

MOUNT LORETTE, BEAVER MINES and STEEPLES RAPTOR COUNTS

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PETER SHERRINGTON

Introduction 2019 is the 28th consecutive year that a spring raptor count has been conducted at the Mount Lorette site. In 1992 an eight-day reconnaissance count starting on March 20 at the site established that Golden Eagles moved to the northwest in significant numbers through the Rocky Mountain Front Ranges. Most of the birds moved along the Fisher Range, crossing the Kananaskis Valley to Mount Lorette before continuing their migration to the northwest. A 48 day (393 hour) count at the site in the spring of 1993 yielded 4140 migrating Golden Eagles and the following year a seventy day (649 hour) count produced 4213 birds which remains the highest spring count ever for the species at Mount Lorette. Between 1994 and 2007 extensive spring counts averaging 82 days (897 hours) were conducted at the site with a maximum count in 2005 of 94 days (1238 hours). Despite the steady increase in observer effort during this period, the number of migrating Golden Eagles counted has steadily and significantly decreased since 1995. In 2006 RMERF conducted its first complete fall count at the Piitaistakis-South Livingstone site near the Crowsnest Pass in SW Alberta and in 2008-10 also conducted full spring counts there. During this period extensive comparative counts were made at Mount Lorette between March 1 and April 15 which is coincident with the height of the Golden Eagle migration and during which period over 90% of the population moves north. Observer effort from 2008-10 at Mount Lorette averaged 43 days (487 hours) with a maximum count of 46 days (519 hours) in 2010 when no days were lost to inclement weather. In 2011 and subsequent years the count period was extended by 1 week (March 1 to April 22) and we will use the same period this spring.

Last year's (2018) spring count saw a combined species passage of 2715 birds that included a Golden Eagle count of 2390. The March combined species count of 1794 represented 66.1% of the total count and was 18.1% below average, while April's count of 596 was 34.9% above

average and represented 33.9% of the count. The maximum Golden Eagle count was 307 on March 25 and 6 other days had counts exceeding 100 birds. Bald Eagles (216) and Sharp-shinned Hawks (25) were close to average counts; 4 species were above average: Osprey (3), Broad-winged Hawk (3), American Kestrel (2) and Gyrfalcon (7), while 9 species occurred in below-average numbers: Northern Harrier (1), Cooper’s Hawk (2), Northern Goshawk (11), Red-tailed Hawk (30), Rough-legged Hawk (16), Golden Eagle (2390), Merlin (3), Peregrine Falcon (1) and Prairie Falcon (2). The combined species median passage date was March 26, 4 days later than average.

Last year saw the third complete (55 days) count at Beaver Mines which produced a record 2340 migrants of 18 species: 1 Turkey Vulture, 3 Ospreys, 355 Bald Eagles, 24 Northern Harriers, 46 Sharp-shinned Hawks, 6 Cooper’s Hawks, 27 Northern Goshawks, 13 Broad-winged Hawks, 2 Swainson’s Hawks, 155 Red-tailed Hawks, 6 Ferruginous Hawks, 101 Rough-legged Hawks, 1533 Golden Eagles, 10 American Kestrels, 14 Merlins, 9 Gyrfalcons, 10 Peregrine Falcons, and 3 Prairie Falcons. This year will be the fifth consecutive count at the site which is conducted from Peter Sherrington’s house in Beaver Mines.

Vance Mattson’s 2018 40-day reconnaissance count at the Steeples site on the western flanks of the Rocky Mountains near Cranbrook, BC produced a record 891 birds of 10 species. This year will be the ninth consecutive count at the site.

Rosemary Power is organizing the Mount Lorette count and welcomes visitors to the site. If you are interested in volunteering as a “Sky-sweeper” (no previous experience needed: just good eyes and binoculars) or as an Observer please contact Rosemary at 403-707-6117 (rosemarypower1010@gmail.com). Details of how to find the site and other useful information can be found on our website, www.eaglewatch.ca. Generally the best time to see migrating eagles is in the afternoon, and the chart below gives an indication of the dates when other raptors are expected to be moving at the site.

SUMMARY OF RAPTOR SPECIES SPRING OCCURRENCES, MOUNT LORETTE (March 1-April 22, 1993-2017)			
species	average first occurrence	earliest first occurrence	average species median passage date
TUVU	3 records of 4 birds: 18 and 31 March, 10 April	18 March	n/a
OSPR	17 April	9 April	n/a

BAEA	3 March	1 March	28 March
NOHA	2 April	3 March	12 April
SSHA	23 March	2 March	13 April
COHA	1 April	16 March	14 April
NOGO	12 March	1 March	31 March
BWHA	5 records of 9 birds: March 31 to 24 April	n/a	n/a
SWHA	2 birds on 15 April 2017	15 April	n/a
RTHA	21 March	9 March	10 April
FEHA	3 records of 4 birds: 6, 9 and 15 April	6 April	n/a
RLHA	20 March	2 March	7 April
GOEA	2 March	1 March	22 March
AMKE	15 April	4 April	n/a
MERL	20 March	6 March	5 April
GYRF	24 March	6 March	n/a
PEFA	4 April	15 March	n/a
PRFA	28 March	7 March	n/a

Friday, March 1 Mount Lorette (Caroline Lambert) NO OBSERVATION (weather). Snow fell until early afternoon, but the mountains remained obscured all day. The temperature was -16C to -18C and winds were moderate ENE-NE all day.

Friday, March 1 Beaver Mines (Peter Sherrington) NO OBSERVATION (weather). Light snow fell for most of the day with an accumulation of 16 cm. The ridge was obscured until 1800 when the snow finally stopped. The temperature was -15C at 0800 but fell throughout the day to -23C at 1800 with moderate E to ENE winds up to 30 km/h giving wind chill temperatures of -31C to -33C after 1100. Clear skies are forecast for tomorrow.

Friday, March 1 Steeples (Vance Mattson) NO OBSERVATION (Weather). Light snow fell for most of the day and the mountains were fully obscured.

Saturday, March 2 Mount Lorette [Day 1] 0930-1145 Mount Allan viewpoint, 1155-1510 Hay Meadow, 1545-1720 Mount Allan viewpoint (Blake Weis). The temperature at 0930 was -30C and the high at 1700 was -13C. Ground winds were N-NE all day, 0-5 km/h in the morning and 0-10 gusting to 20 km/h in the afternoon that produced wind-chill values close to -40C. Because of this Blake wisely spent the start and end of the day watching from his car at the Mount Allan viewpoint on highway 40. The sky was essentially cloudless with up to 10% cumulus developing close to ridges which were clear all day. Not surprisingly no migrant raptors were seen but a resident subadult Bald Eagle flew low to the south above the Kananaskis River at 1500. Despite the conditions a good variety of other bird species were noted comprising 1 female Common Merganser on the river, 1 male Hairy Woodpecker, 3 Common Ravens, 2 Mountain Chickadees, 3 Boreal Chickadees, 1 Golden-crowned Kinglet, 1 Brown Creeper, 2 Pine Grosbeaks (heard), 1 Common Redpoll and 10 White-winged Crossbills.

7.58 hours TOTAL 0

Saturday, March 2 Beaver Mines [Day 1] 0730-1815 (Peter Sherrington, assisted by Hilary Atkinson). The temperature at 0730 was -35C (wind-chill of -46C), the high was -24C at 1500 and 1600 and at 1815 it was -30C. Winds were light all day, W-NW to 1400 and E-ESE thereafter, and it was cloudless all day apart from traces of cumulus cloud to the SE. Two migrant raptors were seen: a juvenile Bald Eagle flapped low towards the north at 1201, and at 1611 a juvenile Golden Eagle also flapped to the north after perching atop a Douglas Fir for 50 minutes near the top of the ridge. Other birds seen were 6 Downy Woodpeckers, 1 male Red-shafted Flicker, 8 Blue Jays, 4 Black-billed Magpies, 42 Common Ravens most of which flew high towards the SW to roost in the late afternoon, 8 Black-capped Chickadees, 32 Evening Grosbeaks, 17 Common Redpolls, 8 Pine Siskins and 7 Dark-eyed Juncos (3 *hyemalis*, 1 *cismontanus* and 3 *montanus*).

10.75 hours BAEA 1, GOEA 1 TOTAL 2

Saturday, March 2 Steeples [Day 1] 1230-1630 (Vance Mattson). The temperature was -12C but it was calm and sunny with 20-30% cumulus cloud cover. There was 38 cm of snow at the site which made accessing the site challenging. No migrants were seen but a resident adult Golden Eagle glided north along the ridge and then west above the valley at 1310.

4 hours TOTAL 0

Sunday, March 3 Mount Lorette [Day 2] 0950-1805 (Bill Wilson, assisted by Lori Anderson). The starting temperature was -23C, the high was -11C at 1500 and it was -16C at the end of observation. Ground winds were E-ESE 2-8 km/h to 1200, NNW-NNE 5-14 to 1700 after which they were W 2-8 km/h and ridge winds were probably mainly moderate NW although cloudless skies all day made them difficult to determine. The only migrant was an adult Bald Eagle that flapped and glided to the north against the face of the Fisher Range at 1632. Other birds seen were 1 Black-billed Magpie, 2 Common Ravens, 2 Mountain Chickadees, 2 Common Redpolls and 5 White-winged Crossbills. There were 5 visitors to the site.

8.25 hours (15.83) BAEA 1 (1) TOTAL 1 (1)

Sunday, March 3 Beaver Mines [Day 2] 0730-1830 (Peter Sherrington, assisted by Hilary Atkinson). It was another very cold day with a temperature at 0800 of -34C (wind chill -46C), a high of -20C from 1400 to 1700 and -23C at 1830. Winds were W 15 km/h to 0900 then light and variable for the rest of the day. The sky was completely cloudless all day. The only migrant raptor was a dark morph Rough-legged Hawk that was initially seen feeding on a snow bank from where it flew low to the north at 1226. A non-migrant juvenile Bald Eagle flew to the SW at 1147 and an adult briefly perched on the ridge at 1815 before flying low behind the ridge presumably to roost for the night. Other birds seen were 6 Downy Woodpeckers, 2 Red-shafted Flickers (male and female), 10 Blue Jays, 9 Black-billed Magpies, a flock of 9 American Crows, 92 Common Ravens 77 of which flew high towards the SW to roost between 1500 and 1756, 7 Black-capped Chickadees, 3 Mountain Chickadees, 12 Bohemian Waxwings, 29 Evening Grosbeaks, 12 Common Redpolls, 40 Pine Siskins and 8 Dark-eyed Juncos (4 *hyemalis*, 1 *cismontanus* and 3 *montanus*).

11 hours (21.75) RLHA 1 (1) TOTAL 1 (3)

Sunday, March 3 Steeples [Day 2] 1230-1600 (Vance Mattson). The temperature was -12C that warmed to -9C under cloudless sunny skies, and it was calm. No migrants were seen, but a

juvenile Golden Eagle moved south along the ridge, perched briefly and continued to the south after being harassed by a Clark's Nutcracker.

3.5 hours (7.5) TOTAL 0 (0)

Monday, March 4 Mount Lorette [Day 3] 0955-1745 (George Halmazna, assisted by Dan Parliament). The temperature was -19C at 0800, the high was a balmy -2C at 1500 and it was -3C at the end of observation. It was essentially calm during the morning but winds became E 2-10 km/h to 1500 after which they were NE 3-4 km/h for the rest of the day. Upper winds were probably also light but the direction could not be determined as the sky was again cloudless all day. No migrants were seen and the only raptor recorded was a resident adult Northern Goshawk at 1032. Other birds recorded were 1 American Three-toed Woodpecker, 2 Canada Jays, 3 Common Ravens, 2 Black-capped Chickadees, 4 Mountain Chickadees, 2 Red-breasted Nuthatches, 1 American Dipper and 10 Pine Siskins. The highlight of the day, however, was a Grey Wolf that crossed the Kananaskis River towards the east, just north of the site at 1625, and 2 Bighorn Sheep were also seen on Mount Allan. There were 5 visitors to the site today.

7.83 hours (23.66) TOTAL 0 (1)

Monday, March 4 Beaver Mines [Day 3] 0730-1845 (Peter Sherrington, assisted by Hilary Atkinson). The temperature at 0730 was -27C, but rose to a high of -8C at 1300 and 1400 and was -16C at 1845. Winds in the morning were W-WNW 10-20 km/h but were light and variable in the afternoon. It was again completely cloudless all day. No migrant raptors were seen but a juvenile Golden Eagle perched on a pole to the NE of the ridge in the late morning and at 1134 an adult made a low-level, low-intensity display flight near the perched bird before flying off to the NE. The juvenile also flew to the NE at 1146. What was probably the same adult bird flew from the top of the ridge to the SE at 1236. An adult Bald Eagle flew low along the valley towards the SW at 1813. Other birds seen were 4 Downy Woodpeckers, 2 Red-shafted Flickers, 13 Blue Jays, 4 Clark's Nutcrackers, 5 Black-billed Magpies, a flock of 9 American Crows, 32 Common Ravens with only 26 flying high towards the SW to roost between 1600 and 1820, 6 Black-capped Chickadees, 6 Mountain Chickadees, 6 Evening Grosbeaks, 12 Common Redpolls, 26 Pine Siskins and 7 Dark-eyed Juncos (3 *hyemalis*, 1 *cismontanus* and 3 *montanus*). As yesterday the flock of American Crows flew high from the NE, circled high above the Big Hill for several minutes before descending to the trees at the top of the hill to roost at 1730, exactly the same time as yesterday!

11.25 hours (33) TOTAL 0 (3)

Monday, March 4 Steeples (Vance Mattson). NO OBSERVATION. Because of teaching commitments Vance will generally be unable to observe on Mondays and Wednesdays this season.

Tuesday, March 5 Mount Lorette [Day 4] 0830-1745 (Blake Weis, assisted by Katherine Peterson). Most of the day was spent in the Hay Meadow but for the last half-hour observation was from the Mount Allan viewpoint. The starting temperature was -19C the high was -6C from 1300 to the end of observation. Ground winds were SW 0-3 gusting 10 km/h to 1100, then variable 0-5 km/h to 1300 and finally NNW-NE 5-10 gusting to 28 km/h for the rest of the day. Ridge winds probably reflected the ground winds but were difficult to assess as the sky was again cloudless all day with traces of cirrus developing after 1500. No migrant or resident raptors were seen, but other birds present were 6 Canada Jays, 1 Black-billed Magpie, 8 Common Ravens, 2 Black-capped Chickadees, 1 Mountain Chickadee, 2 Boreal Chickadees, 2 Brown Creepers, 2 Common Redpolls and 1 Pine Siskin. Ten Bighorn Sheep were seen on Olympic Summit, and there were 9 visitors to the site.

9.25 hours (32.91) TOTAL 0 (1)

Tuesday, March 5 Beaver Mines [Day 4] 0730-1830 (Peter Sherrington, assisted by Hilary Atkinson). The temperature at 0730 was -20C the high at 1400 was -6.5C and it was -13C at 1830. Winds were generally light all day, WNW to 1300 and mainly E-SE for the rest of the day. It was cloudless in the morning after which cirrus and altostratus cloud developed to the south which gradually increased during the afternoon and reached 100% at 1700 before breaking to 70% altocumulus at 1830. Despite the excellent observing conditions the light winds again proved inimical to raptor migration and once again none were seen. An adult Bald Eagle that perched in the morning for an hour and a half on a Douglas Fir on the NE flank of the ridge was probably the same bird that was seen yesterday at 1813, and was seen again perched in a cottonwood at the SW end of Beaver Mines at 1615 before flying low to the NE at 1638. A resident adult Golden Eagle soared briefly above the Big Hill at 1112 before perching near the summit, and was not seen again. The flock of 9 American Crows today appeared from the NE at 1746 and for 14 minutes moved high above the Hill in a tight group moving repeatedly to the SW then back to the NE. This "dance" was repeated about a dozen times with each leg becoming progressively shorter until they finally descended vertically to roost in trees on the summit at 1800. Other birds seen were 5 Canada Geese, the first of the season, that flew above the valley to the SW at 1744, 4 Downy Woodpeckers, 1 Hairy Woodpecker, 6 Blue Jays, 5 Black-billed Magpies, 47 Common Ravens of which 40 flew high towards the SW to roost between 1700 and 1804, 8 Black-capped Chickadees, 6 Mountain Chickadees, 12 Evening Grosbeaks, 10 Common Redpolls, 17 Pine Siskins and 5 Dark-eyed Juncos (3 *hyemalis* and 2 *montanus*).

11 hours (44) TOTAL 0 (3)

Tuesday, March 5 Steeples [Day 3] 1300-1630 (Vance Mattson). The temperature reached -2C under sunny calm conditions with 30-50% thin altostratus and altocumulus cloud cover. No migrants were seen, and an adult Golden Eagle that soared above the flank of Mount Bill Nye and which later moved to the north above the ridge was considered to be a resident.

3.5 hours (11) TOTAL 0 (0)

Wednesday, March 6 Mount Lorette [Day 5] 0750-1740 (Caroline Lambert, assisted by Rosemary Power). The temperature at 0750 was -24C, the high at 1500 was -6C and it was -9C at the end of observation. Ground winds were light and variable in the morning and NE-N 5-10 gusting 20 km/h throughout the afternoon and ridge winds were probably moderate NE. Cloud cover was 80-90% cirrostratus and altostratus to noon when it quickly cleared to 10% after which it steadily increased throughout the afternoon reaching 60% cumulus and cirrostratus at 1400 and 100% by 1700. The ridges were clear all day but no migrant or resident raptors were seen. Other bird species in the area were 1 Hairy Woodpecker, 6 Canada Jays, 4 Black-capped Chickadees, 4 Mountain Chickadees, 3 Boreal Chickadees and 8 White-winged Crossbills. Five visitors made it to the site today.

9.83 hours (42.74) TOTAL 0 (1)

Wednesday, March 6 Beaver Mines [Day 5] 0730-1830 (Peter Sherrington, assisted by Hilary Atkinson). The temperature at 0730 was -17C, the high was -12C (1100-1500) and it was -14.5C at 1830. Winds were again mainly light, W-NE to 1300 and then E-ESE for the rest of the day. Cloud cover was 100% stratus for most of the day that produced light to moderate snow and occasional freezing rain, apart from 1340-1410 when the snow stopped and cloud cover was briefly 100% altostratus and cumulus with small patches of blue sky. Once again migration conditions were poor and the only migrant raptor was a light morph Rough-legged Hawk at 1716. At 1747 a non-migrant juvenile Bald Eagle flapped low from the NE and roosted in a tree low on the NE flank of the ridge. Other birds seen were 2 Rock Pigeons, 4 Downy Woodpeckers, 15 Blue Jays, 17 Black-billed Magpies, 51 Common Ravens, 48 of which flew high towards the SW to roost between 1646 and 1759, 8 Black-capped Chickadees, 3 Mountain Chickadees, 7 Bohemian Waxwings, 40 Evening Grosbeaks, 14 Common Redpolls, 60 Pine Siskins and 8 Dark-eyed Juncos (3 *hyemalis*, 2 *cismontanus* and 3 *montanus*).

11 hours (55) RLHA 1 (2) TOTAL 1 (4)

Wednesday, March 6 Steeples (Vance Mattson). NO OBSERVATION.

Thursday, March 7 Mount Lorette [Day 6] 0750-1740 (Blake Weis, assisted by Lori Anderson). The starting temperature was -11C, the high was 2C (1400-1600) and it was -1C at

the end of observation. Ground winds were W-SW 0-5 km/h to 1000, 5-10 gusting 20 km/h to 1400 then 5-10 gusting to 33 km/h for the rest of the day. Ridge winds were W-SW all day, moderate to 1000, moderate to strong to 1400 and strong thereafter. Cloud cover was altostratus, altocumulus and cumulus all day, initially 50%, 70% from 1100 to 1300, 40% at 1500 and 70% after 1600. There were persistent light snow flurries after 1100 but the eastern ridges were only 10% obscured between 1300 and 1400, and the west 20% obscured after 1700. The only migrant raptor was an adult Bald Eagle that flew north from the Fisher Range at 1548, and a resident unaged Northern Goshawk was seen over Hummingbird Hill at 1640. Other birds seen were a single Canada Goose at Lorette Ponds, a female American Three-toed Woodpecker at the parking area, 2 Canada Jays, 1 Black-billed Magpie, 8 Common Ravens, 6 Black-capped Chickadees, 4 Mountain Chickadees, 4 Boreal Chickadees, 2 Red-breasted Nuthatches, 2 Common Redpolls and 15 White-winged Crossbills. Four visitors made it to the site.

9.67 hours (52.41) BAEA 1 (2) TOTAL 1 (2)

Thursday, March 7 Beaver Mines [Day 6] 0700-1815 (Peter Sherrington, assisted by Hilary Atkinson). At 0700 the temperature was -14C, the high was 1C at 1100 and was 0.5C until 1300, which is the first time the temperature has risen above freezing here for 33 days, and it was -4C at 1815. Winds were W-WSW all day, light until 1000 then 30-45 gusting 50-65 for the rest of the day. Cloud cover was initially 80% altocumulus and cumulus that gradually reduced to 20% cumulus at 1200 and 1300. Light snow flurries started at 1100 but between 1315 and 1445 heavy snow swept from the SW and obscured the ridge after which cloud cover varied between 10 and 50% cumulus and altocumulus for the rest of the day. The Continental Divide to the SW was completely obscured all day. There was finally a slow but persistent raptor migration of 11 birds between 1022 and 1724 comprising 4 adult Bald Eagles, 1 light morph Rough-legged Hawk and 6 adult Golden Eagles with all birds gliding high to the NW or N from the Big Hill. Other birds seen were 2 Canada Geese that flew to the SW at 1702, 9 Rock Pigeons, 3 Downy Woodpeckers, 1 Hairy Woodpecker, 6 Blue Jays, 2 Black-billed Magpies, 28 Common Ravens, that included a meagre roosting movement of 17 birds between 1540 and 1615, 4 Black-capped Chickadees, 4 Mountain Chickadees, 9 Evening Grosbeaks, 16 Common Redpolls, 50 Pine Siskins and 6 Dark-eyed Juncos (3 *hyemalis* and 3 *montanus*).

11.25 hours (66.25) BAEA 4 (5), RLHA 1 (3), GOEA 6 (7) TOTAL 11 (15)

Thursday, March 7 Steeples [Day 4] 1400-1630 (Vance Mattson). The temperature was 3C, winds were strong S and 60-80% cumulus cloud cover provided partly sunny conditions. No migrant or resident raptors were seen.

2.5 hours (13.5) TOTAL 0 (0)

Friday, March 8 Mount Lorette [Day 7] 0930-1815 (Caroline Lambert, assisted by Rachel McKay). As all the ridges were obscured with the exception of Mount Lorette the observers remained at Barrier Lake to the north of the site until 1200 before moving to the Hay Meadow when clearing occurred. The temperature at 0930 was -5C, the high was 1C between 1400 and 1600 and it was -3C at the end of observation. Winds were W all day, 30-40 km/h at Barrier Lake and 5-10 gusting 20 km/h at Hay Meadow, while ridge winds were strong W all day. Cloud cover was 100% stratus and altostratus to 1600 after which it reduced to 70%, but apart from light snow flurries at Barrier Lake there was no precipitation. In the afternoon the east ridges were obscured 20% of the time and the west was largely obscured only reducing to 20% at 1800. The only migrants seen were 2 adult Bald Eagles that flew to the north above the river, one at 1405 and the second at 1740. Twenty-five Bohemian Waxwings were seen at Barrier Lake, and other birds seen at Hay Meadow were 4 Common Ravens, 4 Black-capped Chickadees, 2 Boreal Chickadees, 1 American Dipper and 50 Common Redpolls. Two visitors were at the site today.

8.75 hours (61.16) BAEA 2 (4) TOTAL 2 (4)

Friday, March 8 Beaver Mines [Day 7] 0700-0910, 1000-1815 (Peter Sherrington, assisted by Hilary Atkinson); 0910-1000 (Gord Petersen). The temperature at 0700 was -6C, the high was -1C between 1400 and 1600 and it was -3C at 1815. Winds were WSW-W all day 20-30 gusting to 55 km/h to 1500 and 20-30 km/h for the rest of the day. It was cloudless all day with only traces of cumulus cloud to the S and SW. There was again a slow but steady eagle movement between 0833 and 1718 of 16 birds comprising 4 adult Bald Eagles and 12 adult Golden Eagles all of which glided high to the N or NW. At 0745 a resident adult Golden Eagle greeted the sunny day by displaying low above the hill and the pair together with a resident juvenile bird were seen on 5 further occasions during the day. Other birds seen were 11 Rock Pigeons, 5 Downy Woodpeckers, 9 Blue Jays, 34 Common Ravens, with no obvious roosting movement, 6 Black-capped Chickadees, 3 Mountain Chickadees, 25 Evening Grosbeaks, 13 Common Redpolls, 20 White-winged Crossbills. 34 Pine Siskins and 6 Dark-eyed Juncos (3 *hyemalis* and 3 *montanus*).

11.25 (77.5) BAEA 4 (9), GOEA 12 (19) TOTAL 16 (31)

Friday, March 8 Steeples [Day 5] 1200-1715 (Vance Mattson). The temperature was 3C, winds were W light to moderate and cloud cover was 60-80% cumulus that produced periods of sunshine. Three adult migrant Bald Eagles seen between 1352 and 1409 were the first migrants recorded at the site this season. The resident juvenile Golden Eagle was seen on two occasions including a period of extended soaring at 1200, and a single resident adult was seen twice, once perching relatively low at 1430.

