | 1 | 0 | 7 | 0 | 1 | 0 | 2 | 0 | 0 | 0 | 0 | 2 | 200 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 0 | 0 | 0 | 216 |
| 2011-03-19 | 9.5 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 23 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 28 |
| 2011-03-20 | 12 | 0 | 0 | 9 | 0 | 0 | 0 | [1] | 0 | 0 | 0 | 0 | 0 | 106 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 0 | 0 | 118 |
| 2011-03-21 | 12.5 | 0 | 0 | 6 | 0 | 0 | 0 | [2] | 0 | 0 | 0 | 0 | 0 | 36 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 42 |
| 2011-03-22 | 11.5 | 0 | 0 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 217 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 222 |
| 2011-03-23 | 10.25 | 0 | 0 | 9 | 0 | 0 | 0 | [1] | 0 | 0 | 0 | 0 | 0 | 211 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 222 |
| 2011-03-24 | 12.5 | 0 | 0 | 14 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 437 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 452 |
| 2011-03-25 | 11.92 | 0 | 0 | 0 | 0 | 0 | 0 | [2] | 0 | 0 | 0 | 0 | 0 | 10 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 10 |
| 2011-03-26 | 10.25 | 0 | 0 | 17 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 1 | 293 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 0 | 0 | 315 |
| 2011-03-27 | 12.75 | 0 | 0 | 4 | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 1 | 156 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 164 |
| 2011-03-28 | 13.67 | 0 | 0 | 14 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 175 | 0 | 0 | 1 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 193 |
| 2011-03-29 | 13.5 | 0 | 0 | 10 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 318 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 328 |
| 2011-03-30 | 11 | 0 | 0 | 2 | 0 | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 19 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 23 |
| 2011-03-31 | 13.75 | 0 | 0 | 2 | 0 | 3 | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 29 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 36 |
| March | 305.4 | 1 | 0 | 124 | 2 | 5 | 1 | 9 | 0 | 0 | 2 | 0 | 9 | 2554 | 0 | 0 | 1 | 1 | 1 | 0 | 4 | 10 | 0 | 0 | 2724 |
| 2011-04-01 | 11 | 0 | 0 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 5 | 0 | 2 | 30 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 41 |
| 2011-04-02 | NO OBSERVATION | | | | | | | | | | | | | | | | | | | | | | | 0 | |
| 2011-04-03 | 13.83 | 0 | 0 | 9 | 0 | 0 | 0 | 0 | 0 | 0 | 4 | 0 | 1 | 77 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 91 |
| 2011-04-04 | 14 | 0 | 0 | 8 | 1 | 4 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 89 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 104 |
| 2011-04-05 | 11.08 | 0 | 0 | 1 | 0 | 2 | 0 | [1] | 0 | 0 | [1] | 0 | 0 | [1] | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4 |
| 2011-04-06 | 8.5 | 0 | 0 | 1 | 0 | 0 | 1 | 1 | 0 | 0 | 2 | 0 | 3 | 14 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 22 |
| 2011-04-07 | 14 | 0 | 0 | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 5 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 9 |
| 2011-04-08 | 13.5 | 0 | 0 | 7 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 49 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 58 |
| 2011-04-09 | 10 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 7 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 9 |
| 2011-04-10 | 13.83 | 0 | 0 | 5 | 0 | 1 | 1 | 2 | 0 | 0 | [1] | 0 | 0 | 32 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 41 |
| 2011-04-11 | 8.16 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4 |
| 2011-04-12 | 13 | 0 | 0 | 5 | 0 | 2 | 0 | [2] | 0 | 0 | [1] | 0 | 0 | 45 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 53 |
| 2011-04-13 | 11.5 | 0 | 0 | 3 | 0 | 2 | 2 | 2 | 0 | 0 | 7 | 0 | 4 | 10 | 0 | 1 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 33 |
| 2011-04-14 | 10 | 0 | 0 | 4 | 0 | 0 | 0 | [1] | 0 | 0 | 5 | 0 | 2 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 14 |
| 2011-04-15 | 11 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 2 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 6 |
| 2011-04-16 | 11.25 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| 2011-04-17 | 12.5 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 |
| 2011-04-18 | 14 | 0 | 1 | 3 | 1 | 7 | 0 | 1 | 0 | 0 | 1 | 0 | 8 | 10 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 34 |
| 2011-04-19 | 12 | 0 | 0 | 5 | 0 | 7 | 0 | [1] | 0 | 0 | 4 | 0 | 1 | 23 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 40 |
| 2011-04-20 | 12.5 | 0 | 0 | 6 | 0 | 5 | 2 | 1 | 0 | 0 | 7 | 0 | 5 | 25 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 53 |
| 2011-04-21 | 12 | 0 | 0 | 3 | 0 | 2 | 0 | 0 | 0 | 0 | 2 | 0 | 1 | [2] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 8 |
| 2011-04-22 | 13 | 0 | 0 | 1 | 0 | 2 | 0 | 1 | 0 | 0 | 2 | 0 | 1 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 11 |
| April | 250.7 | 0 | 1 | 68 | 3 | 36 | 7 | 8 | 0 | 0 | 43 | 0 | 31 | 428 | 1 | 4 | 0 | 1 | 1 | 1 | 2 | 3 | 0 | 0 | 638 |
| Total | 556.1 | 1 | 0 | 192 | 5 | 41 | 8 | 17 | 0 | 0 | 45 | 0 | 40 | 2982 | 1 | 4 | 1 | 2 | 2 | 1 | 6 | 13 | 0 | 0 | 3362 |
| Date | HRS | TV | OS | BE | NH | SS | CH | NG | BW | SW | RT | FH | RL | GE | AK | ML | GY | PG | PR | UA | UB | UE | UF | UU | TOTAL |
| [] | non migrant/resident | | | | | | | | | | | | | | | | | | | | | | | | |