5.25 (18.75) BAEA 3 (3) TOTAL 3 (3)

Saturday, March 9 Mount Lorette [Day 8] 0745-1800 (Blake Weis, assisted by Cliff Hansen). At the start the temperature was -8C, the high was 1C at 1500 and it was -2C at 1800. Ground winds were SW 0-5 km/h to 1000 after which they were W-SW 0-5 gusting 12-25 km/h for the rest of the day; ridge winds were light to moderate WSW to 1300, moderate to 1600 after which they were moderate WNW. Cloud cover was a mix of 30-70% altocumulus, cirrus, cirrocumulus and cumulus all day with the exception of 1500 when it reached 80% and all ridges were clear. Despite these favourable migration and observing conditions only 3 migrant raptors were seen, although the total was the highest for the season so far! At 1224 an adult Bald Eagle soared over Hummingbird plume Hill, glided to Mount Lorette and on to the NW, at 1410 an adult Golden Eagle crossed the valley from the northern end of the Fisher Range to Mount Lorette and on to the NW, and at 1426 a juvenile Bald Eagle flew above the valley towards the north. Other birds in the area were 1 drumming Hairy Woodpecker, 4 Canada Jays, 1 Black-billed Magpie, 7 Common Ravens, 6 Black-capped Chickadees, 4 Mountain Chickadees, 3 Boreal Chickadees, 2 Red-breasted Nuthatches, 1 Brown Creeper, 35 Common Redpolls, 24 White-winged Crossbills and 1 Pine Siskin. The sunny conditions produced a season high 28 visitors at the site.

10.25 hours (71.41) BAEA 2 (6), GOEA 1 (1) TOTAL 3 (7)

Saturday, March 9 Beaver Mines [Day 8] 0700-1830 (Peter Sherrington, assisted by Hilary Atkinson). The temperature at 0700 was -6C, the high was briefly 0.5C at 1400 and it was -4C at 1830. Winds were WNW-W 10-15 km/h to 1100 and mainly WSW 5-20 km/h for the rest of the day. Cloud cover was 100% stratocumulus and altostratus to 1100 that briefly produced light snow around 0900, but after 1200 mainly sunny conditions prevailed with 30-70% cumulus cloud cover to 1800 when it became 100% cirrus, cirrocumulus and altocumulus that quickly thinned to 20% by 1830. Despite these apparently favourable conditions only 7 migrant raptors were seen between 1120 and 1738 that comprised 4 adult Bald Eagles, 1 light morph Rough-legged Hawk and 2 adult Golden Eagles. Three of the Bald Eagles moved between 1532 and 1552. The resident pair of Golden Eagles soared briefly above the ridge at 1230. Other birds seen were a tight flock of 23 Canada Geese that flew low to the SW at 1814, 8 Rock Pigeons, 3 Downy Woodpeckers, 1 Northern [Red-shafted] Flicker, 10 Blue Jays, 26 Common Ravens, with again no obvious evening roosting movement, 6 Black-capped Chickadees, 4 Mountain Chickadees, 31 Evening Grosbeaks, 4 Common Redpolls, 59 Pine Siskins and 6 Dark-eyed Juncos (3 *hyemalis* and 3 *montanus*).

11.5 hours (89) BAEA 4 (13), RLHA 1 (4), GOEA 2 (21) TOTAL 7 (38)

Saturday, March 9 Steeples [Day 6] 1200-1730 (Vance Mattson). The temperature at 1200 was -1C and rose to a high of 5C, conditions were calm and 30-50% cumulus cloud cover provided mainly sunny conditions and clear ridges. A season high total of 13 migrant raptors were seen

between 1215 and 1609 comprising 8 Bald Eagles (5a, 3j) and 5 adult Golden Eagles. Eight eagles moved before 1300 after which migration became more sporadic. All birds appeared over the flank and in some cases over the peak of Mount Bill Nye with some birds soaring for extended periods before gliding to the north. A resident juvenile Golden Eagle hunted along the ridge at 1317 and resident adult Golden Eagles were seen on 2 occasions.

5.5 hours (24.25) BAEA 8 (11), GOEA 5 (5) TOTAL 13 (16)

NOTE: TIME CHANGE FROM MOUNTAIN STANDARD TIME TO MOUNTAIN DAYLIGHT TIME (+ 1 HOUR)

Sunday, March 10 Mount Lorette [Day 9] 0755-1935 (Bill Wilson, assisted by Lori Anderson). The temperature at 0755 was -19C, the high was 3C at 1600 and 1700 and it was -1C at 1935. Ground winds were light (0-5 km/h) and variable to 1100, then 0-6 gusting 20 km/h to 1400 after which they were SW 5-20 gusting to 36 km/h. Ridge winds were SW moderate to strong after 1500 but could not be assessed earlier as it was completely cloudless, but after 1500 cirrostratus cloud appeared that gradually increased to 100% after 1800. A season high total of 11 migrants were recorded between 1446 and 1733 comprising 4 Bald Eagles (3a, 1j) and 7 adult Golden Eagles. Eight eagles moved between 1600 and 1800 and all birds glided high to the NW from the Fisher Range to Mount Lorette. Other birds seen were 2 Canada Jays, 1 Black-billed Magpie, 52 Common Ravens, most of which moved over Mount Lorette to roost in the late afternoon, 2 Black-capped Chickadees, 1 Mountain Chickadee, 1 Red-breasted Nuthatch, 1 American Dipper, 6 Common Redpolls and 30 White-winged Crossbills. The highest count of the day, however, was a season high total of 64 visitors at the site.

11.5 hours (82.91) BAEA 4 (10), GOEA 7 (8) TOTAL 11 (18)

Sunday, March 10 Beaver Mines [Day 9] 0800-1900 (Peter Sherrington, assisted by Hilary Atkinson). The temperature at 0800 was -6C, the high was 2C at 1600 and it was -1C at 1900. Winds were W-WSW all day 30-40 gusting to 60 km/h and it was completely cloudless all day with a trace of cirrus only appearing at 1900. A disappointing total of 6 raptors were recorded between 1026 and 1713, 4 of which occurred before 1138. The count was 1 adult Bald Eagle, 1u Rough-legged Hawk and 4 adult Golden Eagles. A non-migrant subadult Bald Eagle also hunted low above the ridge at 1843. Numbers of other birds were also down and comprised 13 Rock Pigeons, 5 Downy Woodpeckers, 10 Blue Jays, 1 Black-billed Magpie, 15 Common Ravens, 6 Black-capped Chickadees, 2 Mountain Chickadees, 10 Evening Grosbeaks, 15 Common Redpolls, 39 Pine Siskins and 10 Dark-eyed Juncos (6 *hyemalis* and 4 *montanus*).

11 hours (100) BAEA 1 (14), RLHA 1 (5), GOEA 4 (25) TOTAL 6 (44)

Sunday, March 10 Steeples [Day 7] 1200-1830 (Vance Mattson). The temperature reached a high of 3C from a low of -4C at 1200 and it was calm and cloudless all day. A total of 8 migrants were seen between 1345 and 1751 and, with the exception of a single adult Bald Eagle at 1538, all were adult Golden Eagles. Three resident Golden Eagles (2a, 1j) were seen on 3 occasions, and a non-migrant adult Bald Eagle moved south along the ridge at 1531.

6.5 hours (30.75) BAEA 1 (12), GOEA 7 (12) TOTAL 8 (24)

Monday, March 11 Mount Lorette [Day 10] 0820-1900 (Blake Weis assisted by Dan Parliament). It was the warmest day so far this season with a temperature at 0820 of -1C, a high between 1500 and 1700 of 5C and it was still 3C at 1900. Ground winds were WSW-SW and occasionally SE all day, 5-15 gusting to 42 km/h, while ridge winds were strong all day, SW to 1400 after which they were NW. Cloud cover was altostratus, altocumulus and cirrus all day, initially 90% that diminished to 40 to 60% after 1300, while low cumulus draped the mountains to the west all day. The west was 10-20% obscured after 1000 but the eastern ridges were clear all day. Despite these seemingly favourable migration and observing conditions the only migrant raptor seen was an adult Golden Eagle that glided high from the northern end of the Fisher Range to Mount Lorette at 1756. Three non-migratory adult Bald Eagles were also seen: 1 flew south at 0820 at the parking area, 1 flew south above the Fisher Range at 1110 and a third flew south above the river at 1634. Other birds seen were a Pileated Woodpecker flying above Highway 40, 3 Canada Jays, 12 Common Ravens, 7 Black-capped Chickadees, 5 Mountain Chickadee, 3 Boreal Chickadees, 1 Red-breasted Nuthatch, 18 Common Redpolls and 9 White-winged Crossbills. Only two visitors made it to the site today.

9.67 hours (92.58) GOEA 1 (9) TOTAL 1 (19)

Monday, March 11 Beaver Mines [Day 10] 0745-1915 (Peter Sherrington, assisted by Hilary Atkinson). It was also the warmest day so far at Beaver Mines with a starting temperature of -2C that rose to a high of 4C from 1500 to 1800 and was still 2C at the end of observation. Winds were strong W and occasionally WSW all day 40-60 gusting 70-90 km/h and cloud cover was 100% altostratus and altocumulus to 1300 that reduced to 70-80% for the rest of the day that provided mainly sunny and excellent observing conditions. A season high total of 28 migrant raptors of 4 species were counted between 0839 and 1904 with a highest hourly count of 8 between 1500 and 1600. The count was a season high 17 Bald Eagles (16 adults and 1 late subadult), 8 adult Golden Eagles, the season's first Gyrfalcon, an adult probable male white morph at 1708, the first Prairie Falcon at 0933 and 1 very high-flying unidentified raptor at 0940 that was either an eagle or a *Buteo*. Amongst the other birds seen were a number of first occurrences for the season that comprised a flock of 25 Mallards that flew low to the SW, 1 first winter Northern Shrike, 2 European Starlings, 1 male Red-winged Blackbird and 1 male Rusty Blackbird. Other birds seen were 17 Rock Pigeons, 2 Downy Woodpeckers, 8 Blue Jays, 6 Black-billed Magpies, 27 Common Ravens, 15 of which flew to the SW to roost between 1830

and 1847, 5 Black-capped Chickadees, 35 Evening Grosbeaks, 16 Common Redpolls, 35 Pine Siskins and 10 Dark-eyed Juncos (6 *hyemalis* and 4 *montanus*).

11.5 hours (111.5) BAEA 17 (31), GOEA 8 (33), GYRF 1 (1), PRFA 1 (1) UU 1 (1) TOTAL 28 (72)

Monday, March 11 Steeples (Vance Mattson). NO OBSERVATION.

Tuesday, March 12 Mount Lorette NO OBSERVATION (weather). Rosemary Power and Kathleen Peterson were at Barrier Lake between 1045 and 1330 where the temperature was 1C, winds were light, cloud cover was 100% low stratus and an ice crystal fog greatly reduced visibility. By 1330 the crystal fog thickened and obscured the ridges and the count was abandoned for the day just before it began to snow.

Tuesday, March 12 Beaver Mines [Day 11] 0730-1600 (Peter Sherrington, assisted by Hilary Atkinson). The temperature at 0730 was 0C which fell to -1C at 0800, rose to a high of 4C at 1400 and was 1C at 1600 when observation ceased. Winds were WSW-W 20-30 gusting 40 km/h to 1200, then N 10-20 km/h to 1400 and finally ESE-SE 20 km/h to 1600. Cloud cover was 30-60% cumulus, altocumulus and cirrus to 0830 after which it was 100% stratus and cumulus for the rest of the day although it was thin enough to allow hazy sunshine between 1000 and 1400. Light snow began to fall at 1515 which became moderate at 1600 obscuring the ridge and bringing the day's count to an end. Raptor migration was slow with just 5 eagles moving between 0844 and 1405: 1 adult Bald Eagle and 4 Golden Eagles (3a, 1sa). Other birds seen were 4 Canada Geese that flew high to the NE at 0940, 23 Rock Pigeons, 1 Downy Woodpecker, 1 Hairy Woodpecker, 1 first winter Northern Shrike, 8 Blue Jays, 1 American Crow, 19 Common Ravens, 5 Black-capped Chickadees, 2 Mountain Chickadees, 3 European Starlings, 9 Bohemian Waxwings, 36 Evening Grosbeaks, 28 Common Redpolls, 60 Pine Siskins and 6 Dark-eyed Juncos (3 *hyemalis* and 3 *montanus*).

8.5 hours (120) BAEA 1 (32), GOEA 4 (37) TOTAL 5 (77)

Tuesday, March 12 Steeples (Vance Mattson). NO OBSERVATION (weather). Snow and rain fell all day and obscured the mountains.

Wednesday, March 13 Mount Lorette [Day 11] 0900-1940 (Caroline Lambert, assisted by Brian McBride). The temperature at 0900 was -8C, the high at 1500 and 1600 was 1C and it was -1C at the end of observation. Ground winds were SW 0-5 km/h all day with the exception of 1700-1730 when they were N 5-10 km/h during a brief snow shower, and ridge winds were light SW all day. Cloud cover was 100% stratocumulus to 1400 after which it was 70-90% stratus. The east

ridges were variably obscured 20-100% all day only completely clearing around 1300, and the west was 80-100% obscured all day. Conditions were not conducive for migration and the only migrant seen was an adult Golden Eagle that moved north along the Fisher Range at 1741. Other birds seen were a Pileated Woodpecker, 3 Canada Jays, 1 Common Raven, 1 Mountain Chickadee, 3 Boreal Chickadees, 1 Red-breasted Nuthatch, 1 Brown Creeper, 1 American Dipper, 75 Common Redpolls and 3 White-winged Crossbills. A set of fresh Canada Lynx tracks were seen next to the tracks of a Snowshoe Hare that was obviously running at high speed! There were 9 visitors at the site today.

10.67 hours (103.3) GOEA 1 (10), TOTAL 1 (20)

Wednesday, March 13 Beaver Mines [Day 12] 1000-1945 (Peter Sherrington, assisted by Hilary Atkinson). The temperature at 0800 was -4C but steady snowfall that completely obscured the ridge meant that observation did not begin until 1000 when the ridge cleared and the temperature was -2C. Snow resumed at 1020 and only finally stopped at 1200 leaving 17 cm of fresh snow on the ground but the ridge remained clear for the rest of the day. The temperature high was 1C at 1300 and it was -3C at 1945. Winds were variable all day with a velocity of only 0-5 km/h, and cloud cover was 100% stratus to 1900 when it reduced to 80% cumulus and quickly cleared to 20% cumulus at the end of the day. The light winds produced a paltry raptor count of 3 eagles with adult Golden Eagles moving at 1250 and 1639 and an adult Bald Eagle at 1928. A resident juvenile Golden Eagle perched on a Douglas Fir near the top of the ridge between 1630 and 1715, and an adult Bald Eagle perched in a similar position between 1550 and 1750. Other birds in the area were 26 Canada Geese that flew high to the N at 1646, 8 Rock Pigeons, 4 Downy Woodpeckers, 1 Hairy Woodpecker, 1 Northern [Red-shafted] Flicker, 1 first winter Northern Shrike that caught and carried away a *hyemalis* Dark-eyed Junco at 1624, 1 Canada Jay, 8 Blue Jays, 6 Black-billed Magpies, 123 Common Ravens 101 of which flew high to the SW to roost between 1815 and 1847, 8 Black-capped Chickadees, 6 Mountain Chickadees, 2 European Starlings, a flock of 200 Bohemian Waxwings that flew high to the SW at 1839, 60 Evening Grosbeaks, 30 Common Redpolls, 120 Pine Siskins, 8 Dark-eyed Juncos (5 *hyemalis* and 3 *montanus*) and 1 male Red-winged Blackbird.

9.75 hours (129.8) BAEA 1 (33), GOEA 2 (39) TOTAL 3 (80)

Wednesday, March 13 Steeples [Day 8] 1630-1800 (Vance Mattson). It was a cloudy day but started to clear in the late afternoon but when Vance arrived at the site the ridges were still partially obscured. The temperature was 5C, conditions were calm and cloud cover was 90% cumulus and stratus. No migrant nor resident raptors were seen.

1.5 hours (32.25) TOTAL 0 (24)

Thursday, March 14 Mount Lorette [Day 12] 0805-2005 (Cliff Hansen, assisted by Heinz Unger and Eric Langshaw). The starting temperature was -18C, the high at 1500 was 2C and it was 0C at the end of observation. Ground winds were SW all day, light (<5 km/h) to 1400 then 5-10 gusting 25 km/h to 1800 after which gusts ceased, while ridge winds were moderate to strong SW all day. It was cloudless to 1100 when 100% thin cirrostratus developed that reduced to 30% with cumulus and altocumulus from 1600 to the end of the day. Observing and migration conditions were excellent throughout the afternoon and a season high 12 migrant raptors were counted between 1448 and 1659 all of which moved from the northern end of the Fisher Range to Mount Lorette. The flight comprised 1 adult Bald Eagle, 1 light morph Rough-legged Hawk (the first for the season) and 10 adult Golden Eagles, 8 of which were recorded between 1600 and 1659. A non-migrant adult Bald Eagle also moved to the south above the Fisher Range. Other birds recorded were 1 Hairy Woodpecker, 2 Canada Jays, 9 Common Ravens, 20 Mountain Chickadees and the season's first Red-winged Blackbird, a singing male. Fresh Canada Lynx tracks were again seen, and there were 3 human visitors to the site.

12 hours (115.3) BAEA 1 (11), RLHA 1 (1), GOEA 10 (20) TOTAL 12 (32)

Thursday, March 14 Beaver Mines [Day 13] 0730-1930 (Peter Sherrington, assisted by Hilary Atkinson). The temperature at 0730 was -5C, the high at 1400 and again at 1600 was 2C and it was -1C at 1930. Winds were WNW 15-20 km/h to 0950 after which they were W-WSW for the rest of the day 20-40 gusting to 60 km/h. It was cloudless to 1050 when cumulus cloud started to develop that became 40-100% altostratus to 1630 after which it was again cloudless with minor cirrus after 1900. Both migration and, with the exception of blowing snow, observing conditions were excellent throughout and allowed a season high total of 64 migrants to be counted between 0901 and 1856. The count comprised 15 Bald Eagles (12a, 3j), 1 light morph Rough-legged Hawk and a season high 48 Golden Eagles (45a, 3j). Birds moved steadily all day with a maximum hourly count of 16 (10 Golden Eagles) between 1300 and 1400, and 13 birds (10 Golden Eagles) moved between 1800 and 1856. The resident juvenile Golden Eagle soared briefly close to the ridge at 1803. This first significant movement of the season coincides with last year's first significant movement when 61 migrants (41 Golden Eagles) were counted on March 14. Other birds in the area were 30 Mallards that flew to the NE at 1751, 8 Rock Pigeons, 2 Downy Woodpeckers, 1 male Northern [Red-shafted] Flicker, 8 Blue Jays, 1 American Crow, 44 Common Ravens 23 of which to the SW to roost between 1828 and 1914, 3 Black-capped Chickadees, 1 Mountain Chickadee, 5 European Starlings, 30 Bohemian Waxwings, 45 Evening Grosbeaks, 6 Common Redpolls, 100 Pine Siskins, 4 Dark-eyed Juncos (2 *hyemalis* and 2 *montanus*) and 3 male Red-winged Blackbirds.

12 hours (141.8) BAEA 15 (48), RLHA 1 (6), GOEA 48 (87) TOTAL 64 (144)

Thursday, March 14 Steeples [Day 9] 1300-1700 (Vance Mattson). The temperature reached a high of 4C from a starting temperature of -1C, winds were moderate S, and 20-70% thin altostratus and cumulus cloud gave mostly sunny skies with excellent observing conditions. A

season high 32 eagles glided north between 1332 and 1818, 26 of which were seen after 1600 including 13 between 1700 and 1800. The flight was 5 Bald Eagles (4a, 1j) and a season high 27 Golden Eagles (23a, 3j, 1u). Non-migrants were 4 adult Bald Eagles including a pair-flight at 1732, and a juvenile Golden Eagle that hunted above the ridge at 1845 and then moved south.

6 hours (38.25) BAEA 5 (17), GOEA 27 (39) TOTAL 32 (56)

Friday, March 15 Mount Lorette [Day 13] 0805-2005 (Caroline Lambert, assisted by Rick Robb). The starting temperature was -4C, the high was 5C at 1600 and it was 1C at the end of observation. Ground winds were 0-5 gusting 20 km/h, variable to 1400 then SW to 1800 and finally 0-5 km/h for the rest of the day, while ridge winds were moderate NW all day. Cloud cover was initially 80% cirrus and stratus that became 70-60% cumulus and stratus between 1000 and 1300 after which it gradually diminished to 20% cumulus and cirrus by 2000. The eastern ridges were clear all day, and the west was 40% obscured to 1100 after which it was also clear. The conditions produced a season-high count of 23 eagles between 1217 and 1614 that comprised 2 Bald Eagles (1a, 1sa) and a season-high count of 21 Golden Eagles (18a, 3u). The birds moved steadily with hourly high counts of 6 between 1217 and 1300 and 7 between 1400 and 1500. Up to 1300 the birds were initially located over Mount Lorette having presumably originated in the Wasootch Creek area, but subsequently they glided from the northern end of the Fisher Range to Mount Lorette with only occasional soaring flight. A resident adult Northern Goshawk was also seen on a couple of occasions hunting near the site. Other birds seen were 2 Hairy Woodpeckers, 1 Pileated Woodpecker, 5 Canada Jays, 8 Common Ravens, 6 Black-capped Chickadees, 5 Mountain Chickadees, 4 Boreal Chickadees, 1 Red-breasted Nuthatch, 8 Common Redpolls and 5 White-winged Crossbills. Six visitors were at the site today.

11.67 hours (126.9) BAEA 2 (13), GOEA 21 (41) TOTAL 23 (55)

Friday, March 15 Beaver Mines [Day 14] 0730-1930 (Peter Sherrington, assisted by Hilary Atkinson). The temperature at 0730 was -2C the high at 1600 was a season high 5C and it was 2C at 1930. Winds were again W-WSW all day, 30-40 gusting 50 km/h that moderated to 20-30 km/h after 1800. Cloud cover was 100% altostratus to 1200 and the afternoon saw 60-100% altostratus, cumulus and altocumulus that provided extended sunny periods. The day started encouragingly with single Golden Eagles moving NW at 0858 and 0859, but the next raptors, two Bald Eagles, were not seen until 1100 and the 3rd Golden Eagle did not appear until 1241. Movement was then sporadic throughout the afternoon despite apparently ideal migration conditions and it was only between 1706 and 1747 when 8 of the day's 24 migrants were counted that there was any sustained movement. The final count was 10 Bald Eagles (9a, 1sa), 1 adult Northern Goshawk, the first of the season that flew N with the subadult Bald Eagle at 1532, and 13 Golden Eagles (10a, 2sa, 1j). An adult resident Golden Eagle soared briefly on the ridge at 1810. Other birds seen were 10 Rock Pigeons, 3 Downy Woodpeckers, 1 Hairy Woodpecker, 1 male Northern [Red-shafted] Flicker, 4 Blue Jays, 2 Clark's Nutcrackers, 18 American Crows that flew to the SW at 1816, 45 Common Ravens only 5 of which flew to roost between 1807 and

1914, 4 Black-capped Chickadees, 2 Mountain Chickadee, 2 European Starlings inspecting possible nest sites, 40 Evening Grosbeaks, 6 Common Redpolls, 50 Pine Siskins, 3 Dark-eyed Juncos (2 *hyemalis* and 1 *montanus*) and 3 male Red-winged Blackbirds.

12 hours (153.8) BAEA 10 (58), NOGO 1 (1) GOEA 13 (100) TOTAL 24 (168)

Friday, March 15 Steeples [Day 10] 1130-1700 (Vance Mattson, assisted by Andrena Heigh). Observation today was from the South Lakit site where the temperature was initially 2C but by 1600 it was 9C and caused significant snow melt. Winds were light SW but became calm after 1600 and cloud cover was 60% altostratus and cumulus that reduced to 30% cumulus after 1600. A total of 15 migrants were counted between 1149 and 1530 comprising 3 Bald Eagles (2a, 1j) and 12 adult Golden Eagles. The resident pair of Golden Eagles were visible nearly the entire day with extended soaring, hunting and a minor display flight by one of the birds. Six non-migrant adult Bald Eagles were also present with a pair-flight seen at 1408.

5.5 hours (43.75) BAEA 3 (20), GOEA 12 (51) TOTAL 15 (71)

Saturday, March 16 Mount Lorette [Day 14] 0750-1930 (Blake Weis, assisted by Ruth Morrow). The starting temperature was -9C, the high was 7C at 1700 and 1800 and was 4C at 1930. Ground winds were W-SW 0-5 km/h to 1300 after which they were WSW 5-10 gusting to 26 km/h, while ridge winds were moderate SW to 1300 and then SW moderate to strong. Cloud cover was 30% cirrus to 1000 and then 50-100% cirrus, altocumulus, altostratus and lenticular cloud for the rest of the day. All ridges were clear. A season-high total of 37 eagles were counted between 1025 and 1846 comprising 1 adult Bald Eagle and 36 Golden Eagles (29a, 1sa, 1u) which is the highest count for the site so far this season. Only 3 birds were seen before 1400 after which movement became steady with 9, 8 and 8 eagles migrating in each of the next 3 hours. All the movement was on the eastern ridge system with most birds kiting high above the northern end of the Fisher Range before gliding high to Mount Lorette. Two resident adult Northern Goshawks flew low to the south over the site at 1127 and 1128, and an assumed non-migrant adult Bald Eagle flew high from Olympic Summit to the east above the Fisher Range. Other birds in the area were 1 Hairy Woodpecker, 2 Canada Jays, 1 Black-billed Magpie, 5 Clark's Nutcrackers, 12 Common Ravens, 7 Black-capped Chickadees, 4 Mountain Chickadees, 2 Red-breasted Nuthatches, 1 American Dipper, 25 Bohemian Waxwings, 2 Common Redpolls and 3 White-winged Crossbills. There was no shortage of company with 29 visitors making it to the site today.

11.67 hours (138.6) BAEA 1 (14), GOEA 36 (77) TOTAL 37 (92)

Saturday, March 16 Beaver Mines [Day 15] 0730-2030 (Peter Sherrington, assisted by Hilary Atkinson). For the first time this season the starting temperature at 0730 was above freezing (1C) although it dropped to 0C at 0800 before reaching a season high of 8C at 1700 and was still 4C at 2000. Winds were moderate W all day 20-30 gusting 40 km/h and cloud cover was 100-60% thin

cirrostratus and altocumulus in the morning, with 100% grey uniform altostratus cover for the rest of the day that gave hazy sunshine. There was a very disappointing movement of only 5 raptors between the first Golden Eagle at 0836 and an adult Bald Eagle at 1541. The paltry fare comprised 2 adult Bald Eagles, 1 adult Northern Goshawk and 2 adult Golden Eagles with 9 hourly counts producing no birds at all. Single birds of the resident Golden Eagle family (2a and 1j) were seen hunting over the ridge on four occasions. Other birds seen were also fewer today and comprised 8 Rock Pigeons, 3 Downy Woodpeckers, 1 Hairy Woodpecker, 1 male Northern [Red-shafted] Flicker, 6 Blue Jays, 16 Black-billed Magpies, 18 American Crows, 36 Common Ravens, 4 Black-capped Chickadees, 1 Mountain Chickadee, 5 European Starlings, 45 Evening Grosbeaks, 4 Common Redpolls, 12 Pine Siskins and 2 Dark-eyed Juncos (1 *hyemalis* and 1 *montanus*).

12.5 hours (166.3) BAEA 2 (60) NOGO 1 (2), GOEA 2 (102) TOTAL 5 (173)

Saturday, March 16 Steeples [Day 11] 1130-1700 (Vance Mattson, assisted by Virginia Rasch and Penny Ohanjanian). Observation was from the usual Mount Bill Nye site where the temperature rose to 6C from a low of 1C, conditions were mainly calm and cloud cover was 100% thin altostratus that reduced to 40% thin altostratus and cumulus. A total of 16 migrants, 8 adult Bald Eagles, 7 adult Golden Eagles and 1 unidentified eagle, were seen between 1245 and 1708, with 13 of the birds moving between 1500 and 1700. The first migrant, a Golden Eagle, perched for 25 minutes on the ridge before finally flying to the north, and the calm conditions produced much slow soaring and low flight. Many resident or non-migrant birds were seen comprising 4 adult and 1 late subadult Bald Eagles, and single adult resident Golden Eagles were seen on 7 occasions and the juvenile twice.

7 hours (50.75) BAEA 8 (28), GOEA 7 (58), UE 1 (1) TOTAL 16 (87)

Sunday, March 17 Mount Lorette [Day 15] 0715-2015 (Bill Wilson, assisted by Lori Anderson and Rosemary Power). The temperature at 0800 was -8C, the high between 1600 and 1800 was 8C and it was 0C at the end of observation. Ground winds were variable 0-3 km/h to 1000, SE-NE 0-12 km/h to 1400 then SW-W 10-20 km/h for the rest of the day, while ridge winds were probably light to moderate SW throughout. It was essentially cloudless with traces of altocumulus cloud all day with the exceptions of 1200 when 50% cumulus developed and 1300 when there was 30% cumulus. The count was almost exactly the same as yesterday's with total of 37 eagles that comprised 2 Bald Eagles (1 adult and 1 late subadult) and 35 Golden Eagles (29a, 3sa, 2j, 1u) that moved between 1117 and 1927. By 1700 only 8 Golden Eagles had been recorded but 11 were counted between 1700 and 1800, 8 between 1800 and 1900 and 8 between 1900 and 1927. With the exception of 1 Golden Eagle that flew high to the NW above the centre of the valley, all birds glided high from the northern end of the Fisher Range to Mount Lorette where they moved to the NW against the face of the mountain. A resident adult Golden Eagle perched and hunted on Mount Lorette, and possibly the same bird flew high from the centre of the valley to Mount Allan later in the day. A Northern Goshawk called from the nest-site near the

parking area early in the morning and an adult was also seen hunting north of the site. Other birds seen were 1 Canada Goose on the river, 1 Hairy Woodpecker, 1 Pileated Woodpecker, 3 Canada Jays, 25 Common Ravens, 3 Black-capped Chickadees, 1 Mountain Chickadee, 3 Boreal Chickadees, 1 American Robin (the first of the season), 2 Common Redpolls, 20 White-winged Crossbills and 1 male Red-winged Blackbird. A season high total of 71 visitors were at the site today.

13 hours (151.6) BAEA 2 (16), GOEA 35 (112) TOTAL 37 (129)

Sunday, March 17 Beaver Mines [Day 16] 0730-1900 (Peter Sherrington, assisted by Hilary Atkinson). The temperature was 0C at 0730, dropped to -1.5C at 0800 but reached a high of 8C at 1600 and was still 4C at the end of observation. Winds were light all day, mainly NE and ESE and it was essentially cloudless with just occasional traces of altocumulus cloud. The light easterly winds produced only 2 adult Bald Eagles, 1 at 1438 and 1 at 1806 and it is probable that raptors were migrating farther to the west where the mountains were completely clear to the Continental Divide. No resident raptors were seen. Clear skies overnight led to an exodus of many of the birds that had been wintering here which produced a strangely quiet day in the sunshine. The other birds seen were 2 Canada Geese that flew to the SW at 0832, 2 Rock Pigeons, 3 Downy Woodpeckers, 1 male Northern [Red-shafted] Flicker, 6 Blue Jays, 1 Black-billed Magpie, 12 Common Ravens, 2 Black-capped Chickadees, 4 Mountain Chickadee, 5 European Starlings, 10 Evening Grosbeaks, 1 Common Redpoll, 5 Pine Siskins and 1 Dark-eyed [*hyemalis*] Junco.

11.5 hours (177.8) BAEA 2 (62) TOTAL 2 (175)

Sunday, March 17 Steeples [Day 12] 1145-1845 (Vance Mattson). The temperature at 1145 was 2C but rose to a high of 11C, winds were occasionally light N but mainly calm and it was cloudless all day. The conditions produced a season-high count of 38 migrants that comprised a season-high 13 Bald Eagles (6a, 2sa, 5j) and 24 Golden Eagles (19a, 4j, 1u) and 1 unidentified eagle that moved between 1328 and 1819. Six eagles were seen before 1400 then 11, 7 and 11 in each of the next three hours, and 3 between 1800 and 1819. Movement was low to 1600 after which it was very high. Also seen were 2 non-migratory adult Bald Eagles, 1 adult resident Golden Eagle and 5 sightings of the resident juvenile Golden Eagle including it perching between 1730 and 1800 on a rocky outcrop near the site.

7 hours (57.75) BAEA 13 (41), GOEA 24 (82), UE 1 (2) TOTAL 38 (125)

Monday, March 18 Mount Lorette [Day 16] 0750-1950 (Blake Weis, assisted by Dan Parliament). The starting temperature was -9C, but rose to a season-high 12C at 1700 and 1800 and was still 10C at 1950. Ground winds were SW 0-5 km/h all day and ridge winds were SW, light in the morning and light to moderate in the afternoon. It was completely cloudless to 1400

after which there was 10-30% cirrus for the rest of the day. For the third successive day the count was 37 birds, that moved between 1302 and 1916 and comprised 3 adult Bald Eagles, 1 adult Northern Goshawk (the first migrant of the season) and 33 Golden Eagles (32a, 1j). The highest hourly count was 14 (1 Bald and 13 Golden Eagles) between 1600 and 1700. With the exception of 1 Golden Eagle that moved on the western route and 1 Bald Eagle that went north from the end of the Fisher Range, all birds moved from the Fisher Range to Mount Lorette at variable heights and generally after much soaring. Resident adult Golden Eagles were seen at Mount Lorette and over Hummingbird Plume Hill, and 2 resident adult Northern Goshawks flew low over the site towards the north at 0849. A non-migrant adult Bald Eagle also flew south from Hummingbird Plume Hill. No new spring arrivals were noted and other birds seen were 5 Canada Jays, 12 Common Ravens, 4 Black-capped Chickadees, 6 Mountain Chickadees, 3 Boreal Chickadees, 2 Red-breasted Nuthatches, 2 singing Brown Creepers, 1 American Dipper, 1 European Starling, 13 Bohemian Waxwings, 4 Common Redpolls, 1 White-winged Crossbill, 1 Pine Siskin and 1 Dark-eyed Junco. There were 15 visitors at the site today.

12 hours (163.6) BAEA 3 (19), NOGO 1 (1), GOEA 33 (145) TOTAL 37 (166)

Monday, March 18 Beaver Mines [Day 17] 0730-1930 (Peter Sherrington, assisted by Hilary Atkinson; Gord Petersen 1400-1730). The temperature also reached a season high of 12C at 1500 and 1600 from a starting low of -1C and was 4C at 1930. Winds were WSW 15-20 km/h in the morning, but in the afternoon they were NE 0-5 km/h or calm. There was 30-70% altostratus and cirrus cloud cover to 1100 after which the sky was completely cloudless. The conditions produced another meagre raptor count of just 4 birds between 1205 and 1752 comprising 1 juvenile Bald Eagle, 1u Northern Goshawk, the first Red-tailed Hawk of the season at 1618 that was a dark morph bird of undetermined race and age, and 1 subadult Golden Eagle. The resident pair of Golden Eagles soared above the ridge at 1155 and glided high to the SE, and a non-migrant adult Bald Eagle was seen soaring low at 1630 and then was seen perched on the ridge between 1747 and 1755. Between 1400 and 1730 Hilary and I left the site observed progressively to the west to see if birds were moving on other ridges but 3.5 hours spent at Vicki Ridge, Kylo Ridge, Carbondale Ridge, Barnaby Ridge and Table Mountain produced not a single migrant raptor. In all cases winds were light and the sky cloudless. No new spring arrivals were noted and other birds seen at the Beaver Mines site were a flock of 40 Wild Turkeys, 4 Rock Pigeons, 2 Downy Woodpeckers, 1 male Northern [Red-shafted] Flicker, 1 Steller's Jay, 5 Blue Jays, 1 Black-billed Magpie, 19 Common Ravens, 4 Black-capped Chickadees, 4 Mountain Chickadees, 8 European Starlings, 6 Evening Grosbeaks, 1 Common Redpoll, 3 Pine Siskins and 1 Dark-eyed [*montanus*] Junco.

12 hours (189.8) BAEA 1 (63), NOGO 1 (3), RTHA 1 (1), GOEA 1 (103) TOTAL 4 (179)

Monday, March 18 Steeples [Day 13] 1630-1900 (Vance Mattson). Weather conditions west of the Rockies were also similar with a temperature of 12C, calm conditions and cloudless sunny skies that produced a movement of 13 migrant raptors, 5 Bald Eagles (4a, 1j) and 8 adult Golden

Eagles between 1630 and 1809. During the first 5 minutes at the site 2 adult Bald Eagles and 2 adult Golden Eagles moved north, and 8 eagles were seen between 1700 and 1800. The resident Golden Eagles were again conspicuous, especially the juvenile that again perched on its favoured rocky outcrop from 1732 to the end of observation at 1900. Four non-migrant Bald Eagles (3a, 1j) were also seen that included a pair-flight low over the south flank of Mount Bill Nye.

2.5 hours (60.25) BAEA 5 (46), GOEA 8 (90) TOTAL 13 (138)

Tuesday, March 19 Mount Lorette [Day 17] 0755-1945 (Blake Weis, assisted by Katherine Peterson). The temperature at 0800 was -7C, but reached a season-high 15C at 1700 and 1800 and was still 7C at the end of observation. Ground winds were SW all day, 0-5 km/h that gusting to 10 km/h between 1200 and 1800, while ridge winds were light SW to 1200 and light to moderate in the afternoon. There was cirrus cloud cover all day, 40% to 1000 that diminished to 10% at 1000 before gradually increasing to 80% at 1500 and again diminishing to 20% at the end of the day. A season-high total of 60 migrants were counted between 1020 and 1802 that comprised a season-high 8 Bald Eagles (6a, 2sa), 1 light morph Rough-legged Hawk, a season-high 49 Golden Eagles (40a, 9u), the first Prairie Falcon of the season and 1 unidentified distant raptor that was probably either a Northern Goshawk or a Gyrfalcon. The first Golden Eagle was not seen until after 1300 but movement was then steady and peaked at 15 birds between 1500 and 1600. Up to 1700 migration was mainly on the western route with birds moving from the southern flank of Mount Allan to Hummingbird Plume Hill and then to the NW over Skogan Pass, but after 1700 birds moved from the northern end of the Fisher Range to Mount Lorette with much extended soaring and flapping in the light winds. A single resident adult Golden Eagle soared on the north ridge of Mount Lorette at 0925. There were no new spring arrivals, probably because the Hay Meadow is still completely snow covered, but other birds seen were 2 Pileated Woodpeckers, one of which flew very high to the north from the south flank of Mount Allan, 2 Canada Jays, 10 Common Ravens, 4 Black-capped Chickadees, 5 Mountain Chickadees, 2 Boreal Chickadees, 3 Red-breasted Nuthatches, 7 Common Redpolls, 4 White-winged Crossbills and 1 Pine Siskin. There were 5 visitors at the site today.

11.83 hours (175.4) BAEA 8 (27), RLHA 1 (2), GOEA 49 (194), PRFA 1 (1), UU 1(1) TOTAL 60 (226)

Tuesday, March 19 Beaver Mines [Day 18] 0730-1930 (Peter Sherrington, assisted by Hilary Atkinson). The temperature at 0730 was 1C that reached a season-high 15C at 1500 and 1600, and was still 10C at 1930. Winds were WSW 15-20 km/h to 1030 when again they diminished to 0-5 km/h, mainly NE for the rest of the day. Cloud cover was 10% altostratus to 0830 and it was then cloudless all day with occasional ephemeral traces of altocumulus occasionally developing. The delightful weather again produced almost no migrants, however, with only 3 seen today: 1 adult Golden Eagle at 1352, 1 adult Bald Eagle at 1544 and 1 subadult Bald Eagle at 1659. The highlight of the day was our first American Robin at 0831 and other birds seen were 1 Canada Goose, 16 Wild turkeys, 1 Rock Pigeon, 3 Downy Woodpeckers, 1 Northern Flicker, 7 Blue Jays, 1 Black-billed Magpie, 5 American Crows, 35 Common Ravens, 25 of which flew high to the SW between 1900 and 1921, 20 European Starlings, 10 Evening Grosbeaks and 7 Pine Siskins.

12 hours (201.8) BAEA 2 (65), GOEA 1 (104) TOTAL 3 (182)

Tuesday, March 19 Steeples [Day 14] 1300-1900 (Vance Mattson). The weather was again warm with a temperature of 12C, calm conditions and cloudless skies that produced a season-high count of 42 eagles comprising a season-high total of 25 Bald Eagles (14a, 3sa, 8j) and 17 Golden Eagles (12a, 1sa, 3j). Movement was steady throughout the observation period with a maximum hourly count of 14 between 1500 and 1600. The resident Golden Eagle family was seen together with one adult bird displaying vigorously for the first time this year. The juvenile was seen on 3 occasions, once soaring at length with an adult, and again perched at length between 1540 and 1747. Two non-migrant adult Bald Eagles soared together before gliding south along the ridge.

6 hours (66.25) BAEA 25 (71), GOEA 17 (107) TOTAL 42 (180)

Wednesday, March 20 Mount Lorette [Day 18] 0755-1945 (Caroline Lambert, assisted by Glen Webber, Rosemary Power and Eric Langshaw). The temperature reached a season-high 17C at 1700 from a starting low of -7C and it was 5C at the end of observation. Ground winds were variable and light to 1700 after which they were SW 0-5 gusting 10 km/h and 20 km/h after 1800; ridge winds were probably light to moderate SW after 1700. It was completely cloudless all day. A total of 45 migrant raptors of 4 species was counted between 1050 and 1859 comprising 1 adult Bald Eagle, 1 juvenile Northern Goshawk, the first Red-tailed Hawk of the season which appeared to be an intermediate morph of uncertain age of the race *calurus*, 41 Golden Eagles (40a, 1u) and 1 indeterminate eagle. Apart from the first Golden Eagle that flew from the Fisher Range to Mount Lorette at 1050, all 35 birds up to 1600 migrated on the western route where most soared very high on the southern flank of Mount Allan with many simply disappearing into the clear blue sky. No migrants were seen between 1600 and 1800, but after 1800 the Red-tailed Hawk and 8 Golden Eagles glided high from the northern end of the Fisher Range to Mount Lorette. Resident birds were single adult Northern Goshawks seen on three occasions near the site and an adult Golden Eagle that flew south from Hummingbird Hill. The highlight of the non-raptor count was the season's first occurrence of 2 Violet-green Swallows that appeared perfectly comfortable in the first-day-of-spring weather, but were the earliest seen at the site by 5 days. A Lapland Longspur heard in the Hay Meadow was also a first for the year. Other birds seen were 3 Canada Geese, 1 Hairy Woodpecker, 1 Pileated Woodpecker, 3 Canada Jays, 8 Common Ravens, 4 Black-capped Chickadees, 2 Mountain Chickadees, 1 Brown Creeper and 1 male Red-winged Blackbird. No finches were recorded today. Around 0800 a Grey Wolf howled east of the river, and later in the day and American Marten strolled along the path from the south to the site. Nine human visitors also made it to the site today.

12 hours (187.4) BAEA 1 (28), NOGO 1 (2), RTHA 1 (1), GOEA 41 (235) UE 1 (1) TOTAL 45 (271)

Wednesday, March 20 Beaver Mines [Day 19] 0730-1930 (Peter Sherrington, assisted by Hilary Atkinson). The temperature at 0730 was 2C and reached a season-high 16C at 1600 and 1700 and was still 10C at 1930. Winds were W-WSW 5-15 km/h to 0930 and were then calm or very light (<5 km/h) and mainly from the NE for the rest of the day, and the sky was completely cloudless all day. Clouds were not the only thing lacking in the sky as 12 hours of observation yielded not one migrant or resident raptor! Gord Petersen spent from 1350 to 1650 in the Table Mountain-Carbondale Ridge area where a few eagles were seen soaring high or perched on Table Mountain, but the only birds that appeared to be definite migrants were 2 subadult Golden Eagles that soared high over the southern peak of Table Mountain at 1603 and glided high to the NW. An unidentified eagle high over the Continental Divide to the west at 1524 may also have been a migrant. A reconnaissance in the Beauvais Lake area between 1620 and 1650 yielded no raptors at all. There may therefore have been a small but insignificant migration to the west of the site, so it is possible that the birds seen at Lorette are in fact moving north to the east of the Beaver Mines site over the low foothills and high plains. A photograph taken today and sent to me by Bob Costa of 19 Bald Eagles perched in Cottonwoods on Highway 22 east of the Livingstone Range seem to support this conjecture, and Gord plans to do a reconnaissance survey to the east tomorrow. We shall probably continue to stare into a beautiful blue void as the weather forecast is for more of the same. Other birds noted were 45 Wild Turkeys on a grassy hill to the NE with males in full display mode, 7 Rock Pigeons, 4 Downy Woodpeckers, 1 Northern Flicker, 1 Pileated Woodpecker, 5 Blue Jays, 2 Black-billed Magpie, 13 Common Ravens, 2 Black-capped Chickadees, 1 Mountain Chickadee, 1 American Robin, 7 European Starlings, 41 Evening Grosbeaks and 4 Pine Siskins.

12 hours (213.8) TOTAL 0 (182)

Wednesday, March 20 Steeples [Day 15] 1630-1900 (Vance Mattson). The temperature was 13C, it was calm and cloudless skies gave sunny conditions. Because of teaching commitments Vance couldn't get to the site until 1630 but saw 15 migrants, including a kettle of 6 birds, by 1700. A further 5 birds moved between 1700 and 1743 giving a final count of 8 Bald Eagles (5a, 1sa, 2j) and 12 Golden Eagles (11a, 1j). Many other birds must have moved earlier. Non-migrants were 2 Golden Eagles (1a, 1j) and 1 subadult Bald Eagle.

2.5 hours (68.75) BAEA 8 (79), GOEA 12 (119) TOTAL 20 (200)

Thursday, March 21 Mount Lorette [Day 19] 0800-2000 (Cliff Hansen, assisted by Rick Robb). It was another warm day with a temperature high of 15C from 1600 to 1800 from a morning low of -5C and it was 5C at 2000. It was calm to 1100 and subsequently ground winds were variable and light as probably were the ridge winds, and it was completely cloudless all day. Only 5 migrant raptors were seen between 1147 and 1902: 1 adult Bald Eagle that flew north from the end of the Fisher Range at 1902, 1 adult Northern Goshawk that flew low to the NW and 3 adult Golden Eagles 2 of which flew to the NW from Olympic Summit and the third that flapped north along the Fisher Range ridge and roosted for the night at 1901 on a rock outcrop at the northern

end of the range. A resident adult Northern Goshawk was seen hunting in the vicinity of the Lorette Canyon, 2 adult resident Golden Eagles were seen several times around Olympic Summit and a non-migrant adult Bald Eagle flew east from the Fisher Range. Other birds seen were 4 Canada Geese, 1 Hairy Woodpecker, 1 Northern Flicker, 2 Canada Jays, 1 Black-billed Magpie, 5 Common Ravens, 2 Black-capped Chickadees, 1 Mountain Chickadee, 1 Brown Creeper, 2 European Starlings and 8 Bohemian Waxwings. Among the 25 visitors to the site today were a party of 16 from the Canmore Bird Association led by Caroline Lambert who were of great assistance in locating birds in the cloudless skies.

12 hours (199.4) BAEA 1 (29), NOGO 1 (3), GOEA 3 (238) TOTAL 5 (276)

Thursday, March 21 Beaver Mines [Day 20] 0730-1930 (Peter Sherrington, assisted by Hilary Atkinson). It was slightly cooler today with a high temperature of 13C at 1500 from a low at 0730 of 0.5C, and it was 6.5C when observation ceased at 1930. The wind followed the same pattern as the last several days with W-WSW winds 10-15 km/h to 1030 and then E-NE winds for the rest of the day that were mainly light but gusted to 15 km/h from 1500 to 1700, after which it was calm for the rest of the day. It was cloudless to 1200 when very thin cirrostratus developed to the south which gradually moved to the north and reached 70% after 1900. The only migrant seen was an adult Bald Eagle that flew to the NW at 1804, and an unaged Golden Eagle seen in the same area at 1755 perched on a tree, was not seen again and was considered to be a non-migrant. Gord Petersen watched various ridges to the north and east between 1045 and 1650 including Burmis Hill near Lee Lake, Rock Creek Road, the area around Lundbreck and Cowley, the Snake Road on the western Flank of the Porcupine Hills, Highway 22 and finally the Livingstone Ridge at Frank. A total of 8 Bald Eagles were seen soaring and some appeared to be migrating to the NW, and a further 6 were perched or feeding, but the only Golden Eagle seen was a resident perched on a rock west of the Porcupine Hills that was later seen hunting. Surprisingly not a single *Buteo* was recorded and, significantly, only one Richardson's Ground Squirrel was seen on the entire trip. Other birds at Beaver Mines were a total of 23 Canada Geese, 12 of which landed on a melt-water pool in the valley in the evening, 53 Wild Turkeys, 3 Rock Pigeons, 1 Wilson's Snipe that called at 1115 and was not heard again, 4 Downy Woodpeckers, 2 Hairy Woodpeckers, 1 Northern Flicker, 1 Pileated Woodpecker, 12 Blue Jays, 8 Black-billed Magpies, 9 Common Ravens, 1 Black-capped Chickadee, 14 European Starlings, 32 Evening Grosbeaks and 7 Pine Siskins.

12 hours (225.8) BAEA 1 (66) TOTAL 1 (183)

Thursday, March 21 Steeples [Day 16] 1300-1900 (Vance Mattson). Weather information was not provided, but conditions were probably similar to those of the last several days. A total of 36 migrants were seen up to 1803 when the first non-eagle migrant of the year, an adult female Northern Harrier, moved to the north. Other migrants were 22 Bald Eagles (11a, 2sa, 9j) and 13 Golden Eagles (10a, 2j, 1u). Only 8 eagles were seen before 1600 but 19 migrated between 1600 and 1700. Consistent with the last few days movement was generally low and slow with extended

soaring by some of the birds, especially as the day progressed. Non-migrant raptors were 3 adult Bald eagles and 1 adult Golden Eagles. Two probable Trumpeter Swans were seen on small open patches of water on the still mainly frozen Wasa Slough on the way to the site.