TABLE 6

Steeles, BC, spring counts 2010-2011

| YEAR | DAYS | HRS | TV | OS | BE | NH | SS | CH | NG | BW | SW | RT | FH | RL | GE | AK | ML | GY | PG | PR | UA | UB | UE | UF | UU | TOTAL |
|--------|------|-------|----|----|-----|----|----|----|----|----|----|----|----|----|-----|----|----|----|----|----|----|----|----|----|----|-------|
| 2010 | 48 | 213.5 | 13 | 2 | 218 | 2 | 7 | 0 | 8 | 0 | 0 | 20 | 0 | 7 | 534 | 2 | 0 | 0 | 1 | 0 | 0 | 0 | 2 | 0 | 0 | 816 |
| 2011 | 28 | 118.5 | 12 | 0 | 147 | 1 | 5 | 0 | 2 | 0 | 0 | 7 | 0 | 2 | 395 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 573 |
| TOTALS | 76 | 332 | 25 | 2 | 365 | 3 | 12 | 0 | 10 | 0 | 0 | 27 | 0 | 9 | 929 | 2 | 0 | 0 | 1 | 0 | 0 | 0 | 4 | 0 | 0 | 1389 |

TABLE 7

Steeple, British Columbia, spring 2011
March 03 to April 18 (28 days, 118.5 hours)