6 hours (74.75) BAEA 22 (101), NOHA 1 (1), GOEA 13 (132) TOTAL 36 (236)

Friday, March 22 Mount Lorette [Day 20] 0745-2020 (Caroline Lambert, assisted by Eric Langshaw and Rosemary Power). The starting temperature was -5C, the high was 15C from 1600 to 1800 and was 7C at 2020. Ground winds were variable and light to 1400 after which they were NE 0-5 gusting 15-20 km/h becoming calm at the end of the day. Ridge winds could not be assessed but were probably mainly light, and cloud cover was cirrus all day, initially 10% that gradually increased to 70% at 1400 that persisted for the rest of the day. The 27th anniversary of the start of the Mount Lorette count was celebrated by the first 100+ movement of the season with 109 eagles migrating between 1035 and 1925. The flight comprised 6 Bald Eagles, 101 Golden Eagles (58a, 1sa, 42u) and 2 unidentified eagles. Although the first Golden Eagle was seen to fly from the Fisher Range to Mount Lorette, most of the movement between 1100 and 1500 was on the western route with most birds soaring very high over Olympic Summit before gliding to the NW. After 1500 movement was highly variable but between 1800 and 1900 43 Golden Eagles that included most of the day's unaged birds, glided very high above the middle of the valley above the observers to Hummingbird Plume Hill where they soared high before moving to the NW over Skogan Pass. A pair of resident Northern Goshawks flew to the east and there were 2 other sightings of single birds, a resident adult Golden Eagle displayed above Olympic Summit near noon and 2 single non-migrant adult Bald Eagles flew to the south, one on the Fisher Range and the other on the Western route. A singing Varied Thrush was the first for the season and other birds in the area were 1 Canada Goose, 1 Downy Woodpecker, 3 Canada Jays, 8 Common Ravens, 4 Black-capped Chickadees, 2 Mountain Chickadees, 2 Boreal Chickadees, 2 Brown Creepers, 1 European Starling 1 Bohemian Waxwing, 1 Pine Siskin and 2 singing Dark-eyed Juncos. A single Mourning Cloak was the first butterfly seen this year. Most of the 11 visitors to the site today stayed for long periods and greatly assisted in locating high-flying eagles, but unfortunately all had departed before the evening golden-rush.

12.58 hours (212) BAEA 6 (35), GOEA 101 (339), UE 2 (3) TOTAL 109 (385)

Friday, March 22 Beaver Mines [Day 21] 0745-2000 (Peter Sherrington, assisted by Hilary Atkinson; 0900-1030 Gord Petersen). The temperature at 0745 was -1.5C, the high at 1500 and 1600 was 12.5C and it was 6C at 2000. Winds were initially W 15 km/h but after 1000 switched to light (0-8 km/h) NE and E and before reverting to light W at 1900. Cloud cover was thin cirrostratus for most of the day ranging from 0-20% up the 70-80% that provided a welcome relief from the cloudless skies of recent days. It did not provide any raptor movement, however, as the only migrant seen was a light morph Rough-legged Hawk that soared over the middle of the valley and glided to the NNW at 1450. A non-migrant adult Bald Eagle perched by a small pool of meltwater on the floor of the valley at 1937 was the only other raptor seen. Other birds

seen were 2 Canada Geese, 63 Wild Turkeys, 3 Rock Pigeons, 4 Downy Woodpeckers, 1 Hairy Woodpecker, 1 Northern Flicker, 1 Pileated Woodpecker, 6 Blue Jays, 5 Black-billed Magpies, 12 Common Ravens, 4 Black-capped Chickadee, 3 Mountain Chickadees, 2 Red-breasted Nuthatches, 3 American Robins, 8 European Starlings, 41 Evening Grosbeaks and 4 Pine Siskins. Two small *Polygonia* butterflies, that were probably Green Commas, were on the wing, and I forgot to note earlier that the first was seen here on March 20. The forecast for Saturday is for moderate to strong W winds so we are hoping that the week-long raptor drought will finally be broken.

12.25 hours (238) RLHA 1 (7) TOTAL 1 (184)

Friday, March 22 Steeples [Day 17] 1200-1900 (Vance Mattson). The weather was nearly identical to yesterday with a high temperature of 15C from a low of 6C at 1200, and calm and cloudless conditions. A season-high total of 44 migrants of 3 species was counted between 1259 and 1751 that comprised 23 Bald Eagles (16a, 2sa, 5j) the first 2 Red-tailed Hawks of the season (1 adult light morph *calurus* and 1 dark morph of unknown race or age), 18 Golden Eagles (15a, 2j, 1u) and 1 unidentified eagle. Only 3 birds were seen before 1400 but the next 2 hours each saw the passage of 16 migrants after which movement again became sporadic. Migration was again mainly slow and low with much soaring, and at 1428 a gliding adult Golden Eagle nearly collided with a soaring adult Bald Eagle causing each to quickly veer off to avoid impact. Resident birds were 4 Bald Eagles (2a, 2j) and 3 adult Golden Eagles with some agonistic behaviour seen between them. Two flocks of Canada Geese, one of 31 and the other of 35 moved north at 1526.

7 hours (81.75) BAEA 23 (124), RTHA 2 (2), GOEA 18 (150), UE 1 (3) TOTAL 44 (280)

Saturday, March 23 Mount Lorette [Day 21] 0735-1955 (Blake Weis, assisted by Patrick Farley). The initial temperature was -5C, the high at 1500 and 1600 was 12C and it was 7C at the end of observation. Ground winds were WSW 0-5 km/h to 1500 after which they were variable NW, N and NE 5-10 gusting 20 km/h, and ridge winds were light WSW to 1500 after which they were moderate N. Cloud cover was initially 30% cirrus that increased to 90% at 1200; it was 90% cirrus and altostratus to 1500 and then 100-80% cirrus, altostratus and altocumulus for the rest of the day. There was a moderately strong raptor movement of 85 birds between 1005 and 1756 that comprised 6 Bald Eagles (4a, 2sa), 1u Northern Goshawk, 76 Golden Eagles (48a, 1j, 27u) and 2 unidentified eagles. The highest hourly counts were 34 between 1200 and 1300, 18 between 1300 and 1400 and 15 between 1400 and 1500 after which only another 8 migrants were seen. With the exception of 3 birds all movement was on the western route to 1430 with birds soaring high over Olympic Summit with some gliding to the NW behind Mount Allan and others gliding NW over Skogan Pass. After 1500 all birds switched to the eastern route and moved from the northern end of the Fisher Range to Mount Lorette. Non-migrant birds were an adult Northern Goshawk that hunted over Hummingbird Plume Hill at noon, a resident adult Golden Eagle that displayed within a kettle of 9 migrant Golden Eagles over Olympic Summit at 1425, and an adult Bald

Eagle that soared aimlessly over the Fisher Range late in the day. Other birds in the area were 12 Canada Geese, 1 pair of Mallard, 1 drumming Ruffed Grouse, 1 Hairy Woodpecker, 5 Canada Jays, 1 American Crow, 14 Common Ravens, 6 Black-capped Chickadees, 5 Mountain Chickadees, 3 Boreal Chickadees, 1 Red-breasted Nuthatch, 2 Brown Creepers, 2 American Dippers, 2 singing Varied Thrushes, 1 American Robin, 2 European Starlings, 1 Common Redpoll, 2 Pine Siskins and 4 Dark-eyed Juncos. Many of the 37 visitors coincided with the peak raptor movement today.

12.33 hours (224.3) BAEA 6 (41), NOGO 1 (4), GOEA 76 (415) UE 2 (5) TOTAL 85 (470)

Saturday, March 23 Beaver Mines [Day 22] 0730-2000 (Peter Sherrington, assisted by Gord Petersen and Hilary Atkinson). The temperature at 0730 was 6C, the high at 1500 was 12C and it was 7C at 2000. Winds were favourable W-WSW 30-40 gusting 50 km/h to 1800 when they became NE10-20 km/h. Cloud cover was 100% cirrostratus to 1100 that gave hazy sunshine which subsequently turned to uniform grey altostratus for the rest of the day that allowed only very hazy sunshine. Patchy cumulus cloud was developing below the stratus at the end of the day and there was very light drizzle after 1915. The winds produced a moderate raptor movement, which was the first for a week, of 55 birds of a season-high 6 species between 0931 and 1851, with a high hourly count of 17 between 1400 and 1500. The flight comprised a season-high 22 Bald Eagles (19a, 3j), the season's first Northern Harrier, an adult male that glided high to the NW at 1439, 1 adult light morph *calurus* Red-tailed Hawk, 1 light morph Rough-legged Hawk, 28 adult Golden Eagles and 2 grey morph Gyrfalcons (1 adult female and 1u). Other birds seen were 34 Canada Geese that flew to the SW in 4 flocks between 1802 and 1918, a pair of Mallard, 1 female Common Merganser that flew high to the NE at 1030. 58 Wild Turkeys, 20 Rock Pigeons, 2 Downy Woodpeckers, 8 Blue Jays, 2 Clark's Nutcrackers, 6 Black-billed Magpies, 11 American Crows, 26 Common Ravens, 2 Black-capped Chickadees, 1 Mountain Chickadee, 3 American Robins, 200 European Starlings, 55 Evening Grosbeaks, 115 Grey-crowned Rosy-Finches, the first of the season, that flew high to the north in 3 flocks between 0904 and 1003, and 8 Pine Siskins.

12.5 hours (250.5) BAEA 22 (88), NOHA 1 (1), RTHA 1 (2), RLHA 1 (8), GOEA 28 (132), GYRF 2 (3) TOTAL 55 (239)

Saturday, March 23 Steeples [Day 18] 1130-1930 (Vance Mattson, assisted by Virginia Rasch). The temperature rose to a high of 14C from a low of 4C, winds were variable and light or calm and cloud cover was 100% thin altostratus that reduced to 20% at the end of the day that greatly assisted the two observers. The 152 raptors counted between 1144 and 1851 is a new spring site record behind the previous record of 133 on March 17, 2017. The flight comprised 26 Bald Eagles (8a, 1sa, 17j) which is the highest count so far this season, and 126 Golden Eagles (124a, 1j, 1u) which is the second-highest spring count ever at the site, the highest being 133 on March 17, 2017. Only 4 eagles moved before 1300, 14 were seen in the following hour, but 1400 to 1500 saw the passage of 59 eagles including 55 Golden Eagles. The next 2 hours saw 19 and 17

eagles respectively, 24 were seen between 1700 and 1800 and 15 between 1800 and 1851 that included 10 Bald Eagles, 9 of which were juveniles. In contrast to the previous week, movement today was generally fast, steady and high with extended soaring occurring only later in the day. Non-migrants were also plentiful, especially Bald Eagles (5a, 7j), but resident adult Golden Eagles were seen only twice, including one that perched high on the snow-covered peak of the front face of Mount Bill Nye.

8 hours (89.75) BAEA 26 (150), GOEA 126 (276) TOTAL 152 (432)

Sunday, March 24 Mount Lorette [Day 22] 0715-2015 (Bill Wilson, assisted by Lori Anderson). The temperature at 0800 was 1C, the high was 4C (1400-1600) and it was 2C at the end of observation. Ground winds were NW-N but mainly NNW all day, 0-10 gusting 20 km/h except between 1500 and 1700 when they gusted to 32 km/h and ridge winds could not be assessed but were probably light to moderate and variable. Cloud cover was 100% stratus to 1200 that provided a very light snow flurry at 0900 and then reduced to 30% cumulus and altostratus at 1400 which gradually increased to 100% altostratus and cumulus by the end of the day. The eastern ridges were 100% obscured to 1200 and variably 40-90% obscured throughout the afternoon and were again 100% obscured at the end of the day; the western mountains were essentially 100% obscured all day. Despite these unpromising weather conditions there was a reasonably strong raptor movement of 76 birds between 1125 and 1735 that involved a season-high 17 Bald Eagles (11a, 2sa, 4j) 1 juvenile dark morph *calurus* Red-tailed Hawk and 58 Golden Eagles (52a, 1sa, 3j, 2u). Just 3 migrants were seen before 1300 but 33 eagles (9 Bald and 24 Golden) moved between 1300 and 1400 and 19 (2 Bald and 17 Golden) between 1400 and 1500 after which movement slowed but 5 Bald Eagles and 5 Golden Eagles migrated between 1700 and 1735. Movement was mainly on the western route over the western part of the valley to 1340 with many birds soaring into the base of the low cloud cover, but after 1400 all the movement was on the Fisher Range with some soaring before they glided at various altitudes to Mount Lorette. Non-migrant raptors included 5 Bald Eagles (4a, 1j) that were soaring with 4 Golden Eagles above the northern end of the Fisher Range but which were not seen to have proceeded any farther and may have settled to roost for the night; 2 sightings of adult Bald Eagles near the river; 2 sightings of hunting adult Northern Goshawks, and a resident adult Golden Eagle that hunted in front of the Fisher Range ridge. Other birds recorded in the area were 7 swans of undetermined species that flew south above the east valley, 13 Canada Geese including a flock of 10 that flew north, 2 male Mallards and 4 male American Wigeons on the river, 1 Hairy Woodpecker, 1 male Pileated Woodpecker, 2 Canada Jays, 16 Common Ravens, 1 Black-capped Chickadee, 1 Red-breasted Nuthatch, 1 Varied Thrush, 1 American Robin and 70 European Starlings. Thirty-one visitors were at the site today.

13 hours (237.3) BAEA 17 (58), RTHA 1 (2), GOEA 58 (473) TOTAL 76 (546)

Sunday, March 24 Beaver Mines (Peter Sherrington) NO OBSERVATION (weather). Light snow and rain fell to mid-afternoon, the temperature ranged from 1C to -1C, and low cloud and fog obscured the ridge all day preventing any possibility of movement.

Sunday, March 24 Steeples [Day 19] 1200-1915 (Vance Mattson). The temperature at 1200 was 6C and rose to a high of 13C, it was calm mixed with light SE winds, and 60% altostratus, cumulus and altocumulus cloud cover gave mostly sunny conditions until 1630 when dark cumulus moved in from the south bringing light rain from 1640 to 1730 that slightly obscured the ridges. These quickly cleared after 1745 when calm conditions resumed. There was another strong raptor movement with 112 migrants of 4 species seen between 1226 and 1833 comprising 16 Bald Eagles (8a, 8j), 1 adult light morph *calurus* Red-tailed Hawk, the season's first 2 Rough-legged Hawks (1 light morph, 1u), 92 Golden Eagles (87a, 4j, 1u) and 1 unidentified eagle. Hourly counts were 18 (1200-1300), 55 including 46 Golden Eagles (1300-1400), 18 (1400-1500), 13 (1500-1600), 3 (1600-1700), 1 (1700-1800) and 3 (1800-1833). Most of the birds moved even higher today and many moved west of the ridge and were initially spotted very high over the flank of Mount Bill Nye. Many of the birds also soared at length to impressive heights over the gap between ridges. At 1633 a gliding migrant Golden Eagle suddenly made a controlled hunting stoop, the result of which was unknown as it disappeared behind a ridge. There were three separate pair flights from non-migrant adult Bald Eagles and just one sighting of an adult resident Golden Eagle.

7.25 hours (97) BAEA 16 (166), RTHA 1 (3), RLHA 2 (2), GOEA 92 (368), UE 1 (4) TOTAL 112 (544)

Monday, March 25 Mount Lorette [Day 23] 0715-2015 (George Halmazna, assisted by Dan and Cindy Parliament). The temperature reached 10C at 1600 and 1700 from a morning low of -2C and was 3C at 2015. Ground winds were NW-W 0-2 km/h to 1100 after which they were SW for the rest of the day, mainly 5-10 km/h but 8-15 km/h between 1400 and 1700 and again 0-2 km/h after 1700, while ridge winds were SW light to moderate. Cloud cover was 100% altostratus with minor cumulus to 1000 that diminished to 30% cumulus at 1400 and 90% thin cirrostratus formed for the last 2 hours of observation. Location of high-flying birds in the blue sky was often challenging where cloud was absent and during the last 2 hours birds could only be aged when they flew against the face of Mount Lorette. The day produced a season-high count of 217 migrant raptors between 1101 and 1942 that comprised 6 Bald Eagles (5a, 1j), 1 adult Northern Goshawk and a season-high 210 Golden Eagles (202a, 1sa, 5j, 2u). All birds moved high or very high on the eastern route above the Fisher Range ridge to Mount Lorette where a few birds soared. Migration was strong and steady throughout the migration period and peaked between 1800 and 1900 when 65 Golden Eagles were seen. Resident birds were 3 adult Bald Eagles, a pair and a single bird, and 1 adult Golden Eagle that flew south from Hummingbird Plume Hill to Olympic Summit at 1242. Other birds seen in the area were 2 Snow Geese that flew from the Fisher Range to Mount Lorette at 1658, 2 Canada Geese, 25 adult white-headed gulls of unknown species that flew high to the north, 1 Northern Flicker, 1 Pileated Woodpecker,

2 Canada Jays, 19 Common Ravens, 1 Black-capped Chickadee, 2 Mountain Chickadees, 3 Red-breasted Nuthatches, 2 Varied Thrushes, 3 American Robins, 1 American Dipper, 1 Lapland Longspur and 4 “Slate-coloured” morph Dark-eyed Juncos. Twenty-four visitors were at the site today.

12.92 (250.3) BAEA 6 (64), NOGO 1 (5), GOEA 210 (683) TOTAL 217 (763)

Monday, March 25 Beaver Mines [Day 23] 0730-2000 (Peter Sherrington, assisted by Hilary Atkinson). The temperature at 0730 was -3C, the high was 10.5C at 1500 and it was 6C at 2000. Winds were W-WSW 20-40 gusting to 55 km/h to 1700 after which they were WNW 15-25 km/h and became light after 1900. Yesterday’s fog persisted to 0730 when the top of the hill became visible but by 0800 it was completely clear. Cloud cover was 10-40% cumulus to 1300, 80-100% altostratus and cumulus to 1500, 20-60% altocumulus, cumulus and cirrostratus to 1800 and 100% cirrostratus for the rest of the day, all of which gave excellent observing conditions. There was a moderately strong raptor movement of 86 birds of 5 species between 0901 and 1859 which was the highest count so far this season. The flight comprised 20 Bald Eagles (15a, 3sa, 2j), 1 adult male Northern Harrier, a season-high 3 Northern Goshawks (1a, 2u), 1 adult dark morph *harlani* Red-tailed Hawk and a season-high 61 adult Golden Eagles. Most birds soared high above the ridge, sometimes for extended periods, before gliding high to the N or NW. Movement was often sporadic with several raptor-free periods and the highest hourly count was 15 between 1100 and 1200 and again between 1400 and 1500. Ten Golden Eagles moved between 1806 and 1859. Other birds seen were 9 Canada Geese, 1 male Common Merganser that flew high to the NE at 1905. 27 Wild Turkeys, 12 Rock Pigeons, 3 Downy Woodpeckers, 1 Northern Flicker, 1 Pileated Woodpecker, 2 Blue Jays, 5 Black-billed Magpies, 7 American Crows, 55 Common Ravens 35 of which flew high to the SW to roost between 1700 and 1909, 3 American Robins, 50 European Starlings, 20 Evening Grosbeaks, 70 Grey-crowned Rosy-Finches that flew high to the north in 2 flocks at 1217 and 1558, and 2 Pine Siskins.

12.5 hours (263) BAEA 20 (108), NOHA 1 (2) NOGO 3 (6), RTHA 1 (3), GOEA 61 (193)
TOTAL 86 (325)

Monday, March 25 Steeples [Day 20] 1645-1845 (Vance Mattson). Teaching commitments again restricted observation to the late afternoon when the temperature was 12C, conditions were calm and cloud cover was 80% thin altostratus, altocumulus and cirrus. A total of 9 Golden Eagles (6a, 2j, 1u) migrated between 1652 and 1718. A resident Golden Eagle soared low in the gap and a non-migrant juvenile Bald Eagle soared high over the ridge and then high over Mount Bill Nye to the south. It was rainy and overcast in the morning but the mountains were clear by 1300 so it is probable that several birds migrated before 1645.

2 hours (99) GOEA 9 (377) TOTAL 9 (553)

Tuesday, March 26 Mount Lorette [Day 24] 0735-1950 (Blake Weis, assisted by Katherine Peterson). The temperature at the start was -2C, the high was 7C at 1300 and it was 0C at the end of observation. Ground winds were S-SW all day, 0-3 km/h to 1000 then 0-5 gusting 20 km/h to 1800 after which they were 0-5 gusting 10 km/h for the rest of the day, while ridge winds were moderate SW all day. Cloud cover to 1200 was 90-30% altocumulus, altostratus, cumulus and cirrus, but by 1300 it was 100% stratocumulus that brought snow flurries. The eastern ridges were clear to 1100 but by 1500 were 100% obscured, while the west was 10% obscured to 1000, 70-80% obscured to 1400 and by 1500 it was also 100% obscured. At 1535 the observers decided to relocate to the Lusk Creek site where the ridges were clear and cloud cover was 50-70% altostratus, altocumulus and cumulus. The first 6 Golden Eagles were seen from the Hay Meadow at 0918 and a total of 112 migrants, 1 Bald Eagle, 1 Northern Goshawk and 110 Golden Eagles were seen before the move to Lusk Creek with high hourly counts of 37 Golden Eagles between 0900 and 1000, and 25 Golden Eagles between 1100 and 1200. Lusk Creek produced a further 108 migrants up to 1930 comprising 102 Golden Eagles, 5 unidentified eagles and 1 small unidentified raptor, with the 3 hours after 1600 producing 27, 25 and 38 migrants respectively. The final combined count was a season-high 220 birds that comprised 1 adult Bald Eagle, 1u Northern Goshawk, a season-high 212 Golden Eagles (53a, 1sa, 158u), 5 unidentified eagles and 1 small unidentified raptor. At Hay meadow all birds initially moved high from the Fisher Range to Mount Lorette but moved at lower elevations as the weather deteriorated. The cloud conditions produced mainly silhouetted views of the migrants that resulted in the high number of unaged Golden Eagles. Resident birds seen at Hay Meadow were 1 subadult Bald Eagle, 1 adult Northern Goshawk and 1 adult Golden Eagle, while at Lusk Creek 1u Northern Goshawk and 1 adult Golden Eagle that moved to the south were considered to be non-migrants. Other birds seen at Hay Meadow were 1 Canada Goose on the river, 1 Hairy Woodpecker, 2 Canada Jays, 16 Common Ravens, 1 Black-capped Chickadee, 1 Mountain Chickadee, 1 Boreal Chickadee, 1 American Dipper, 4 singing Varied Thrushes, 5 American Robins, 4 European Starlings, 6 White-winged Crossbills, 1 Pine Siskin and 5 Dark-eyed Juncos. Only 2 visitors came to the Hay Meadow site today. Additional bird species seen at Lusk Creek were 1 Northern Pygmy-Owl that was chased away by 4 White-winged Crossbills, 2 Red-breasted Nuthatches, 1 Brown Creeper and a flock of 100 Bohemian Waxwings.

12.25 hours (262.5) BAEA 1 (65), NOGO 1 (6), GOEA 212 (895), UE 5 (10), UU 1 (2) TOTAL 220 (983)

Tuesday, March 26 Beaver Mines [Day 24] 0730-2000 (Peter Sherrington, assisted by Hilary Atkinson). The temperature at 0730 was 4C, the high was 9.5C at 1500 and it was 3C at 2000. Winds were strong WSW all day 40-50 gusting to 70 km/h, and cloud cover was mainly 40% altostratus, cumulus and cirrostratus that gave excellent observing conditions, except at 1300 and 1400 when 90% cumulus and altostratus gave occasional rain and sleet showers, and after 1900 when it was essentially cloudless. The conditions produced a moderate raptor migration of 56 birds, with a season-high 10 species moving between 0805 and 1913. The count was 6 Bald Eagles (5a, 1sa), 1u Sharp-shinned Hawk (the first of the season), 3a Northern Goshawks, a season-high 3 adult *calurus* Red-tailed Hawks (2 light, 1 dark), a season-high 3 Rough-legged

Hawks (2 light, 1 dark), a disappointing 35 Golden Eagles (33a, 1sa, 1j), the first 2 *columbarius* Merlins of the season (1a female, 1u), 1 female grey morph Gyrfalcon, the first Peregrine Falcon of the season, an adult male and 1 Prairie Falcon. The first Peregrine Falcon also occurred on this date last year. Movement was again sporadic with high hourly counts of only 10 birds between 1100 and 1200, and again between 1400 and 1500. Other birds seen were 2 Canada Geese, 18 Rock Pigeons, 1 Downy Woodpecker, 1 Hairy Woodpecker, 8 Blue Jays, 3 American Crows, 32 Common Ravens, 1 Black-capped Chickadee, 4 American Robins, 98 European Starlings, 37 Evening Grosbeaks and 5 Pine Siskins.

12.5 hours (275.5) BAEA 6 (114), SSHA 1 (1), NOGO 3 (9), RTHA 3 (6), RLHA 3 (11), GOEA 35 (228), MERL 2 (2), GYRF 1 (4), PEFA 1 (1), PRFA 1 (2) TOTAL 56 (381)

Tuesday, March 26 Steeples [Day 21] 1400-1900 (Vance Mattson). Initially the temperature was 9C, winds were strong S and cloud cover was 50-80% cumulus and altostratus. The ridges were obscured from 1600 to 1650 after which cloud reduced to 30% cumulus and winds became moderate S. A total of 7 Golden Eagles (4a, 1sa, 1j, 1u) migrated between 1501 and 1814 with 3 moving between 1501 and 1533 and 4 between 1756 and 1814. One non-migrant adult Bald Eagle was also seen.

5 hours (104) GOEA 7 (384) TOTAL 7 (560)

Wednesday, March 27 Mount Lorette [Day 25] 1430-1945 (Caroline Lambert). Snow, sometimes heavy, fell all day and the mountains were obscured, but Caroline arrived in the area at 1945 when it appeared that the snow was easing. She spent a couple of hours unsuccessfully searching for a clear ridge between Kananaskis Village and Lusk Creek before finally arriving at the Hay Meadow site. The temperature was 0C at 1430, reached a high of 2C at 1600 and was again 0C at 1945. Ground winds were NE-NW 0-5 gusting 10 km/h and ridge winds were also probably light. Cloud cover was 100% stratocumulus that briefly cleared to 80%, the east ridges were 100% obscured to 1800 but cleared to 80% late in the afternoon and the west was 100% obscured all day. Snow continued to fall throughout. The only migrant raptor was an unidentified eagle that glided to the north from Mount Old Baldy along the Fisher Range at 1611; an adult bird that soared low on the southern flank of Mount Allan and flew to the north was considered to be one of the resident pair. Other birds seen were 1 Black-billed Magpie, 1 Common Raven, 2 Black-capped Chickadees and 2 Mountain Chickadees and, not surprisingly, there were no visitors today.

5.25 hours (267.8) UE 1 (11) TOTAL 1 (984)

Wednesday, March 27 Beaver Mines [Day 25] 0730-1915 (Peter Sherrington, assisted by Hilary Atkinson). The temperature at 0730 was -3C, the high at 1400 was 4C and it was 0C at 1915 when heavy snow ended observation. Winds were light (5 km/h) and variable to 1330 after which

they were NE-ENE 5-10 gusting up to 18 km/h. Cloud cover was 100% low stratus all morning that obscured the ridge to 1015 and produced light freezing rain to 0830. The afternoon saw 100% stratocumulus cloud except between 1630 and 1715 when it reduced to 60-80% and allowed brief sunny breaks. At 1830 thick dark stratocumulus moved from the north bringing snow that persisted to the end of observation. Despite the generally unfavourable conditions there was a slow but persistent raptor movement of 20 birds of 6 species between 1052 and 1850 that comprised 2 Bald Eagles (1a, and 1 undifferentiated immature bird that was just discernible in the snow at 1850), 2 female Northern Harriers (1a, 1j), 1 adult Sharp-shinned Hawk, 2 light morph Rough-legged Hawks the second of which moved just ahead of the advancing snow storm at 1834, 12 adult Golden Eagles 11 of which were seen between 1506 and 1705, and 1 juvenile female Prairie Falcon that flew north at 1052. Other birds seen were 49 Canada Geese, a flock of 10 Trumpeter Swans that flew high to the north at 1338, 2 Mallards, 20 Rock Pigeons, 4 Downy Woodpeckers, 2 Northern Flickers, 14 Blue Jays, 2 Black-billed Magpies, 16 American Crows, 18 Common Ravens, 4 Black-capped Chickadees, 4 Mountain Chickadees, 1 Red-breasted Nuthatch, 3 American Robins, 121 European Starlings, 20 Evening Grosbeaks and 14 Pine Siskins. Yesterday (March 26) Cornell VanRyk reported the area's first Ferruginous Hawk this year, an adult light morph bird, at his home on the lower Castle River 10 km ENE of Beaver Mines.

11.75 hours (287.3) BAEA 2 (116), NOHA 2 (4), SSHA 1 (2), RLHA 2 (13) GOEA 12 (140), PRFA 1 (3) TOTAL 20 (401)

Wednesday, March 27 Steeples [Day 22] 1645-1830 (Vance Mattson). A Wednesday teaching commitment again prevented Vance from arriving at the site before 1645 where the temperature was 11C, conditions were calm and cloud cover was 40-80% cumulus and altostratus. No migrants were seen, but a resident and juvenile Golden Eagle were present with the juvenile soaring low near the site, and a subadult Bald Eagle was soaring when Vance arrived, but glided to the south.

1.75 hours (105.8) TOTAL 0 (560)

Thursday, March 28 Mount Lorette [Day 26] 0715-2005 (Blake Weis, assisted by Rick Robb). The starting temperature was -2C, the high at 1600 and 1700 was 5C and it was 4C at the end of observation. Ground winds were N-NE 0-5 km/h to 1100, S-SW 0-5 gusting 10 km/h to 1700 and then N-NE 0-5 km/h again for the rest of the day, while ridge winds were light NW to 1100 and then W-NW light to moderate. Cloud cover was 100-90% cumulus, altocumulus and stratocumulus to 1000, variable 60-90% altostratus, altocumulus and cumulus to 1700 and then 60% altocumulus to the end. All ridges were initially obscured but gradually cleared throughout the morning and all were completely clear by 1300. Light snow fell to 1000. There was fairly strong raptor movement of 144 birds of 4 species between 1018 and 1915 that comprised a season-high 36 Bald Eagles (26a, 3sa, 1j, 3 undifferentiated immature birds and 3u), 102 Golden Eagles (79a, 1sa, 1j, 21u), 4 unidentified eagles, the season's first Gyrfalcon, a grey morph and 1

Prairie Falcon. With a couple of exceptions movement was exclusively on the western route from Mount Kidd to Olympic Summit and thence to the NW over Skogan Pass to 1300, after which movement was equally divided between the western and eastern routes (Fisher Range to Mount Lorette). The light winds produced much soaring flight with a maximum kettle of 7 Golden Eagles over Olympic Summit. Movement was persistent and steady to 1800 with a high hourly count of 26 (2 Bald Eagles, 22 Golden Eagles and 2 unidentified eagles) between 1500 and 1600, but 1800-1900 produced just 1 Golden Eagle and 1900-2000 just 1 Bald Eagle. A resident Northern Goshawk called early in the morning near the parking area, and later 2 probable adult males flew above the western valley with one bird performing a display flight before harassing the second bird, and the resident Golden Eagle pair were seen several times displaying and perching together in the vicinity of Olympic Summit. Other birds seen in the area were a flock of 25 Snow Geese that flew north above the Fisher Range at 1415, 6 Canada Geese, 1 drumming Ruffed Grouse, 1 Hairy Woodpecker, 1 Northern Flicker, 2 Pileated Woodpeckers, 2 Canada Jays, 1 American Crow, 16 Common Ravens, 4 Black-capped Chickadees, 4 Mountain Chickadees, 2 Boreal Chickadees, 1 Red-breasted Nuthatch, 4 singing Varied Thrushes, 4 American Robins, 55 Bohemian Waxwings in 3 flocks all of which flew south, 1 Common Redpoll, 4 White-winged Crossbills, the first American Tree Sparrow of the season and 7 Dark-eyed Juncos. Ten visitors were at the site today.

12.83 hours (280.6) BAEA 36 (101), GOEA 102 (997), UE 4 (15), GYRF 1 (1), PRFA 1 (1)
TOTAL 144 (1128)

Thursday, March 28 Beaver Mines [Day 26] 0900-2000 (Peter Sherrington, assisted by Hilary Atkinson). The temperature at 0900 was -3C, the high at 1600 was 3C and it was 0C at 2000. Winds were light (<10 km/h) and variable to 1800 when they became light SW-W. Cloud cover was 100% stratus 1745 when it began to quickly break and by 1800 it was 30% cumulus and at 1900 it was cloudless, after which altostratus developed that reached 80% at 2000. The ridge cleared at 0900 that allowed observation to start, but snow persisted to 1150 that left 8 cm of fresh snow on the ground. There was again a disappointing and very sporadic raptor movement involving 28 birds of 3 species that moved to the north between 1304 and 1653 comprising 3 Bald Eagles (2a, 1sa), 1 adult light morph *calurus* Red-tailed Hawk and 24 Golden Eagles (21a, 1sa, 2j). With the exception of a juvenile Golden Eagle at 1419 all birds moved in two waves, the first of 9 birds between 1304 and 1352 and the second involving 18 birds between 1522 and 1653 that included the highest hourly count of 13 (all Golden Eagles) between 1600 and 1700. All birds soared high above the ridge before gliding to the north, with some birds disappearing into the base of the stratus cloud. Other birds seen were 33 Canada Geese, 16 Rock Pigeons, 4 Downy Woodpeckers, 2 Hairy Woodpeckers, 1 Northern Flicker, 6 Blue Jays, 1 Black-billed Magpie, 60 Common Ravens, 5 Black-capped Chickadees, 1 Mountain Chickadee, 1 Townsend's Solitaire, 9 American Robins, 111 European Starlings, 30 Evening Grosbeaks, 1 singing Cassin's Finch, 50 Pine Siskins and 9 Dark-eyed Juncos (1 *hyemalis*, 3 *cismontanus* and 5 *montanus*).

11 hours (298.3) BAEA 3 (119), RTHA 1 (7), GOEA 24 (264) TOTAL 28 (429)

Thursday, March 28 Steeples [Day 23] 1400-1830 (Vance Mattson). The temperature was 9C to 10C, conditions were calm and cloud cover was 80-100% altostratus and dark cumulus. A total of 7 eagles that comprised 2 Bald Eagles (1a, 1sa), 4 Golden Eagles (3a, 1u) and 1 unidentified eagle. With the exception of the subadult Bald Eagle at 1734, all birds migrated between 1416 and 1535. Non-migrant birds were 6 Bald Eagles (3a, 1sa, 2j) that included a pair that flew west together into the valley, and three sightings of adult Golden Eagles including one that made a brief display flight.

4.5 hours (110.3) BAEA 2 (168), GOEA 4 (388), UE 1 (5) TOTAL 7 (567)

Friday, March 29 Mount Lorette [Day 27] 0715-2005 (Caroline Lambert, assisted by Patrick Farley, Patricia Farley and Doug Pederson). The temperature at 0715 was -1C, the high was 8C at 1700 and 1800 and it was 1C at 2000. Ground winds were light and variable all day with the exception of around 1500 when they gusted to 15 km/h from the S, while ridge winds were also mainly light and variable all day. Cloud cover was initially 90% cumulus, altocumulus and altostratus that gradually dwindled to 10% cirrus at 1800 before increasing to 50% cirrus and expanded contrails late in the day. Both ridge systems were initially obscured with the east clearing after 0900 and the west clear after 1100. There was a moderate raptor movement that involved only eagles between 1040 and 1940 comprising 2 adult Bald Eagles, 55 Golden Eagles (45a, 4sa, 1j, 5u) and 1 unidentified eagle. With the exception of one bird all movement was on the western route until 1720 where birds mainly soared high over Olympic Summit before gliding high to the NW behind the summit of Mount Allan, but after 1720 soaring birds were located on the eastern route over the Fisher Range or Mount Lorette. Movement was steady throughout the day but significantly increased after 1800 with 14 and 10 Golden Eagles seen between 1800 and 1900, and 1900 to 1940 respectively. A resident adult Northern Goshawk were heard calling east of the river early in the morning and 1 later hunted over the west valley, and a juvenile hunted above Hummingbird Plume Hill in the mid-afternoon; and the Golden Eagle pair was seen once, hunting against the face of Mount Bogart. Other birds in the area were 6 Canada Geese, 1 drumming Ruffed Grouse, 1 Pileated Woodpecker, 1 Northern Shrike, 1 Canada Jay, 1 Black-billed Magpie, 16 Common Ravens, 3 Black-capped Chickadees, 6 Mountain Chickadees, 3 Boreal Chickadees, 2 Red-breasted Nuthatches, 2 male Mountain Bluebirds that riskily shared the meadow with the shrike around 1500, 5 singing Varied Thrushes, 3 American Robins, 20 European Starlings, a flock of 20 Bohemian Waxwings that flew north and 7 singing Dark-eyed Juncos. Four Bighorn Sheep were on Olympic Summit and an American Mink was seen on the river bank at the site and entertained several of today's 20 visitors.

12.58 hours (293.2) BAEA 2 (103), GOEA 55 (1052), UE 1 (16) TOTAL 58 (1186)

Friday, March 29 Beaver Mines [Day 27] 0730-2000 (Peter Sherrington, assisted by Gord Petersen and Hilary Atkinson). The starting temperature at 0730 was -1C, the high was 6.5C at 1800 and it was 2C at 2000. Winds were mainly NE 5-15 km/h in the morning that became light to 1600, after which they were light SW-SSW for the rest of the day. Cloud cover was 100-70%

mainly stratocumulus and cumulus to 1730, with the exception of 1000 and 1100 when it was 30-40% cumulus and cirrus, but after 1730 the sky cleared to 40-20% cumulus, cirrostratus and expanded contrails which gave sunny conditions at the end of the day. The day started promisingly with a Sharp-shinned Hawk flying north at 0929 and 2 Golden Eagles gliding high to the north at 1048 and 1055, but a third Golden Eagle was not seen until 1510 and the only sustained movement was when 20 Golden Eagles soared high above the SW flank of the ridge between 1641 and 1742 including 8 that soared together at 1655. The last bird of the day was an adult Bald Eagle at 1841. The final count of 29 birds was 2 Bald Eagles (1a, 1j), 1a Sharp-shinned Hawk, 2a Northern Goshawks and 24 Golden Eagles (22a, 2sa). The resident pair of Golden Eagles soared above the ridge together between 1141 and 1155, and the resident juvenile perched at the top of the hill at 1545. Other birds seen were 4 Canada Geese, 2 Mallards, a flock of 60 Northern Pintails that flew high to the north at 1054, 53 Wild Turkeys, 16 Rock Pigeons, 4 Downy Woodpeckers, 1 Northern Flicker, 5 Blue Jays, 2 Black-billed Magpies, 10 American Crows, 19 Common Ravens, 2 Black-capped Chickadees, 2 Mountain Chickadees, 4 American Robins, 36 European Starlings, 21 Evening Grosbeaks, 55 Grey-crowned Rosy-Finches that flew high to the north in 2 flocks at 1825 and 1845, 2 female Cassin's Finches, 8 Pine Siskins and 8 Dark-eyed Juncos (1 *hyemalis*, 2 *cismontanus* and 5 *montanus*).

12.5 hours (310.8) BAEA 2 (121), SSHA 1 (3), NOGO 2 (11), GOEA 24 (288) TOTAL 29 (458)

Friday, March 29 Steeples [Day 24] 1200-1830 (Vance Mattson). The temperature reached 13C from a starting low of 7C, conditions were initially calm with light E winds developing later and 80% cumulus cloud cover at the start reduced to 20% at the end of the day. Only 3 migrants were seen between 1418 and 1757: 1 adult Bald Eagle and 2 Golden Eagles (1a, 1j). Non-migrant activity was somewhat more eventful with a resident Golden Eagle soaring high above the site from 1630 to 1641, 7 Bald Eagles (5a, 2j) that included a pair-flight and extended dueling of the juvenile birds in which an adult briefly joined in, and the first sightings of the resident pair of Northern Goshawks that chased and dived at each other at 1659. The ice was fully melted on Wasa Lake and 7 Bald Eagles (3a, 1sa and 2j) fished the lagoon and a spirited territorial battle between 2 adults was seen after which to two combatants parted the scene in opposite directions.

6.5 hours (116.8) BAEA 1 (169), GOEA 2 (290) TOTAL 3 (570)

Saturday, March 30 Mount Lorette [Day 28] 0710-2030 (Blake Weis, assisted by Cliff Hansen and Doug Pederson). The temperature reached a high of 12C from 1600 to 1900 from a starting low of -7C and it was 5C at the end of observation. Ground winds were WSW 0-5 km/h to 1500, variable 0-5 gusting 10 km/h to 1800 and NW-NE 5-10 gusting 20 km/h for the rest of the day; while ridge winds were light to moderate SW to 1600 after which they were moderate WSW. Cloud cover was 10-20% cirrus to 1500 after which it was 20% altocumulus and cirrus which gradually increased to 90% at the end of the day. The first migrant at 0943 was the first Merlin of the season and by 2010 a total of 143 raptors of a season-high 5 species had been counted. The flight was 11 Bald Eagles (9a, 1 undifferentiated immature bird and 1u), 1u Sharp-shinned Hawk

(the first of the season), 1 light morph Rough-legged Hawk, 127 Golden Eagles (103a, 1sa, 4j, 19u), 1 unidentified eagle, 1 Merlin of undetermined race, sex or age and 1 unidentified raptor. The highest hourly count was 52 Golden Eagles between 1100 and 1200 that was followed by 2 Bald Eagles and 30 Golden Eagles the next hour. Only 12 further raptors were seen up to 1900 but 1900-2000 produced 4 Bald Eagles, 1 Sharp-shinned Hawk and 38 Golden Eagles, and the unidentified eagle at 2010 was the latest seen so far this season. All birds moved on the western route to 1300, soaring high on Olympic Summit and gliding high to the NW behind the summit of Mount Allan or to the NW over Skogan Pass, between 1300 and 1900 one-third of the birds used the west and two-thirds the east and the last big movement after 1900 was exclusively on the eastern route from the Fisher Range to Mount Lorette. Resident birds were 1 or 2 Northern Goshawks, a pair of adult Bald Eagles that soared together for 10 minutes above the northern end of the Fisher Range and drifted slowly to the south, and an adult Golden Eagle that displayed to 4 migrant birds over Olympic Summit at 1120. Other birds in the area were 43 Canada Geese including a flock of 35 that flew to the north, 1 male Common Merganser, 1 singing Northern Pygmy-Owl on Hummingbird Plume Hill that was reported by a visitor to the site, 1 drumming Ruffed Grouse, 40 unidentified gulls that flew high to the north over the western route at 1130, 1 Hairy Woodpecker drumming, 2 Pileated Woodpeckers, 1 Northern Flicker, 1 Canada Jay, 2 American Crows, 13 Common Ravens, 1 Black-capped Chickadee, 4 Mountain Chickadees, 1 Boreal Chickadee, 3 Red-breasted Nuthatches, 1 Golden-crowned Kinglet, 3 male and 1 female Mountain Bluebirds in the meadow, 4 singing Varied Thrushes, 60 American Robins, 3 European Starlings, 1 Pine Siskin, 1 White-winged Crossbill and 6 Dark-eyed Juncos. Ten White-tailed Deer were in the Meadow and 23 Bighorn Sheep were on Olympic Summit, and butterflies seen were 1 Mourning Cloak, 3 Milbert's Tortoiseshells and 1 unidentified Comma. There was much to enjoy for the 38 visitors to the site today.

13.33 hours (306.5) BAEA 11 (114), SSHA 1 (1), RLHA 1 (3), GOEA 127 (1179), UE 1 (17), MERL 1 (1), UU 1 (3) TOTAL 143 (1329)

Saturday, March 30 Beaver Mines [Day 28] 0730-2000 (Peter Sherrington, assisted by Gord Petersen and Hilary Atkinson). The temperature at 0730 was 2C, the high from 1300 to 1800 was 12C and it was 7C at 2000. Winds were SW-WNW 5-10 gusting 30 km/h to 1345, after which they were variable but mainly ESE-NE 5-10 gusting 15 km/h. It was mainly cloudless with trace amounts to 10% cirrus to 1900 when 10% scattered cumulus developed that became 50% at 2000. There was yet another disappointing raptor movement of only 13 birds between 0935 and 1715 that comprised 1 adult Bald Eagle, 1 adult Northern Goshawk, 1u Rough-legged Hawk and 10 Golden Eagles (7a, 2sa, 1j). Seven of the Golden Eagles moved between 0935 and 1028, and the other 3 were seen between 1540 and 1545. A non-migrant light morph Rough-legged Hawk flew low to the SW at 1530 before perching on a cottonwood tree for an hour. Other birds were also sparse and comprised 2 Canada Geese, 38 Wild Turkeys, 9 Rock Pigeons, 3 Downy Woodpeckers, 1 Hairy Woodpecker, 1 Northern Flicker, 1 adult Northern Shrike, 1 Blue Jay, 14 American Crows, 21 Common Ravens, 2 Mountain Chickadees, 2 Townsend's Solitaires, 2 American Robins, 40 European Starlings, 28 Evening Grosbeaks, 30 Grey-crowned Rosy-

Finches that flew high to the north at 1620, 3 Pine Siskins and 1 *montanus* ("Oregon") Junco. Butterflies seen were 1 Mourning Cloak and 1 probable Green Comma.

12.5 hours (323.3) BAEA 1 (122), NOGO 1 (12), RLHA 1 (14), GOEA 10 (298) TOTAL 13 (471)

Saturday, March 30 Steeples [Day 25] 1200-1900 (Vance Mattson). It was a beautiful day with the temperature reaching 14C from a starting low of 7C, conditions were calm and cloud cover was 10-40% thin altostratus, altocumulus and cirrus. A total of 24 migrants were seen between 1225 and 1746 comprising 7 Bald Eagles (8a, 7j), 1 dark morph Red-tailed Hawk of undetermined race, morph or age, 15 Golden Eagles (8a, 7j) and 1 unidentified eagle. Six birds moved between 1300 and 1400, 10 between 1400 and 1500 and 5 between 1500 and 1600. Non-migrants were the season's first Turkey Vultures, none of which exhibited migratory behaviour, 13 Bald Eagles (6a, 1sa, 6j) and the first resident adult light morph *calurus* Red-tailed Hawk. No resident Golden Eagles were seen today.

7 hours (123.8) BAEA 7 (176), RTHA 1 (4), GOEA 15 (405), UE 1 (6) TOTAL 24 (594)

Sunday, March 31 Mount Lorette [Day 29] 0650-2000 (Bill Wilson, assisted by Lori Anderson, Doug Pederson, Heinz Unger and Graeme Dunlop). The starting temperature was -1C, the high was 7C at 1400 and 1500 and it was 1C at the end of observation. Ground winds were SSE-SSW 2-10 gusting 24 km/h to 1400, NNE 5-20 gusting 35 km/h to 1700 and then NNE-NNW 5-15 km/h for the rest of the day; ridge winds were probably moderate SW all day. Cloud cover was 100% stratus to 0900, 90-100% altostratus to 1200 and then 100% stratus for the rest of the day that gave light to moderate flurries between 1500 and 1700 and then light to moderate snow for the rest of the day. Ridges were mostly clear to 1300 becoming 20-30% obscured at 1400 and completely obscured after 1500. Despite the weather conditions there was a fairly strong raptor movement of 133 birds of 4 species between 0848 and 1736 that comprised 8 Bald Eagles (7a, 1j), 1 light morph Rough-legged Hawk, 121 Golden Eagles (70a, 2sa, 2j, 47u), 2 unidentified eagles and 1 large unidentified falcon. One hundred and one birds moved between 1100 and 1500 with a high hourly count of 38 between 1300 and 1400 and 2 Bald Eagles and 2 Golden Eagles moved in the falling snow between 1700 and 1736. Birds used both the western and eastern routes throughout the day with the majority (88 birds) using the west where they mainly soared over the southern flank of Mount Allan and Olympic Summit before gliding high to the NW behind the summit of Mount Allan. Resident birds were 2 adult Bald Eagles that soared at Mount Lorette and flew south at 1527, 2 records of Northern Goshawks, a resident adult light morph *calurus* Red-tailed Hawk that soared over the valley at 1147 and glided to the south, and 2 sightings of adult Golden Eagles including one that displayed over Mount Old Baldy at 1339. Other birds recorded were 4 Snow Geese that flew low, appropriately in the snow, above the river with Canada Geese where they landed at 1913, a further 120 Canada Geese that flew north in flocks of 50, 40 and 30, 1 Mallard, 1 female Common Merganser, 1 or 2 Ruffed Grouse, 9 (1+8) unidentified gulls that flew high to the north at 1511 and 1734 respectively, 2 Northern Flickers,

1 adult Northern Shrike, 2 Canada Jays, 17 Common Ravens, 2 Black-capped Chickadees, 1 Mountain Chickadee, 1 Red-breasted Nuthatch, 4 male Mountain Bluebirds in the meadow, 3 singing Varied Thrushes, 42 American Robins, 2 European Starlings, 160 Bohemian Waxwings in two flocks of 80 birds, 4 Red Crossbills, 1 Song Sparrow singing east of the river and 3 Dark-eyed Juncos. Twenty-five visitors were at the site today.

14.16 (320.7) BAEA 8 (122), RLHA 1 (4), GOEA 121 (1300), UE 2 (19) UF 1 (1) TOTAL 133 (1462)

March summary (With variance from the long-term 1993-2018 22-year average, that excludes the anomalously low counts in 2008-2010 and 2012 which are considered invalid). 29 days (+0.5%), 320.7 hours (+2.9%) BAEA 122 (+9.4%), SSHA 1 (-62.7%), NOGO 6 (-46.3%), RTHA 2 (-58.1%), RLHA 4 (-24.1%), GOEA 1300 (-46% and the lowest ever total for a valid March count), MERL 1 (-56%), GYRF 1 (-4.3%), PRFA 2 (+109.5%), UE 19 (+464.9%), UF 1 (+175%), UU 3 (+407.7%) TOTAL 1329 (-48% and the lowest ever combined-species total for a valid March count). Species previously recorded in March but not recorded this year were TUVU, NOHA, COHA, BWHA and PEFA; OSPR, SWHA, FEHA and AMKE have never been recorded in March.

Sunday, March 31 Beaver Mines [Day 29] 0730-2000 (Peter Sherrington, assisted by Hilary Atkinson). The temperature at 0730 was -1C the high at 1600 was 11C and it was 4C at the end of observation at 2000. Winds were variable and light to 1400 when they became mainly WSW 10-15 gusting 30 km/h to 1900, after which they were NE 10-15 km/h for the rest of the day. Cloud cover was mainly 100% stratocumulus to 1430 when it became 40-60% cumulus and cirrus to 1800 after which it was again 100% stratus and stratocumulus that produced light rain showers between 1900 and 1920. The day saw a moderate raptor movement of 70 birds (the second highest count of the season) of 6 species between 1121 and 1752. The flight was 9 Bald Eagles (6a, 3sa), 1 adult Northern Goshawk, 2 adult light morph *calurus* Red-tailed Hawks, 1 light morph Rough-legged Hawk, 55 Golden Eagles (31a, 4sa, 5j, 15u) and 1 male Prairie Falcon. Sixty-six birds moved between 1424 and 1752 coincident with the development of the moderate WSW winds, and the highest hourly count was 23 between 1600 and 1700. Other birds seen were 34 Canada Geese including a flock of 30 that flew high to the north at 0938, a leek of 36 Wild Turkeys including 2 displaying males, 9 Rock Pigeons, 3 Downy Woodpeckers, 5 Blue Jays, 20 American Crows, 12 Common Ravens, 4 Mountain Chickadees, 8 American Robins, 23 European Starlings, 40 Evening Grosbeaks, and 2 Pine Siskins.