| Date | HRS | TV | OS | BE | NH | SS | CH | NG | BW | SW | RT | FH | RL | GE | AK | ML | GY | PG | PR | UA | UB | UE | UF | UU | TOTAL | SITE | |
|---------------|----------------|-----------|----------|------------|----------|----------|----------|----------|----------|----------|----------|----------|----------|------------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|------------|------|----|
| 2010-03-01 | NO OBSERVATION | | | | | | | | | | | | | | | | | | | | | | | | 0 | | |
| 2010-03-02 | NO OBSERVATION | | | | | | | | | | | | | | | | | | | | | | | | 0 | | |
| 2010-03-03 | 5.5 | 0 | 0 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 9 | SF | |
| 2010-03-04 | 4 | 0 | 0 | 5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 11 | SF |
| 2010-03-05 | 5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | SF | |
| 2010-03-06 | 5 | 0 | 0 | 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 21 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 30 | SF | |
| 2010-03-07 | 4.5 | 0 | 0 | 11 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 21 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 32 | SF | |
| 2010-03-08 | 3.5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | SF | |
| 2010-03-09 | NO OBSERVATION | | | | | | | | | | | | | | | | | | | | | | | | 0 | | |
| 2010-03-10 | NO OBSERVATION | | | | | | | | | | | | | | | | | | | | | | | | 0 | | |
| 2010-03-11 | 5.5 | 0 | 0 | 18 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 33 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 52 | SF | |
| 2010-03-12 | 5.5 | 0 | 0 | 13 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 39 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 52 | SF | |
| 2010-03-13 | 5 | 0 | 0 | 5 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 17 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 23 | SF | |
| 2010-03-14 | 4.5 | 0 | 0 | 8 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 17 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 25 | SF | |
| 2010-03-15 | NO OBSERVATION | | | | | | | | | | | | | | | | | | | | | | | | 0 | | |
| 2010-03-16 | 5 | 0 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 22 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 25 | SF | |
| 2010-03-17 | 4.5 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 6 | SF | |
| 2010-03-18 | 6 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 25 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 26 | SF | |
| 2010-03-19 | NO OBSERVATION | | | | | | | | | | | | | | | | | | | | | | | | 0 | | |
| 2010-03-20 | 6 | 0 | 0 | 4 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 34 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 39 | SF | |
| 2010-03-21 | NO OBSERVATION | | | | | | | | | | | | | | | | | | | | | | | | 0 | | |
| 2010-03-22 | NO OBSERVATION | | | | | | | | | | | | | | | | | | | | | | | | 0 | | |
| 2010-03-23 | 4 | 0 | 0 | 10 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 69 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 80 | SF | |
| 2010-03-24 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | SF |
| 2010-03-25 | 2.5 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 10 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 12 | SF | |
| 2010-03-26 | 4 | 0 | 0 | 25 | 0 | 3 | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 30 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 60 | SF | |
| 2010-03-27 | NO OBSERVATION | | | | | | | | | | | | | | | | | | | | | | | | 0 | | |
| 2010-03-28 | NO OBSERVATION | | | | | | | | | | | | | | | | | | | | | | | | 0 | | |
| 2010-03-29 | NO OBSERVATION | | | | | | | | | | | | | | | | | | | | | | | | 0 | | |
| 2010-03-30 | NO OBSERVATION | | | | | | | | | | | | | | | | | | | | | | | | 0 | | |
| 2010-03-31 | NO OBSERVATION | | | | | | | | | | | | | | | | | | | | | | | | 0 | | |
| March | 83 | 0 | 0 | 118 | 0 | 3 | 0 | 2 | 0 | 0 | 2 | 0 | 1 | 358 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 486 | | |
| 2010-04-01 | NO OBSERVATION | | | | | | | | | | | | | | | | | | | | | | | | 0 | | |
| 2010-04-02 | NO OBSERVATION | | | | | | | | | | | | | | | | | | | | | | | | 0 | | |
| 2010-04-03 | 5.5 | 0 | 0 | 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 19 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 29 | SF | |
| 2010-04-04 | 1 | 3 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 5 | SL | |
| 2010-04-05 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | SF | |
| 2010-04-06 | NO OBSERVATION | | | | | | | | | | | | | | | | | | | | | | | | 0 | | |
| 2010-04-07 | NO OBSERVATION | | | | | | | | | | | | | | | | | | | | | | | | 0 | | |
| 2010-04-08 | 5 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 5 | SF | |
| 2010-04-09 | 3.5 | 0 | 0 | 4 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 10 | SF | |
| 2010-03-10 | 3.5 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | SF | |
| 2010-04-11 | NO OBSERVATION | | | | | | | | | | | | | | | | | | | | | | | | 0 | | |
| 2010-04-12 | 4 | 0 | 0 | 4 | 0 | 1 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 10 | SF | |
| 2010-04-13 | 3 | 9 | 0 | 7 | 0 | 0 | 0 | 0 | 0 | 0 | 4 | 0 | 0 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 24 | SF | |
| 2010-04-14 | NO OBSERVATION | | | | | | | | | | | | | | | | | | | | | | | | 0 | | |
| 2010-04-15 | NO OBSERVATION | | | | | | | | | | | | | | | | | | | | | | | | 0 | | |
| 2010-04-16 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | SF | |
| 2010-04-17 | NO OBSERVATION | | | | | | | | | | | | | | | | | | | | | | | | 0 | | |
| 2010-04-18 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | SF | |
| April | 35.5 | 12 | 0 | 29 | 1 | 2 | 0 | 0 | 0 | 0 | 5 | 0 | 1 | 37 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 87 | | |
| TOTALS | 118.5 | 12 | 0 | 147 | 1 | 5 | 0 | 2 | 0 | 0 | 7 | 0 | 2 | 395 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 573 | | |
| Date | HRS | TV | OS | BE | NH | SS | CH | NG | BW | SW | RT | FH | RL | GE | AK | ML | GY | PG | PR | UA | UB | UE | UF | UU | TOTAL | SITE | |

SL=South Lakit site (1 day)
SF=Scarface (Bill Nye) site (27 days)