12.5 hours (335.8) BAEA 9 (131), NOGO 1 (13), RTHA 2 (9), RLHA 1 (15), UB 1 (1), GOEA 55 (353), PRFA 1 (4) TOTAL 70 (541)

March summary (with variance from the 2015-2018 average in parenthesis). 29 days (+3.6%), 335.8 hours (+48.8%), BAEA 131 (-26.4%), NOHA 4 (-61.9%), SSHA 3 (-77.4%), NOGO 13 (-63.1%), RTHA 9 (-83.9%), RLHA 15 (-77.2%), GOEA 353 (-64%), MERL 2 (-73.3%), GYRF 4 (-5.9%), PEFA 1 (-33.3%), PRFA 4 (=), UB 1 (-80%), UU1 (-42.9%) TOTAL 541 (-60.6%).

Species previously recorded in March but not recorded this year were TUVU, COHA, BWHA, SWHA and AMKE; OSPR has never been recorded in March.

Sunday, March 31 Steeples [Day 26] 1230-1930 (Vance Mattson). The temperature was initially 8C that rose to a high of 10C, conditions were calm throughout and cloud cover was 100% altostratus and dark cumulus that brought rain and obscured the ridges from 1430 to 1530, but was then 40% cumulus and thin altostratus that gave sunny conditions. Despite the weather interruption the day produced 35 migrant raptors of 4 species between 1253 and 1757 comprising 3a Turkey Vultures, the first migrants of the season, 14 Bald Eagles ((8a, 2sa, 4j), 1u Sharp-shinned Hawk that was the first bird seen and a first record for the season, and 17 Golden Eagles (13a, 2j, 2u). Migration was initially slow with just 4 birds seen before 1530, but 14 migrants were seen between 1533 and 1600 with many of the birds moving in light rain between the ridge and the site as the ridge was clearing. The ridges were clear by 1600 but only 1 migrant moved before 1700, but the following hour produced 16 migrants with the last Golden Eagle seen at 1757. Non-migrants were 6 Turkey Vultures, 5 adult Bald Eagles including 2 pair-flights, 1 resident Sharp-shinned Hawk and 3 Golden Eagles (2a, 1j) with one adult seen displaying. Forty Tundra Swans moved to the NE at 1317.

7 hours (130.8) TUVU 3 (3), BAEA 14 (190), SSHA 1 (1), GOEA 17 (422) TOTAL 35 (692)

March summary (with variance from the 2010-2018 average in parenthesis). 26 days (+28.6% and equals highest days), 130.8 hours (+58.4%, new high), BAEA 190 (+93.2%, new high), NOHA 1 (+200%), SSHA 1 (-50%), RTHA 4 (-21.7%), RLHA 2 (-10%), GOEA 422 (+49.9%), UE 6 (+237.6%) TOTAL 629 (+58.7%, second highest March count after 643 last year. Species previously recorded in March but not recorded this year were OSPR, NOGO, AMKE, MERL and PEFA, while COHA, BWHA, SWHA, FEHA, GYRF and PRFA have never been recorded on a spring count.

Monday, April 1 Mount Lorette [Day 30] 0700-1950 (George Halmazna, assisted by Dan Parliament and Graeme Dunlop). The temperature was -3C at 0700, the high was 4C at 1600 and 1700 and it was 2C at the end of observation. It was calm to 1100, then ground winds were NE 2-8 km/h to 1400, SW 2-5 km/h at 1500 and 1600 and NE 5-20 km/h after 1700; ridge winds were probably light to moderate W-NW. Cloud cover was 100-70% altostratus, altocumulus, cumulus and stratus all day with the exceptions of 1100 and 1900 when it reduced to 50%, and there were frequent snow flurries that swept from the west between 1300 and 1800. The eastern ridges were 90% obscured to 1200, 50% to 1400, 30% at 1500, clear at 1600 and 1700 and then 80-90% obscured after 1800; the west was 30% obscured to 0900 and then variably obscured to 1600 after which it was mainly clear. Remarkably these unpromising conditions produced a season-high total of 283 migrant raptors of 6 species between 1050 and 1845 that comprised 15 Bald Eagles (10a, 3sa, 2j), the season's first Northern Harrier, a juvenile bird of unknown sex, 2 adult Northern Goshawks, 1 adult light morph *calurus* Red-tailed Hawk, a season-high 263 Golden Eagles (174a, 4sa, 10j, 75u) and 2u *columbarius* Merlin. Movement was mainly on the western

route to 1500 with birds soaring high with kettles of up to 20 eagles that often disappeared into the cloud base, and then glided high to the NW either behind the summit of Mount Allan or above Skogan Pass. After 1500 the movement was entirely on the eastern route which saw the highest single hour count of 78 birds (76 Golden Eagles) between 1500 and 1600. Resident birds were 1 adult Bald Eagle, 1 calling and displaying adult Northern Goshawk, and the pair of resident Golden Eagles to the west where the male displayed above the southern flank of Mount Allan. Other birds recorded on a busy day were 4 Canada Geese, 1 drumming Ruffed Grouse, 1 Northern Flicker, 1 Pileated Woodpecker, 9 American Crows, 19 Common Ravens, 2 Black-capped Chickadees, 2 Red-breasted Nuthatches, 1 male Mountain Bluebird, 5 singing Varied Thrushes, 19 American Robins, 7 European Starlings, 10 Bohemian Waxwings and 8 Dark-eyed [Oregon] Juncos. Eight visitors were at the site today.

12.83 (333.5) BAEA 15 (137), NOHA 1 (1), NOGO 2 (8), RTHA 1 (3), GOEA 263 (1563), MERL 2 (3) TOTAL 284 (1746)

Monday, April 1 Beaver Mines [Day 30] 0730-1930 (Peter Sherrington, assisted by Everett Hanna and 22 biology students from Lethbridge College, and Hilary Atkinson). The temperature at 0730 was 0C, the high was 7C at 1600 and 1700 and it was 4C at 1930. Winds were light W-SSW to 1030, light NE-E to 1330 when they were mainly SW-SSW 5-10 gusting 15 km/h to 1900, after which it was calm. Heavy snow fell at 0730 that left 4 cm of fresh snow on the ground when it stopped at 0830 and the ridge cleared. Cloud cover was 100-70% stratocumulus, cumulus and altostratus in the morning that cleared throughout the afternoon giving excellent observing conditions to 1700 after which it was essentially cloudless. The day saw a season-high migration of 95 raptors of 6 species that moved between 1052 and 1841 and comprised 13 Bald Eagles (8a, 3sa, 2j), 1 adult male Northern Harrier, a season-high 7 adult Red-tailed Hawks (6 light and 1 dark *calurus*, and 1 dark *harlani*), a season-high 71 Golden Eagles (51a, 8sa, 10j, 2u), 1 unidentified eagle and 1 Prairie Falcon. The highest hourly count was 1400-1500 when 44 raptors were counted that included 35 Golden Eagles, 11 of which soared high together at 1440. A resident Golden Eagle displayed vigorously above the centre of the valley at 1429. Other birds in the area were 2 Canada Geese, 2 Tundra Swans that flew north at 1120 a distant flock of unidentified swans that flew north at 1444, 3 Mallards, 11 Wild Turkeys, 12 Rock Pigeons, a flock of 15 California Gulls, the first of the season, that flew north at 1205, 3 Downy Woodpeckers, 1 Hairy Woodpecker, 1 Northern Flicker, 1 Pileated Woodpecker, 1 adult Northern Shrike, 7 Blue Jays, 1 Black-billed Magpie, 37 American Crows, 23 Common Ravens, 2 Black-capped Chickadees, 3 Mountain Chickadees, 1 Red-breasted Nuthatches, a pair of Mountain Bluebirds, 17 American Robins, 70 European Starlings, 20 Evening Grosbeaks, 1 male Cassin's Finch and 20 Pine Siskins.

12 hours (347.8), BAEA 13 (144), NOHA 1 (5), NOGO 1 (14), RTHA 7 (16), GOEA 71 (424), UE 1 (1), PRFA 1 (5) TOTAL 95 (636)

Monday, April 1 Steeples [Day 27] 1630-1945 (Vance Mattson). Afternoon teaching commitments again resulted in a late start, but despite not arriving at the site at 1630 Vance counted 13 migrants: 3 adult Bald Eagles, 1 adult light morph *calurus* Red-tailed Hawk and 9 Golden Eagles (8a, 1u) between 1648 and 1919, the last of which was the latest bird seen this season. Most of the Golden Eagles moved in pairs. Non-migrants were 9 Turkey Vultures and the season's first American Kestrel that mobbed a Golden Eagle as it flew low above the flank of Mount Bill Nye. The temperature was 11C, it was calm and 30-50% cumulus and altocumulus cloud cover gave sunny conditions.

3.25 (134) BAEA 3 (193), RTHA 1 (5), GOEA 9 (431) TOTAL 13 (642)

Tuesday, April 2 Mount Lorette [Day 31] 0730-2015 (Cliff Hansen, assisted by Rick Robb and Graeme Dunlop). The temperature was -4C at 0730, the high at 1700 was 10C and it was 4C at 2015. Ground winds were very light 0-5 km/h to 1300 then S-SW 0-15 km/h to 1700 after which they were again very light, while ridge winds were light to moderate SW all day. It was initially cloudless with a trace of cumulus that gradually increased to a maximum of 40% at 1600 after which it gradually dwindled to a trace of cirrus at the end of observation. There was another strong raptor migration with 173 birds of a season-high 7 species moving between 1015 and 1931 that comprised 16 Bald Eagles (15a, 1sa), 2u Sharp-shinned Hawks, 1u Northern Goshawk, 1 Red-tailed Hawk of unknown age, morph or race, 2u Rough-legged Hawks, 1 unidentified *Buteo*, 147 Golden Eagles (51a, 3sa, 11j, 82u), 2 unidentified eagles and 1u *columbarius* Merlin. The lack of detail on many of the birds resulted from back-lighting of very high flying birds against an often clear blue sky. Movement was strong throughout the migration period with 93 birds seen before 1300 that included a maximum hourly count of 49 between 1200 and 1300, and the last 22 moved after 1800. All birds were seen on the western route until 1400 with birds again soaring very high on the southern flank of Mount Allan and Olympic Summit before gliding very high to the NW behind the summit of Mount Allan. After 1400 most birds used the eastern route with birds again soaring very high above the Fisher Range and gliding very high to the NW to Mount Lorette. A resident adult Northern Goshawk was seen on a nest, and the Golden Eagle pair was seen over Olympic Summit where the male displayed. Other birds recorded were 3 Canada Geese on the river, 1 female Common Merganser, 1 drumming Ruffed Grouse, the season's first Killdeer, 1 Northern Flicker, 1 Pileated Woodpecker, 1 American Crow, 13 Common Ravens, 1 Red-breasted Nuthatch, 2 male Mountain Bluebirds in the meadow, 2 singing Varied Thrushes, 5 American Robins, 10 Bohemian Waxwings, a flock of 30 Grey-crowned Rosy-Finches that flew high on the Fisher Range and 2 Dark-eyed Juncos. A single Mule Deer unusually joined 11 White-tailed Deer to feed in the meadow, where a Striped Skunk was also seen. Five visitors were at the site today.

12.75 hours (346.2) BAEA 16 (153), SSHA 2 (3), NOGO 1 (9), RTHA 1 (4), RLHA 2 (6), UB 1 (1), GOEA 147 (1710), UE 2 (21), MERL 1 (3) TOTAL 173 (1919)

Tuesday, April 2 Beaver Mines [Day 31] 0730-2015 (Peter Sherrington, assisted by Hilary Atkinson). The temperature at 0730 was 0C, the high at 1400 and again at 1600 was 8C and it was 4C at 2015. Winds were very variable but principally from the NE to the SSE, mainly light but occasionally briefly gusting to 20 km/h. Cloud cover was 100-90% stratocumulus to 1030 that produced light snow flurries to 0830, 20-60% cumulus to 1500, 50-60% cumulus and altostratus to 1600 and finally 40% very thin cirrostratus with traces of altocumulus to 2015. Observation conditions were excellent and thermal lift was strong but the day only produced 9 migrant raptors comprising 5 adult *calurus* Red-tailed Hawks (4 light and 1 dark) and 4 Golden Eagles (3a, 1j). For much of the day a pair of resident light morph Red-tailed Hawks was present and conspicuous between 1124 and 1815 performing several low and high intensity display flights, soaring as a pair with legs dangling and hunting the valley floor. Dark-eyed Juncos (1 *hyemalis* and 1 *montanus*). Moderate SW winds are forecast so we are Other birds recorded were 6 Canada Geese, 6 Mallards, a pair of Common Mergansers that flew north at 1955, 1 calling Wild Turkey, 5 Rock Pigeons, 4 Downy Woodpeckers, 2 Hairy Woodpeckers, 1 Northern Flicker, 6 Blue Jays, 2 Black-billed Magpies, 40 American Crows, 10 Common Ravens, 4 Black-capped Chickadees, 4 Mountain Chickadees, 2 Red-breasted Nuthatches, 14 American Robins, 221 European Starlings, 32 Evening Grosbeaks, 1 female Cassin's Finch, 8 Pine Siskins and 2 expecting a stronger raptor movement tomorrow.

12.75 hours (360.5) RTHA 5 (21), GOEA 4 (428) TOTAL 9 (645)

Tuesday, April 2 Steeples [Day 28] 1230-1945 (Vance Mattson). The temperature was 9-11C, it was calm with intermittent light SE winds and mostly 50% cumulus which provided sunny conditions and a helpful backdrop for detecting high-flying birds throughout most of the day. A total of 33 migrant raptors of 4 species were seen between 1300 and 1908 comprising 13 Bald Eagles (11a, 2j), 3 adult Red-tailed Hawks (1 light *calurus* and 2 dark *harlani*), 1 light morph Rough-legged Hawk and 16 Golden Eagles (14a, 2j). Nine migrants moved between 1300 and 1400, but only 6 were seen in the next three hours (1400-1700); 12 (including 9 Golden Eagles) moved between 1700 and 1800, 4 between 1800 and 1900 and 2 between 1900 and 1908, the last being a "Harlan's Hawk". Movement was very high and fast, especially after 1700 when birds appeared high above the western peak of Mount Bill Nye. There was also much non-migrant activity with 14 sightings of Turkey Vultures, none of which exhibited migratory behaviour although at least one bird was in the air all day, 9 Bald Eagles (4a, 5j). 1u Northern Goshawk, 1 Red-tailed Hawk, and 4 Golden Eagles (3a, 1j) which performed a pair-flight low across the ridge and 2 display flights.

7.25 hours (141.3) BAEA 13 (206), RTHA 3 (8), RLHA 1 (3) GOEA 16 (447) TOTAL 33 (675)

Wednesday, April 3 Mount Lorette [Day 32] 0640-2020 (Bill Wilson, assisted by Glenn Webber and Graeme Dunlop). The temperature at 0730 was -5C, the high from 1400 to 1700 was 8C and it was 6C at the end of observation. Ground winds were variable 0-2 km/h to 1100 then S-SW for the rest of the day, 2-10 gusting to 27 km/h to 1700 and 2-10 km/h to 2015; ridge winds

were moderate SW all day. Cloud cover was 100% altostratus throughout the morning and 100% cumulus and altostratus throughout the afternoon that provided hazy sunshine and good locating conditions but made detailed determination of age difficult. There was yet another strong April raptor migration with 113 birds of 3 species seen between 0914 and 1947. The flight was 12 Bald Eagles (9a, 1sa, 2j), 1u Sharp-shinned Hawk and 100 Golden Eagles (50a, 1sa, 9j, 40u). The Golden Eagle count of 510 for the first three days of April has already exceeded the long-term April average count for the species of 442. Once again birds moved steadily throughout with a highest hourly count of 23, including 18 Golden Eagles, between 1400 and 1500. Birds moved on both ridge systems to 1500 with the western birds again soaring high over Olympic Summit and gliding high to the NW behind the summit of Mount Allan, but after 1500 all birds flew on the eastern ridges gliding high from the Fisher Range to Mount Lorette. There were several records of resident birds with a Northern Goshawk heard calling from the nest site early in the morning, 5 sightings of 1 or 2 adult Bald Eagles mainly moving southwards, and 3 of adult Golden Eagles including one that displayed against the face of Mount Bogart at 1221. Other birds recorded in the area were 75 Canada Geese that flew to the north in 6 flocks, 1 Ruffed Grouse, 1 Killdeer, 1 Northern Flicker, 1 Pileated Woodpecker, 15 Common Ravens, 1 unidentified flying swallow, 4 Mountain Bluebirds (1 male, 3u), 3 singing Varied Thrushes, 15 American Robins, 3 European Starlings, 30 Bohemian Waxwings in one flock, 1 singing White-winged Crossbill and 1 singing Dark-eyed Junco. There were 8 visitors at the site today.

13.67 hours (359.9) BAEA 12 (165), SSHA 1 (4), GOEA 100 (1810) TOTAL 113 (2032)

Wednesday, April 3 Beaver Mines [Day 32] 0715-1945 (Peter Sherrington, assisted by Hilary Atkinson). The temperature was initially 0C, the high at 1300 was 10.5C and it was 6.5C at 1945. Winds were WSW-W all day, 10-20 gusting 25 km/h to 1135 after which they strengthened to 25-40 gusting to 65 km/h for the rest of the day. Cloud cover was mainly 100% altostratus in the morning and 70-90% altostratus, altocumulus, cumulus and cirrus for the rest of the day, all of which provided good viewing conditions. Despite the favourable winds there was yet another desultory raptor movement with 16 birds of 6 species moving sporadically between 1108 and 1855. The flight comprised 4 adult Bald Eagles, the season's first Cooper's Hawk (an unaged bird), 1 adult Northern Goshawk, 5 light morph *calurus* Red-tailed Hawks (3a, 2u), the first Ferruginous Hawk of the season, an unaged light morph bird at 1714 and only 3 Golden Eagles (2a, 1sa). A resident pair of Red-tailed Hawks was present with birds seen displaying on a couple of occasions. A rather dull day was greatly enlivened towards the end when the first Sandhill Crane of the season soared high above the ridge at 1803 and flew high to the north, and at 1814 a large flock of about 250 Snow Geese in several skeins flew to the east above the ridge: for a couple of minutes the sky was more reminiscent of Saskatchewan than SW Alberta! A more distant flock of 60 geese at 1757 were also probably Snow Geese. These numbers are unprecedented for the area. Other birds seen were 5 Canada Geese, a small flock of 14 Wild Turkeys that included 6 displaying males, 18 Rock Pigeons, 2 Downy Woodpeckers, 1 Hairy Woodpecker, a pair of Northern Flickers, 7 Blue Jays, 1 Black-billed Magpie, 56 American Crows, 19 Common Ravens, 2 Black-capped Chickadees, 1 Red-breasted Nuthatch, 1

Townsend's Solitaire, 5 American Robins, 30 European Starlings, 27 Evening Grosbeaks and 8 Pine Siskins.

12.5 hours (373) BAEA 4 (148), NOHA 1 (6), NOGO 1 (15), RTHA 5 (26), FEHA 1 (1), GOEA 3 (431) TOTAL 16 (661)

Wednesday, April 3 Steeples [Day 29] 1645-1830 (Vance Mattson). The temperature was 10C, winds were strong S and 100% dark altostratus and cumulus cloud brought light precipitation and partially obscured the ridges. No migrant or resident raptors were seen.

1.75 hours (143) TOTAL 0 (675)

Thursday, April 4 Mount Lorette [Day 33] 0640-2020 (Cliff Hansen, assisted by Rick Robb). The starting temperature was 3C, the high was 11C at 1700 and it was 7C at the end of observation. Ground winds were variable but mainly S 5-10 gusting 20 km/h to 1600, SW5-15 gusting 20 km/h to 1900 and then N 5-10 gusting 20 km/h for the rest of the day; ridge winds were mostly WNW moderate to strong to 1800 and then moderate NW. Cloud cover was variable 20-90% cumulus and altocumulus all day that gave good observing conditions and the ridges were clear, but despite this the raptor count was a disappointing 9 birds, made more so as it followed a week of strong movement. The first bird seen was a light morph Rough-legged Hawk at 1345, but eagle movement did not begin until after 1600 and comprised 1 adult Bald Eagle and 6 Golden Eagles (3a, 1sa, 1j, 1u) that moved up to 1943, with 4 of the Golden Eagles seen between 1800 and 1900; a mid-sized unidentified raptor was also seen during this hour. All the eagles glided high above the Fisher Range to Mount Lorette. A resident Northern Goshawk called from the nest site early in the morning and there was a single sighting of an adult resident Golden Eagle. Other birds recorded in the area were 2 Canada Geese, 10 unidentified gulls that soared over the northern end of the Fisher Range in the late afternoon before flying to the east, 1 Hairy Woodpecker, 2 Northern Flickers, 11 Common Ravens, 2 Black-capped Chickadees, 1 Boreal Chickadee, 1 Red-breasted Nuthatch, 1 singing Varied Thrush, 6 American Robins, 2 Bohemian Waxwings and 3 Dark-eyed Juncos. Twelve visitors were at the site today.

13.25 hours (373.2) BAEA 1 (166), RLHA 1 (7), GOEA 6 (1816), UU 1 (4) TOTAL 9 (2041)

Thursday, April 4 Beaver Mines [Day 33] 0715-2015 (Peter Sherrington, assisted by Hilary Atkinson). At 0715 the temperature was 5.5C, the high was 11C at 1200 and 1300, and again at 1600 and 1700 and it was still 8C at 2015. Winds were W-WSW all day 25-40 gusting up to 60 km/h and cloud cover was variably 30-70% mainly cumulus to 1830 when 100-70% thin cirrostratus developed. Observing conditions were very good throughout and it was encouraging to see the first Golden Eagle gliding high to the north at 0759, but the second bird, an adult Bald Eagle, did not occur until 1103 and the second Golden Eagle was only seen at 1349. After this, however, the pace quickened and peaked at 21 birds between 1700 and 1800, with the last 3 Bald

Eagles moving NNW at 1902. The final count of 57 raptors of 8 species was 14 Bald Eagles (11a, 2sa, 1j), 1 adult male Northern Harrier, 4 Sharp-shinned Hawks (1a, 3u), 1u Northern Goshawk, 8 adult *calurus* Red-tailed Hawks (5 light, 3 dark), 1 unidentified dark *Buteo*, 26 Golden Eagles (23a, 3j), 1 dark morph Gyrfalcon and 1 Prairie Falcon. Other birds seen were 1 Canada Goose, 25 Wild Turkeys, 18 Rock Pigeons, 2 Downy Woodpeckers, 1 Northern Flicker, 5 Blue Jays, 1 Black-billed Magpie, 30 American Crows, 18 Common Ravens, 4 Black-capped Chickadees, 4 Mountain Chickadees, 1 Red-breasted Nuthatch, 12 American Robins, 516 European Starlings, 35 Evening Grosbeaks 8 Grey-crowned Rosy-Finches that flew north at 1318, 14 Pine Siskins and 3 Dark-eyed Juncos (1 *hyemalis*, 1 *cismontanus* and 1 *montanus*).

13 hours (386) BAEA 14 (162), NOHA 1 (7), SSHA 4 (7), NOGO 1 (16), RTHA 8 (34), UB 1 (2), GOEA 26 (457), GYRF 1 (5), PRFA 1 (6) TOTAL 57 (718)

Thursday, April 4 Steeples [Day 30] 1300-1900 (Vance Mattson). The temperature was 11C, winds were moderate to strong S-SE and 60-90% altostratus cloud cover gave partially sunny conditions. Only three migrants were seen: an adult Golden Eagle at 1452, a juvenile Golden Eagle at 1746 and a juvenile Bald Eagle at 1817. Non-migrants consisted of 10 sightings of Turkey Vultures, 3 sightings of adult Bald Eagles, 5 sightings of single adult *calurus* Red-tailed Hawks including 2 hovering hunting flights over the ridges, and 3 adult Golden Eagles that were seen twice including two birds that soared together while one displayed although there was no perceived antagonism between them.

6 hours (149) BAEA 1 (207), GOEA 2 (449) TOTAL 3 (678)

Friday, April 5 Mount Lorette [Day 34] 0740-2040 (Caroline Lambert, assisted by Patrick Farley). The temperature reached a high of 11C from a morning low of -1C and was 5C at 2040 when observation ceased. Ground winds were light all day, variable to 1100, NE to 1400, SE to 1700 and SW after 1800, while ridge winds were SW all day, light to 1500 after which they were moderate. Cloud cover was 100% stratus, altocumulus and altostratus which broke up to 70-80% after 1500. Conditions were hazy with light mist to 1300, and the western mountains were 20-80% obscured after 1000; apart from Mount Lorette being briefly obscured around noon the eastern route was clear all day. There was a fairly strong raptor movement of 57 birds of 3 species between 1038 and 1942 that comprised the season's first Turkey Vulture, of unknown age, that flew to the north above the eastern valley at 1325, 2 adult Bald Eagles, 53 Golden Eagles (21a, 6sa, 2j, 24u) and 1 unidentified eagle. Only 5 birds were seen before 1400 but movement was then steady and peaked at 15 Golden Eagles between 1800 and 1900. All birds moved on the eastern route to 1345 when they switched to the west where birds again soared high on Olympic Summit before gliding high to the NW behind the summit of Mount Allan; between 1510 and 1660 both routes were used and after 1600 all birds glided high from the Fisher Range to Mount Lorette. Resident birds were 1 adult Sharp-shinned Hawk seen hunting north of the site, 1 adult Northern Goshawk, 1u Bald Eagle and the resident pair of Golden Eagles that spent much of the day around Olympic Summit where the male displayed several times. Other birds seen

were 10 Canada Geese, 1 Downy Woodpecker, 2 Hairy Woodpeckers, 2 Northern Flickers, 12 Common Ravens, 1 Black-capped Chickadee, 4 Mountain Chickadees, 4 Boreal Chickadees, 1 American Dipper, 2 Golden-crowned Kinglets that were with the season's first Ruby-crowned Kinglet, 1 male Mountain Bluebird, 3 singing Varied Thrushes, 14 American Robins, 4 European Starlings, 10 White-winged Crossbills, 2 Pine Siskins, 7 Dark-eyed Juncos and 1 Song Sparrow. Twelve Bighorn Sheep were on Olympic Summit, 4 White-tailed Deer in the meadow and 5 visitors were at the site today.

13 hours (386.2) TUVU 1 (1), BAEA 2 (168), GOEA 53 (1869), UE 1 (22) TOTAL 57 (2098)

Friday, April 5 Beaver Mines [Day 34] 0700-2015 (Peter Sherrington, assisted by Mark Sherrington and Hilary Atkinson). At 0700 the temperature was 0C the high at 1500 was 10.5C and it was 8C at 2015. Winds were light all day, variable but principally SE-ESE and although there was a gentle W upper flow all day it never lowered to ridge level. It was a generally dull day with 100% mainly stratocumulus cloud cover that brought very light rain and light snow to 1100 and again after 1445. The cloud began to break at 1700 and after 1730 it was 40-60% cumulus that gave sunny conditions. The conditions provided a very sporadic movement of 16 raptors of 6 species between 1111 and 1901 that comprised 1 adult Bald Eagle, 1 adult male Northern Harrier, 2 Sharp-shinned Hawks, a season-high 9 adult Red-tailed Hawks (6 light and 2 dark *calurus* and 1 dark *harlani*), 1 light morph Rough-legged Hawk and only 2 adult Golden Eagles. Five of the birds moved between 1800 and 1900. A resident adult Northern Goshawk made a display flight above the ridge at 1236, and the resident pair of Red-tailed Hawks soared and occasionally displayed between 1147 and 1834. Other birds in the area were 3 Canada Geese, 1 Mallard, 2 Rock Pigeons, 1 Sandhill Crane that soared high and called above the ridge at 1331 before flying high to the SE, 3 Downy Woodpeckers, 2 Hairy Woodpeckers, 2 Northern Flickers, 8 Blue Jays, 3 Black-billed Magpies, 14 American Crows, 16 Common Ravens, 2 Black-capped Chickadees, 2 Mountain Chickadees, 1 Red-breasted Nuthatch, 9 American Robins, 16 European Starlings, 40 Evening Grosbeaks, 20 Pine Siskins and 2 Dark-eyed Juncos (1 *cismontanus* and 1 *montanus*).

13.25 (399.3) BAEA 1 (163), NOHA 1 (8), SSHA 2 (9), RTHA 9 (43), RLHA 1 (16), GOEA 2 (459) total 16 (734)

Friday, April 5 Steeples (Vance Mattson). NO OBSERVATION (weather). It was overcast all day with intermittent light drizzle. The mountains were shrouded all day except around 1700 when there was some clearing but they soon clouded over again.

Saturday, April 6 Mount Lorette [Day 35] 0720-1945 (Blake Weis, assisted by Brian McBride, Heinz Unger and Caroline Lambert). The starting temperature was 4C, the high was 7C from 1300 to 1600 and it was 5C at the end of observation. Ground winds were S-SW all day, 5-10 gusting 30 and occasionally to 50 km/h to 1900 after which gusts dropped to 15 km/h, while

ridge winds were moderate to strong SW all day. Cloud cover was 100% altocumulus, altostratus, cumulus and stratocumulus to 0900, 100% stratocumulus between 0900 and 1000 that produced snow from 0900 to 0930 and light snow flurries continued throughout the day; between 1000 and 1500 cloud cover was 60-90% altocumulus, cumulus and cirrus and after 1600 it was again 100% stratocumulus with moderate snow flurries. All ridges were 10% obscured to 0900 and 100% obscured by snow between 0900 and 0930 but by 1200 all were clear. After 1600, however, the west was 100% obscured and the east 100-30% obscured for the rest of the day. Despite these conditions there was a moderate raptor migration of 27 birds of 3 species between 1235 and 1750 that comprised 6 Bald Eagles (3a, 1sa and 2 undifferentiated immatures), 1 adult Northern Goshawk and 20 Golden Eagles (7a, 1sa, 3j, 9u). Birds moved slowly but steadily between 1235 and 1600 with maximum hourly counts of 7 (1500-1600 and 1600-1700) but after 1700 only 3 further birds were seen. All used the eastern route where eagles glided high above the Fisher Range to 1500 but as conditions deteriorated birds moved against the face of the range. All the Golden Eagles glided NW to Mount Lorette, but 5 of the 6 Bald eagles flew directly north from the northern end of the Fisher Range. Resident birds were 1 or 2 Northern Goshawks including one calling from the nest site around 1700, and two sightings of adult Golden Eagles but no display behaviour was seen. Other birds in the area were 2 Canada Geese on the river, 1 Mallard, 1 male Common Merganser, 2 Ruffed Grouse (1 drumming and 1 seen), 10 unidentified gulls that flew from the Fisher Range to Mount Lorette at 1440, 1 Hairy Woodpecker, 1 Northern Flicker, 10 Common Ravens, 2 Black-capped Chickadees, 4 Mountain Chickadees, 1 Boreal Chickadee, 1 Red-breasted Nuthatch, 1 Brown Creeper, 1 American Dipper, 2 Golden-crowned Kinglets, 1 male Mountain Bluebird, 2 singing Varied Thrushes, 9 American Robins, 1 White-winged Crossbill, 1 Pine Siskin, 1 American Tree Sparrow, 1 Song Sparrow and 9 Dark-eyed Juncos including 1 *cismontanus* and 1 *montanus*. Eight White-tailed Deer were in the meadow and one American Mink crossed the river three times as it moved to the south near the site. Thirteen visitors were also at the site today.

12.42 hours (398.6) BAEA 6 (174), NOGO 1 (10), GOEA 20 (1889) TOTAL 27 (2125)

Saturday, April 6 Beaver Mines [Day 35] 0700-2015 (Peter Sherrington, assisted by Mark Sherrington and Hilary Atkinson). The temperature at 0700 was 4C, the high at 1300 was 8C and it was 5C at 2015. Winds were strong W-WSW 30-50 gusting up to 80 km/h to 1700 after which they moderated with gusts only up to 40 km/h. Cloud cover was 20-50% mainly cumulus to 1230 after which it was 90-100% altostratus, cirrus, cumulus and altocumulus to 1800 and then cleared to 10% cumulus at the end of observation. There was a moderately strong, but again sporadic, raptor movement between 0832 and 1830 that involved 37 birds of 5 species: 7 Bald Eagles (6a, 1j), 5 Sharp-shinned Hawks (1a, 4u), 3 Northern Goshawks (2a, 1u), 4 adult *calurus* Red-tailed Hawks (2 light, 2 dark), 17 Golden Eagles (14a, 2sa, 1j) and 1 unidentified eagle. There was an encouraging start to the day with 7 raptors including 5 Golden Eagles moving before 0905, but it was not sustained and movement became sporadic with the only double-figure hourly count between 1500 and 1600 when 12 migrants were seen and subsequently only 2 further migrants moved. Resident birds were 1 adult Northern Goshawk, 1 adult Red-tailed Hawk and an adult Golden Eagle that displayed at 1431. Other birds seen were 4 Canada Geese, 3

Mallards, 17 Rock Pigeons, 2 Downy Woodpeckers, 2 Northern Flickers, 6 Blue Jays, 3 Black-billed Magpies, 38 American Crows, 21 Common Ravens, 2 Black-capped Chickadees, 1 Mountain Chickadee, 4 American Robins, 550 European Starlings, 35 Evening Grosbeaks, 16 Grey-crowned Rosy-Finches that flew high to the north at 0836, 10 Pine Siskins and 1 male Red-winged Blackbird.

13.25 hours (412.5) BAEA 7 (170), SSHA 5 (14), NOGO 3 (19), RTHA 4 (47), GOEA 17 (476), UE 1 (2) TOTAL 37 (771)

Saturday, April 6 Steeples [Day 31] 1130-1900 (Vance Mattson). The temperature was 8C, winds were strong S throughout and cloud cover was 100-70% altostratus and dark cumulus. Only 7 migrants, all eagles, were seen between 1315 and 1834 that comprised 2 juvenile Bald Eagles, 4 Golden Eagles (2a, 2u) and 1 unidentified eagle. Five of the birds moved very high and were mainly silhouettes against a dark grey cloud background. Non-migrants were 4 Turkey Vultures, 2 Bald Eagles (1a, 1j), 1 adult Northern Goshawk that hunted near the site, 2 adult light morph *calurus* Red-tailed Hawks that headed to the SW and 2 adult Golden Eagles that were seen twice including soaring together over the ridge at the end of the day.

7.5 hours (156.5) BAEA 2 (209), GOEA 4 (453), UE 1 (7) TOTAL 7 (685)

Sunday, April 7 Mount Lorette [Day 36] 0625-2025 (Bill Wilson, assisted by Lori Anderson). The temperature reached a high of 7C at 1500 and it was 2C at both the start and end of observation. Ground winds were SSW-SW all day, 2-15 km/h to 0900 and 5-15 gusting up to 28 km/h for the rest of the day, while ridge winds were SW moderate to strong all day. Cloud cover was 90-100% altostratus and cumulus to 1200 then 100% cumulus and stratus that produced very light to light snow for the rest of the day that became moderate to heavy from 1630 to 1700. The east ridges were clear to 1400 but became 10-20% obscured to 1600 and then 70-100% obscured to the end, while the west was clear to 1200, 20-30% obscured to 1400 and 90-100% obscured for the rest of the day. The conditions produced a disappointing migration of only 12 eagles between 1013 and 1513 with the first 4 moving on the western route and the rest gliding high above the Fisher Range to Mount Lorette. The flight comprised 2 Bald Eagles (1j and 1 undifferentiated immature bird) and 10 Golden Eagles (2a, 1sa, 4j, 3u) with a high hourly count of only 4 Golden Eagles between 1200 and 1300. Three adult non-migrant Bald Eagles moved to the south at 1123, 1556 and 1840, and a Northern Goshawk called from the nest early in the morning and an adult was seen hunting far to the SW at 1120. Other birds recorded in the area were 2 Canada Geese on the river, 1 pair of Mallard, 1 Ruffed Grouse that drummed throughout the day, 1 pair of Hairy Woodpeckers, 1 Northern Flicker, 1 distant Clark's Nutcracker, 15 Common Ravens, 3 Black-capped Chickadees, 2 Mountain Chickadees, 1 Boreal Chickadee, 2 Red-breasted Nuthatches, 1 male Mountain Bluebird, 1 singing Varied Thrush, 7 American Robins, 4 European Starlings, 2 American Tree Sparrows, 1 Song Sparrow singing east of the river and 9 Dark-eyed Juncos, 2 of which were *montanus*. Thirteen White-tailed Deer fed in the meadow at the end of the day and Sunday brought 25 visitors to the site.

14 hours (412.6) BAEA 2 (176), GOEA 10 (1899) TOTAL 12 (2137)

Sunday, April 7 Beaver Mines [Day 36] 0700-2015 (Peter Sherrington). The temperature at 0700 was 3C, the high at 1700 was 10C and it was still 6C at 2015. Winds were WSW all day, 15-30 gusting 45 km/h to 1300 after which they strengthened to 45-60 gusting up to 80 km/h for the rest of the day. Cloud cover was mainly 100% cirrus, altostratus and altocumulus throughout the morning, then 100% uniform grey altostratus to 1430 that thinned to 100% cirrus, altostratus and cumulus at 1500 and was then 20-30% cumulus and finally it was cloudless after 1730. Raptor movement was again very sporadic with a total of 28 migrants of 8 species recorded between 0819 and 1745. The count was 6 Bald Eagles (4a, 1sa, 1j), a season-high 4 Northern Harriers (2 adult males and 2 females: 1a, 1j), 1u Sharp-shinned Hawk, 1a Northern Goshawk, 6 Red-tailed Hawks (5a *calurus*: 4 light, 1 dark; and 1 dark bird of unknown race or age), 1 light morph Rough-legged Hawk that was the first migrant of the day, 8 Golden Eagles (4a, 2sa, 2j) and 1 adult Peregrine Falcon. The highest hourly counts were 6 birds in each of the three hours after 1500. A resident adult male Northern Harrier displayed vigorously at 1304 and 1 of the resident Red-tailed Hawk pair was seen hunting at 1646. Other birds recorded were 9 Canada Geese, 3 Mallards, 4 Rock Pigeons, 2 Downy Woodpeckers, 1 Hairy Woodpecker, 1 Northern Flicker, 1 Pileated Woodpecker, 9 Blue Jays, 1 Black-billed Magpie, 15 American Crows, 12 Common Ravens, 1 Mountain Chickadee, 1 Red-breasted Nuthatch, 4 American Robins, 62 European Starlings, 54 Evening Grosbeaks, 14 Grey-crowned Rosy-Finches that flew to the north at 1408, 25 Pine Siskins, 1 male *cismontanus* Dark-eyed Junco and 1 male Red-winged Blackbird.

13.25 hours (425.8) BAEA 6 (176), NOHA 4 (12), SSHA 1 (15), NOGO 1 (20), RTHA 6 (53), RLHA 1 (17), GOEA 8 (484), PEFA 1 (2) TOTAL 28 (799)

Sunday, April 7 Steeples [Day 32] 1500-1830 (Vance Mattson). It was overcast and rainy to 1430 when the mountains began to clear and Vance arrived at the site at 1500 when the temperature was 12C, winds were moderate to strong S-SE and 40-60% cumulus cloud cover gave mostly sunny conditions. No migrants were counted but non-migrants were common including 22 Turkey Vultures that included kettles of 6 at 1642 and 7 at 1536 which rose to 13 when a subadult Bald Eagle and 5 ravens joined the vultures. Other non-migrants were 8 additional Bald Eagles (6a, 2j) that included two pair-flights, 2 adult *calurus* Red-tailed Hawks and 1 juvenile Golden Eagle.

3.5 hours (160) TOTAL 0 (685)

Monday, April 8 Mount Lorette [Day 37] 0700-2030 (George Halmazna, assisted by Dan Parliament, Graeme Dunlop and Michael Woertman). The starting temperature was -4C, the high was 11C at 1700 and it was 1C at the end of observation. Ground winds were light SW all day except between 1400 and 1600 when they gusted to 15 km/h, and ridge winds were light to

moderate SW all day. It was cloudless to 1000 when 10% cumulus developed that persisted to 1600 after which the cloud rapidly thickened and by 1630 it was 100% cirrocumulus, altocumulus and altostratus until 1800 when it gradually reduced to 60% by the end of the day. The ridges were clear all day. There was a strong April raptor movement of 94 birds of 5 species between 0750 and 1955 that comprised 11 Bald Eagles (10a, 1sa, 1j), 3 Northern Goshawks (2a, 1u), 1 adult *calurus* Red-tailed Hawk, 1 light morph Rough-legged Hawk and 78 Golden Eagles (52a, 2sa, 8j, 16u). Movement was initially slow and by 1600 only 18 migrants of which 11 were Golden Eagles had been counted, but the rate subsequently increased significantly and peaked between 1800 and 1900 when 2 Bald and 26 Golden Eagles were seen and a further 18 birds moved between 1900 and 1955. The morning flight was equally divided between east and west, and between 1200 and 1600 most birds were initially located over Skogan Pass but after 1600 all birds glided very high above the Fisher Range with 90% of the birds clearing the summit of Mount Lorette and moving directly to Mount McGillivray to the NW. The resident pair of Northern Goshawks perched together near the nest site early in the morning, single adult resident Golden Eagles were seen 3 or 4 times on the southern flank of Mount Allan and 2 adult non-migrant Bald Eagles were also seen. The first Harris's Sparrow of the season, a singing male, was located at the Beaver Ponds to the north of the site by Michael, and other birds were 2 pairs of Canada Geese on the river, 11 Mallards, 2 male Common Mergansers, 2 drumming Ruffed Grouse, 1 Downy Woodpecker, a pair of Northern Flickers, a pair of Pileated Woodpeckers, 1 Canada Jay, 14 Common Ravens, 3 Black-capped Chickadees, 4 Mountain Chickadees, 1 Boreal Chickadee, 8 Red-breasted Nuthatches, 1 male Mountain Bluebird, 6 singing Varied Thrushes, 15 American Robins, 9 European Starlings, 2 White winged Crossbills, 2 Song Sparrows and 8 Dark-eyed Juncos, 2 of which were *montanus*. Three White-tailed Deer were in the meadow, 9 Bighorn Sheep on Olympic Summit and 4 Mourning Cloak and 2 Milbert's Tortoiseshell butterflies were on the wing at the site. There were 10 visitors today.

13.5 (426.1) BAEA 11 (187), NOGO 3 (13), RTHA 1 (5), RLHA 1 (8), GOEA 78 (1977)
TOTAL 94 (2231)

Monday, April 8 Beaver Mines [Day 37] 0645-2030 (Peter Sherrington). The temperature at 0645 was 2C, the high was 12C from 1500-1700 and it was 7C at 2030. Winds were moderate W-WSW all day 15-20 gusting 30 km/h, and cloud cover was 0-40% altostratus, altocumulus, cirrus, cirrostratus and cirrocumulus to 1340 when it became 100% cirrostratus, cirrus and altocumulus that thickened at 1600 to 100% altostratus and cumulus for the rest of the day. Observing and migration conditions were good all day but only 15 migrant raptors of 6 species were seen between 1059 and 1935 that comprised 1 adult female Northern Harrier, 1 adult Northern Goshawk, 3 adult *calurus* Red-tailed Hawks (2 light and 1 dark), 1 dark morph Rough-legged Hawk, 8 Golden Eagles (7a, 1j) and 1 adult Peregrine Falcon. Movement was slow and sporadic with a high hourly count of 4 (1 Red-tailed Hawk and 3 Golden Eagles) between 1200 and 1300. Resident birds were 1 adult male Northern Harrier, 1 pair of Red-tailed Hawks that were seen on several occasions between 1031 and 1839 with occasional single bird or pair display behaviour, and a pair of Golden Eagles. A single Tree Swallow flying high at 1338 was the first of the season and other birds seen were 3 Canada Geese, 15 Rock Pigeons, 4 Sandhill

Cranes (single birds flying to the SW above the valley at 0849 and 1920, and a pair that flew very high to the NW at 1413), 2 Downy Woodpeckers, 1 Hairy Woodpecker, 1 Northern Flicker, 11 Blue Jays, 1 Black-billed Magpie, 5 American Crows, 16 Common Ravens, 1 Red-breasted Nuthatch, 5 American Robins, 78 European Starlings, 18 Evening Grosbeaks and 16 Pine Siskins.

13.75 hours (439.5) NOHA 1 (13), NOGO 1 (21), RTHA 3 (56), RLHA 1 (18), GOEA 8 (492), PEFA 1 (3) TOTAL 15 (814)

Monday, April 8 Steeples [Day 33] 1645-1815 (Vance Mattson). Because of teaching commitments observation did not start until 1645 when the temperature was 13C, winds were moderate SW and cloud cover was 90% cumulus and altostratus. No migrants were seen and non-migrants were 5 Turkey Vultures, 3 sightings of Red-tailed Hawks, and 1 adult Golden Eagle.

1.5 hours (161.5) TOTAL 0 (685)

Tuesday, April 9 Mount Lorette [Day 38] 0720-2000 (Blake Weis, assisted by Heinz Unger). The temperature at the start was -4C, the high was 8C from 1500 to 1700 and it was 5C at 2000. Ground winds were variable 0-3 km/h to 1200, E-ENE 5-10 gusting 25 km/h to 1400 and then SW 0-5 gusting 15 km/h for the rest of the day, while ridge winds were light to moderate SW to 1200, moderate to strong E-NE to 1400 and then moderate SE for the rest of the day. Cloud cover to 1400 was 100% altostratus, altocumulus, cirrus and stratocumulus, 100% stratocumulus, altocumulus, altostratus and cumulus to 1900 and the day ended with 90% altocumulus and altostratus. All ridges were clear to 1400 when both east and west became 10-20% occluded to 1500 after which they were again clear with the exception of the west that was 10% covered at 1700 and 1800. The only precipitation on a day that threatened more was a light to moderate rain shower between 1800 and 1830. There was a moderate raptor migration of 33 birds of 3 species between 1022 and 1633 comprising 5 Bald Eagles (4a, 1 immature), 1 adult *calurus* Red-tailed Hawk and 27 Golden Eagles (6a, 11sa, 5j, 5u). This is the first time this season that immature birds have significantly outnumbered adults. Maximum passage was 19 birds (3 Bald and 16 Golden Eagles) between 1100 and 1200 after which movement was slow and sporadic as the weather deteriorated. Most birds moved on the western route to 1400 with birds again soaring over Olympic Summit before gliding high to the NW behind the summit of Mount Allan, and for the rest of the day both east and west routes were used, again with extensive soaring and high gliding flight. A resident adult Northern Goshawk displayed to the NW at 1040, and 2 Red-tailed Hawks, possibly a pair, were seen in the same vicinity. The resident Golden Eagle pair soared above Olympic Summit at 1550 where the male displayed; they then crossed the valley to the Fisher Range ridge where the male again displayed. Other birds noted were 2 pairs of Canada Geese on the river, 3 Mallards, 1 drumming Ruffed Grouse, 1 drumming Hairy Woodpecker, 4 Northern Flickers, 1 Canada Jay, 1 American Crow, 10 Common Ravens, 3 Black-capped Chickadees, 4 Mountain Chickadees, 1 Boreal Chickadee, 1 Red-breasted Nuthatch, a pair of

Mountain Bluebirds, 2 singing Varied Thrushes, 20 American Robins, 11 White winged Crossbills, 2 American Tee Sparrows, 1 Song Sparrow and 15 Dark-eyed Juncos, 5 of which were *montanus*. Nine White-tailed Deer were in the meadow in the morning and 3 Bighorn Sheep were on Olympic Summit. There were no visitors today.

12.67 hours (438.7) BAEA 5 (192), RTHA 1 (6), GOEA 27 (2004) TOTAL 33 (2264)

Tuesday, April 9 Beaver Mines [Day 38] 0645-1430 and 1800-2030 (Peter Sherrington). The temperature at 0645 was 2C, the high was 4.5C at 1400 and it was 3C at 2030. Winds were variable and light to 1430, and W 20-30 after 1800, and cloud cover was 100% stratus and cumulus to 1000 and 100% low stratus for the rest of the day. Light snow began to fall at 0855 that became moderate at 1125 and turned to light rain at 1300. Apart from brief periods the ridge remained clear to 1300, but was shrouded in cloud at 1400 as steady rain fell and the count was suspended at 1430. At 1800 the count resumed with the ridge clear and W winds of 20-30 km/h that gave some prospect of raptor movement, but cloud cover remained 100% low stratus and very light rain or drizzle continued to fall. No migrant or resident raptors were seen. Other birds recorded were 2 Canada Geese, 3 Mallards, 2 Downy Woodpeckers, 1 Hairy Woodpecker, 1 Northern Flicker, 4 Blue Jays, 1 American Crow, 10 Common Ravens, 3 Mountain Chickadees, 6 American Robins, 97 European Starlings, 27 Evening Grosbeaks, 1 female Purple Finch that was the first record of the season, 22 Pine Siskins and 1 *montanus* Dark-eyed Junco.

10.25 hours (449.8) TOTAL 0 (814)

Tuesday, April 9 Steeples (Vance Mattson). NO OBSERVATION (weather). It rained all day and the mountains were totally socked in so no observation was possible.

Wednesday, April 10 Mount Lorette [Day 39] 0705-1535 (Blake Weis, assisted by Katherine Peterson). Because of poor weather the observers left the Hay Meadow at 1200 and Blake spent the next 3.5 hours at Mount Lorette Ponds, the beaver ponds north at the site and the Mount Allan Viewpoint on Highway 40 and finally Lusk Creek in an mainly unsuccessful search of better observing conditions. The temperature at the start was -1C and the high was 5C at 1500 to the end of observation. Ground winds were very light SW to 1100 then N 0-5 gusting 15 km/h, while ridge winds were SW light to moderate all day. Cloud cover was 100% altocumulus, cumulus and altostratus to 0900, 100% stratocumulus to 1300 that brought snow that was heavy to moderate to 1300 with 3 cm falling in a one-hour period. The cloud reduced to 90% after 1300 with a mix of snow and rain and finally, at Lusk Creek, it was raining steadily and the count was abandoned for the day. Initially the east ridges were clear and the west 30% obscured, but from 1100 all ridges were 100% obscured except after 1300 when Hummingbird Plume Hill became visible on occasion. It was on one such occasion at 1330 that the only migrant raptor of the day, a subadult Golden Eagle, was seen flying low to the NW above Hummingbird Plume Hill. A

resident adult Northern Goshawk perched and called near the nest site early in the morning and non-migrant subadult Bald Eagles were seen at 0745 and 1500. Other birds were more interesting and comprised a flock of 25 Snow Geese that flew low over the valley towards the NNE at 1100, 3 Canada Geese and a pair of Mallards on the river, 1 Ruffed Grouse (2 drumming and 1 seen), the first 2 Great Blue Herons of the season (1 at Mount Lorette Ponds and 1 on the river below the Mount Allan viewpoint, 4 Northern Flickers, 1 American Crow, 3 Common Ravens, 5 Black-capped Chickadees, 4 Mountain Chickadees, 2 Boreal Chickadees, 2 Red-breasted Nuthatches, 1 American Dipper, 1 Golden-crowned Kinglet, 1 Ruby-crowned Kinglet, 1 male Mountain Bluebird, 2 singing Varied Thrushes, 15 American Robins, 2 European Starlings, 1 White winged Crossbill, 1 singing Fox Sparrow that was a first for the season, 1 Song Sparrow and 11 Dark-eyed Juncos, 1 of which was of the race *montanus*. Seven White-tailed Deer were on the Stoney Trail in the morning and although, not surprisingly, no butterflies were seen today, a Compton's Tortoiseshell seen by Michael Woertman at the beaver ponds north of the site should be added to yesterday's list. There were again no visitors today.

8.5 hours (447.2) GOEA 1 (2005) TOTAL 1 (2265)

Wednesday, April 10 Beaver Mines [Day 39] 0645-2045 (Peter Sherrington to 0900, Doug and Teresa Dolmen 0900-1700, and Peter Sherrington assisted by Hilary Atkinson 1700-2045). The temperature at 0645 was 1C, the high at 1400 was 7C and it was 3C at 2045. Winds were variable but mainly ESE-SE 5-20 and occasionally gusting 30km/h, but after 1700 they were mainly W at the same velocity. Cloud cover was 100% low stratus all morning that completely obscured the ridge to 1030, then 90% mainly stratocumulus to 1820 when it broke to 80% altocumulus and cirrus allowing the only sunshine of the day before returning to 100% after 2000. A mix of light rain and snow fell to 0900, and there were occasional light rain showers in mid-afternoon. Raptor movement was very sporadic with only 5 birds of 3 species seen between 1148 and 1937 that comprised 2 adult *calurus* Red-tailed Hawks (1 light, 1 dark), 2 Golden Eagles (1a, 1j) and 1 female *columbarius* Merlin that hunted songbirds and perched at the site at 1230. A resident male Northern Harrier displayed to the female at 1530 and a Red-tailed Hawk displayed above the ridge at 1756. Other birds in the area were 3 Canada Geese, 30 swans that flew high to the NE around 1400, 1 Mallard, 8 Wild Turkeys, 4 Rock Pigeons, 1 pair of Sandhill Cranes that fed together on the valley bottom, 3 Downy Woodpeckers, 2 Hairy Woodpeckers, 1 Northern Flicker, 4 Blue Jays, 3 Black-billed Magpies, 15 American Crows, 17 Common Ravens, 3 Black-capped Chickadees, 2 Mountain Chickadees, 1 Red-breasted Nuthatch, 1 male Mountain Bluebird, 4 American Robins, 163 European Starlings, 13 Evening Grosbeaks, 3 female Cassin's Finches, 20 Pine Siskins, 1 *hyemalis* Dark-eyed Junco and 3 male Red-winged Blackbirds.

14 hours (463.8) RTHA 2 (58), GOEA 2 (494), MERL 1 (3) TOTAL 5 (819)

Wednesday, April 10 Steeple (Vance Mattson). NO OBSERVATION (weather). It was again cloudy and overcast with rain to 1400. The mountains, however, remained obscured for the rest

of the day. Vance watched periodically from his house in Wasa from 1700 but only 2 non-migrant Turkey Vultures were seen.

Thursday, April 11 Mount Lorette [Day 40] 0745-1500 (Cliff Hansen, assisted by Rachel MacKay). The starting temperature was -1C, the high at 1100 and 1300 was only 3C and it was 2C when the count was abandoned for the day at 1500. Ground winds were very light (<5 km/h) and variable to 1100 then NE 5-10 gusting 15 km/h for the rest of the observation period. Ridge winds were light to moderate W to 1100 and NW-NNE to 1300, then moderate NNE to 1500. Very light snow fell at 0800 and there were snow showers from 1000 to 1200, but at 1400 steady snowfall began that became heavy at 1500. All ridges were initially 100% obscured but between 0900 and 1200 the east was 80-50% clear and the west 40-20% clear that gave the possibility of raptor movement, but after 1200 all ridges were again completely obscured. No migrant or resident raptors were seen, but other birds recorded were 3 Canada Geese, a pair of Mallards and a pair of Common Mergansers on the river, 2 drumming Ruffed Grouse, 1 Wilson's Snipe, 1 Hairy Woodpecker, 2 Northern Flickers, 2 Canada Jays, only 1 Common Raven, 2 Black-capped Chickadees, 4 Mountain Chickadees, 1 Red-breasted Nuthatch, 1 American Dipper, 1 male Mountain Bluebird, 5 singing Varied Thrushes, 8 American Robins, 1 Song Sparrow and 12 Dark-eyed Juncos. Five White-tailed Deer were on the Stoney Trail in the morning and a party of 23 staff and students from Dr. E. P. Scarlett High School in Calgary visited the site and learned, amongst many other things, the value of gathering contextual negative data!

7.52 hours (454.5) TOTAL 0 (2265)

Thursday, April 11 Beaver Mines [Day 40] 0700-2015 (Peter Sherrington assisted by Hilary Atkinson). The starting temperature was 2C, the high at 1600 was 10C and it was 3C at 2015 when observation ceased. Winds were moderate and variable SSW-NNW 15-25 gusting to 35 km/h to 1700 after which they were N-E 15-25 km/h. Cloud cover was 90-70% altostratus, altocumulus and cumulus in the morning and 80-20% cumulus that gave mainly sunny conditions to 1800, after which 100% stratocumulus developed that brought light rain at 2015 which an hour later turned to heavy wet snow. There was a fairly strong raptor movement with 34 birds of 4 species seen between 0844 and 1938 that comprised 4 Bald Eagles (3a, 1j) 1 adult Northern Goshawk, 9 adult *calurus* Red-tailed Hawks (8 light, 1 dark), 1 unidentified *Buteo* and 19 Golden Eagles (9a, 6sa, 3j, 1u). By 1400 28 birds had been counted and it appeared that a fairly substantial count was in the offing, but the next five hours only produced 3 further migrants and the last 3 birds moved between 1924 and 1938. Resident Red-tailed Hawks were conspicuous between 0948 and 1808 and there are now probably 2 pairs present, and a single adult resident Golden Eagle glided high to the south at 1058. Other birds recorded were 1 Mallard, 19 Rock Pigeons, 4 Downy Woodpeckers, 1 Hairy Woodpecker, 1 Northern Flicker, 3 Blue Jays, 43 Common Ravens, 1 Black-capped Chickadee, 2 Mountain Chickadees, 1 Red-breasted Nuthatch, 4 American Robins, 79 European Starlings, 23 Evening Grosbeaks, 10 Pine Siskins, 1 *cismontanus* Dark-eyed Junco and 3 male Red-winged Blackbirds.

13.25 hours (477) BAEA 4 (180), NOGO 1 (22), RTHA 9 (67), UB 1 (3), GOEA 19 (513)
TOTAL 34 (853)

Thursday, April 11 Steeples [Day 34] 1300-1815 (Vance Mattson). The temperature was 10C and conditions were calm and sunny with a cloud cover of 50-70% cumulus. The only migrants seen were 3 juvenile Bald Eagles: 2 at 1402 and 1 at 1515. Non-migrants were 4 Turkey Vultures, 2 Bald Eagles (1sa, 1j), 4 sightings of adult Red-tailed Hawks that included a pair-flight over the site with both birds vocalising and 1 sighting of a resident adult Golden Eagle.

6.25 hours (167.8) BAEA 3 (212) TOTAL 3 (688)

Friday, April 12 Mount Lorette [Day 41] 0815-2020 (Caroline Lambert, assisted by Rick Robb). The starting temperature was -1C, the high was 5C between 1500 and 1800, and it was 3C at 2020. Ground winds were N 0-10 km/h to 1700 after which they were SW gusting to 20 km/h for the rest of the day, while ridge winds were light to moderate W to 1700 then moderate W. Cloud cover was 100% stratus that brought light snow to 1200, 90-80% cumulus, altocumulus and altostratus to 1900 after which 40% towering cumulus clouds threatened a thunderstorm for the rest of the day. The east was 100% obscured to 1200, 40% to 1500, 20% to 1800 and then clear, and the west was 100% obscured to 1400, 80% to 1700 and 40% for the rest of the day. Despite the weather there was a fairly strong raptor movement of 34 birds of 4 species between 1135 and 1710 that comprised 3 Bald Eagles (2a, 1sa), a season-high 3 adult *calurus* Red-tailed Hawks (2 light, 1 dark), 3 light morph Rough-legged Hawks, 23 Golden Eagles (6a, 4sa, 8j, 5u) and 2 unidentified eagles. No birds were seen on the western route and only 2 over the Fisher Range and the rest of the birds were located at the northern end of Hummingbird Plume Hill and immediately south of Mount Lorette and appeared to originate from the Wasootch Creek area north of the Fisher Range. Raptors migrated steadily throughout the movement period with 6 seen between 1135 and 1200, 7 between 1200 and 1300, 1300 and 1400 and again between 1700 and 1710. Non-migrant birds were an adult Bald Eagle that hunted low over the river early in the morning and a juvenile hunted over Hummingbird Hill at 1500, a juvenile female Northern Harrier that hunted below Hummingbird Plume Hill at 1220, a Northern Goshawk hunting over Olympic Summit at 1520, the resident Golden Eagle pair that were seen flying between on three occasions between 1220 and 1800 and a subadult Golden Eagle that flew south from Hummingbird Hill at 1320. Other birds recorded were 5 Canada Geese, a pair of Mallards and a male Common Merganser on the river, 2 drumming Ruffed Grouse, 1 Killdeer, 1 Hairy Woodpecker, 2 Northern Flickers, 1 Pileated Woodpecker, 1 Canada Jay, 1 Black-billed Magpie, 10 Common Ravens, 2 Black-capped Chickadees, 2 American Dippers, 3 singing Varied Thrushes, 7 American Robins, 6 European Starlings, 10 White-winged Crossbills, 2 American Tree Sparrows, 1 Song Sparrow and 10 Dark-eyed Juncos. Five White-tailed Deer fed in the meadow late in the day and there were 7 visitors at the site today.

12.08 hours (466.6) BAEA 3 (195), RTHA 3 (9), RLHA 3 (11), GOEA 23 (2028) UE 2 (24)
TOTAL 34 (2299)

Friday, April 12 Beaver Mines [Day 41] 0645-2045 (Peter Sherrington assisted by Hilary Atkinson). The temperature at 0645 was 0C, the high at 1600 was 6C and it was 1C at 2045. Winds were light ENE to ESE with a light westerly flow aloft to 1830 when the winds switched to W-WSW 10-15 km/h for the rest of the day. Cloud cover was 100% stratus to 1400 which brought light snow and light rain to 1320 and obscured the ridge to 0720. At 1355 the first small patches of blue sky appeared and cloud cover quickly thinned to 40-70% which gave sunny periods to 1830 when dark stratocumulus moved from the west that brought light snow and briefly obscured the ridge. By 1905 the skies had again cleared to 60% cumulus, altocumulus and cirrus and at 2045 the only cloud that remained was 10% altocumulus. The overcast and light wind conditions through most of the day produced only 5 migrant raptors: an adult light morph *calurus* Red-tailed Hawk at 1444, an adult Sharp-shinned Hawk at 1559 and 3 unaged Golden Eagles that soared very high above the ridge at 1725 and probably reached the westerly upper flow before gliding high to the NW. A non-migrant subadult Bald Eagle that hunted Mallards on the creek between 1052 and 1115, and a displaying resident Red-tailed Hawk at 1556 were the only other raptors seen. Other birds in the area were 4 Canada Geese, 10 Mallards, 4 Wild Turkeys, 11 Rock Pigeons, 2 Great Blue Herons that were the first of the year, 3 Downy Woodpeckers, 1 Hairy Woodpecker, a pair of Northern Flickers, 5 Blue Jays, 7 Black-billed Magpies, 34 American Crows, 22 Common Ravens, 1 Black-capped Chickadee, 2 Mountain Chickadees, 34 American Robins, 11 European Starlings, 50 Evening Grosbeaks, 1 female Cassin's Finch, 30 Pine Siskins, 4 Dark-eyed Juncos (1 *hyamalis*, 1 *cismontanus* and 2 *montanus*) and 5 male Red-winged Blackbirds.

14 hours (491) SSHA 1 (16), RTHA 1 (68), GOEA 3 (516) TOTAL 5 (858)

Friday, April 12 Steeples [Day 35] 1230-1745 (Vance Mattson). The temperature was 10C, it was mostly calm with periodic light to moderate SE winds, and 40-80% cumulus cloud cover that gave partially sunny conditions and brought light rain at 1700. No migrant raptors were seen although non-migrants were very common, especially Turkey Vultures (13) and Bald Eagles (20: 9a, 2sa, 9j). Other non-migrants were 1u Northern Harrier, 1 adult Northern Goshawk and 1 adult Golden Eagle. Between 1300 and 1330 3 adult and 4 juvenile Bald Eagles interacted vigorously with intense chasing, dive-bombing, barrel-rolling and soaring behaviour. The speed and agility of the big birds as they chased and avoided each other was impressive.

5.25 hours (173) TOTAL 0 (688)

Saturday, April 13 Mount Lorette [Day 42] 0715-1810 (Blake Weis, assisted by Patrick Farley). The temperature at 0715 was -2C, the high at 1800 and 1900 was 8C and it was 5C at the end of observation. Ground winds were S-SW all day, 0-5 gusting 15 km/h to 1000 and again after

1800, but gusting to 25 km/h for most of the day, while ridge winds were WSW moderate to strong to 1800 after which they were moderate. Cloud cover was 40% altocumulus, cumulus and cirrus at the start that thickened to 100% altostratus, altocumulus and cumulus after 1000 with the addition of lenticular and cirrus clouds after 1600. The western ridges were 10% obscured after 1400 and there were occasional very light flurries between 1400 and 1700. The conditions produced 20 migrant raptors of 4 species from 1035 to 1834 comprising 4 Bald Eagles (2a, 1sa, 1u), 1u Sharp-shinned Hawk, 13 Golden Eagles (2a, 1sa, 5j, 5u) and 2u Merlins. The highest hourly count was 6 between 1300 and 1400 and 3 of the Bald Eagles along with the last Golden Eagle were seen between 1800 and 1834. Apart from the Sharp-shinned Hawk and 1 Bald Eagle that flew above the valley and 1 Golden Eagle on the western route all birds glided at ridge level or higher from the Fisher Range to Mount Lorette. Three non-migrant Bald Eagles (2a, 1j) were seen, the resident pair of Northern Goshawks soared to the north of the site at 1120 where the male displayed, a resident Red-tailed Hawk soared above Hummingbird Plume Hill at 1235, and the resident Golden Eagle pair glided south above the Fisher Range to Mount McDougall at 1255 where the male displayed. Other birds noted were 4 Canada Geese on the river, 6 Mallards, a pair of Barrow's Goldeneye that were new for the year, 1 male Common Merganser, 3 Ruffed Grouse, one of which drummed, 1 Hairy Woodpecker, 3 Northern Flickers, a pair of Pileated Woodpeckers, 5 American Crows, 15 Common Ravens, 3 Black-capped Chickadees, 4 Mountain Chickadees, 2 Boreal Chickadees, 3 Red-breasted Nuthatches, 1 Brown Creeper, 3 male Mountain Bluebirds, 1 singing Varied Thrush, 10 American Robins, the first American Pipit of the season, 11 Red Crossbills that flew south in a single flock, 1 White winged Crossbill, 1 Pine Siskin, 1 Song Sparrow and 8 Dark-eyed Juncos, 1 of which was *cismontanus*. Five White-tailed Deer fed in the meadow in the evening and there were 27 visitors at the site today.

10.92 hours (477.5) BAEA 4 (199), SSHA 1 (5), GOEA 13 (2041), MERL 2 (6) TOTAL 20 (2319)

Saturday, April 13 Beaver Mines [Day 42] 0645-2015 (Peter Sherrington assisted by Hilary Atkinson). The temperature at 0645 was 2C, reached a high of 9C at 1400 and was 5C at 2015. Winds were WSW and occasionally W 20-30 gusting to 60 km/h all day and cloud cover was 60-80% cumulus and cirrostratus to 0900 and then 100% cirrostratus and cumulus for the rest of the day with lenticular clouds developing after 1800. Observing and migration conditions were excellent and produced a fairly strong mid-April raptor movement of 52 birds between 0825 and 1925 that involved a season-high 13 species. The count was 2 Bald Eagles (1a, 1j), 3 Northern Harriers (1 adult male, 2 females: 1j, 1u), 2u Sharp-shinned Hawks, 1a Cooper's Hawk, 1a Northern Goshawk, 7a *calurus* Red-tailed Hawks (5 light, 2 dark), 1a light morph Ferruginous Hawk, 3 Rough-legged Hawks (2 light, 1 dark), 1 unidentified *Buteo*, 24 Golden Eagles (12a, 5sa, 7j), 1 male American Kestrel (the first of the season), 4 *columbarius* Merlins (2 males, 2 females), 1u Peregrine Falcon and 1 Prairie Falcon that was the last migrant of the day. Migration was consistent within the movement period with a high hourly count of 9 between 1000 and 1100, and the only hour without migrants was 1300-1400. An adult male Northern Harrier displayed once at 1159 and 3 resident Red-tailed Hawks soared together at 1130 and one or two birds were seen mainly hunting up to 1925. Other birds were 5 Canada Geese, 6 Mallards, 17

Rock Pigeons, 3 Downy Woodpeckers, 1 Northern Flicker, 4 Blue Jays, 1 Black-billed Magpie, 4 American Crows, 49 Common Ravens, 3 Black-capped Chickadees, 2 Mountain Chickadees, 4 American Robins, 22 European Starlings, 30 Evening Grosbeaks, 20 Grey-crowned Rosy-Finches, 38 Pine Siskins, 1 *cismontanus* Dark-eyed Junco and 4 male Red-winged Blackbirds.

13.5 hours (504.5) BAEA 2 (182), NOHA 3 (16), SSHA 2 (18), COHA 1 (2), NOGO 1 (23), RTHA 7 (75), FEHA 1 (2), RLHA 3 (21), UB 1 (4), GOEA 24 (540), AMKE 1 (1), MERL 4 (7), PEFA 1 (4), PRFA 1 (7) TOTAL 52 (910)

Saturday, April 13 Steeples [Day 36] 1600-1730 (Vance Mattson). It was a rainy overcast day with 100% altostratus and dark cumulus, a temperature of 9C and strong S-SE winds. The ridges cleared briefly at 1530 but 1.5 hours of observation yielded no migrant raptors before it again clouded over and precipitation resumed. Non-migrants were 2 Bald Eagles (1a, 1j) and 1 adult Golden Eagle, all seen along the ridge.

1.5 hours (174.5) TOTAL 0 (688)

Sunday, April 14 Mount Lorette [Day 43] 0615-2035 (Bill Wilson, assisted by Lori Anderson). The starting temperature was 1C but fell to 0C at 0800, reached a high of 7C at 1600 and 1700 and was 2C at the end of observation. Ground winds were SW-NW 0-3 km/h to 0800, and then SSE-SW 5-10 km/h for the rest of the day with a maximum gust of 36 km/h at 1500; ridge winds were WSW all day, moderate to 1400 and then moderate to strong. Cloud cover was 80-100% cumulus and altostratus to 1500, 30% cumulus at 1600 and then 60-70% cumulus and stratus for the rest of the day. There were very light snow flurries between 1100 and 1400 and a snow squall between 1430 and 1500, but the east was clear and the west was 10-20 % obscured all day. There was a slow but steady raptor movement of 14 birds of 3 species between 0912 and 1927 with 5 hourly periods having 2 migrants and 4 producing single birds. The count was 1u Bald Eagle, 1 unidentified *Accipiter*, 11 Golden Eagles (2a, 1sa, 5j, 3u) and 1 unidentified eagle. All birds glided high to very high above the Fisher Range to Mount Lorette with the exception of one Golden Eagle that glided directly to Skogan Pass and on to the NW. Three resident adult light morph *calurus* Red-tailed Hawks soared amicably together at the southern end of Hummingbird Plume Hill at 1645, 2 Bald Eagles (1a, 1sa) moved towards the south and three single resident Golden Eagles (2a, 1j) were seen flying at 1408, 1533 and 1941 but no displays were evident. Other birds recorded in the area were 3 Canada Geese, 2 pairs of Mallards and a pair of Common Goldeneyes all on the river, 7 Common Mergansers flying to the north above the river, 1 drumming Ruffed Grouse, 4 unidentified white-headed gulls that flew north above the eastern part of the valley, 2 Northern Flickers, 1 American Crow, 25 Common Ravens, 1 Black-capped Chickadee, 2 Mountain Chickadees, 2 Boreal Chickadees, 1 Red-breasted Nuthatch, 1 singing Varied Thrush, 6 American Robins, 1 Fox Sparrow that sang in the early morning and was not heard again, and 2 Dark-eyed Juncos, 1 of which was *montanus*. Eight White-tailed Deer fed in the meadow in the evening and there were 25 visitors to the site today.

14.33 hours (491.8) BAEA 1 (200), UA 1 (1), GOEA 11 (2052), UE 1 (25) TOTAL 14 (2333)

Sunday, April 14 Beaver Mines [Day 43] 0700-2015 (Peter Sherrington assisted by Hilary Atkinson). The temperature at 0700 was 2C, the high between 1400 and 1600 was 7C and it was 2C at 2015. Winds were strong W-WSW all day gusting 60-70 km/h, and cloud cover was 40-20% mainly cumulus and altocumulus to 1600 and 60-100% cirrus, cumulus and altocumulus for the rest of the day. The ridge was clear with the exception of periods of snow that swept down the valley from the Continental Divide at 0710-0750, 0805-0845, 1450-1500, 1720-1755, 1810-1840 and 1920-1945 when the ridge was completely obscured. There was a fairly strong and persistent raptor movement of 30 birds of 7 species between 0917 and 1756 that comprised 6 Bald Eagles (5 adults and 1 late subadult) 1u Sharp-shinned Hawk, 1a Northern Goshawk, 8 adult *calurus* Red-tailed Hawks (7 light, 1 dark), 4 Rough-legged Hawks (1 light, 2 dark, 1u), 1 unidentified dark morph *Buteo*, 8 Golden Eagles (4a, 4j) and 1 female *columbarius* Merlin. The busiest hour was 7 birds between 1100 and 1200. A male Northern Harrier that displayed at 1056 was reduced to a ball of disheveled feathers by a strong gust of wind and was not seen to display again, and single resident Red-tailed Hawks were only seen on 3 occasions. Other birds were 3 Canada Geese, 1 pair of Mallards, 1 male Common Merganser, 5 Rock Pigeons, a pair of Sandhill Cranes that performed a courtship dance in the valley at 0850, 2 Downy Woodpeckers, 1 Northern Flicker, 8 Blue Jays, 1 Black-billed Magpie, 29 Common Ravens, 2 Black-capped Chickadees, 3 Mountain Chickadees, 2 American Robins, 102 European Starlings, 25 Evening Grosbeaks, 40 Pine Siskins and 2 male Red-winged Blackbirds.

13.25 hours (517.8) BAEA 6 (188), SSHA 1 (19), NOGO 1 (24), RTHA 8 (83), RLHA 4 (25), UB 1 (5), GOEA 8 (548), MERL 1 (8) TOTAL 30 (940)

Sunday, April 14 Steeples [Day 37] 1130-1800 (Vance Mattson). The temperature was 6-9C, cloud cover was initially 100% stratus that became 50% cumulus by the end of the day and periods of light snow and hail fell between 1500 and 1630. The only migrant seen was the season's first American Kestrel, a female, and non-migrant birds were 4 Turkey Vultures, 3 adult Bald Eagles, 2 sightings of adult Sharp-shinned Hawks, and 1 adult Golden Eagle that flew to the SW above the site.

6.5 hours (181) AMKE 1 (1) TOTAL 1 (689)

Monday, April 15 Mount Lorette [Day 44] 0715-1915 (George Halmazna, assisted by Dan Parliament). The temperature was -3C at the start, rose to a high of 5.5C at 1500 and was 3C at the end of observation. It was calm to 0900 after which ground winds were SW all day, 5-15 km/h to 1800 and 2-10 km/h for the last two hours, while ridge winds were moderate SW all day. Cloud cover was 80-100% cirrocumulus, cirrostratus, altostratus, cumulus and stratus all day that produced snow flurries in the west to 1800 that only occasionally reached the site. All ridges were clear in the morning after which the west was 20% obscured except between 1600 and 1700

when it was 90% obscured, and the east was 30% obscured during the same period and 10-20% obscured for the rest of the afternoon apart from the last hour when it cleared. There was a disappointing migration of only 8 eagles: 1 juvenile Bald Eagle and 7 Golden Eagles (5a, 2u) that moved between 1245 and 1800 with a maximum hourly count of 3 (1 Bald and 2 Golden Eagles) between 1300 and 1400, and 2 Golden Eagles moved between 1700 and 1800. The first three birds were initially located over Skogan Pass from where they glided to Pigeon Mountain and the rest glided high from the northern end of the Fisher Range to Mount Lorette. Resident and non-migrant birds were an adult Bald Eagle that flew to the south, 1 adult Northern Goshawk, 1 adult light morph *calurus* Red-tailed Hawk and the resident pair of Golden Eagles. Other birds in the area were 3 Canada Geese and 5 Mallards on the river, 1 male Common Merganser flying above the river, 3 drumming and 1 seen Ruffed Grouse, a pair of Northern Flickers, 1 Canada Jay, 7 Common Ravens, 7 Black-capped Chickadees, 4 Mountain Chickadees, 2 Boreal Chickadees, 4 Red-breasted Nuthatches, 1 male Mountain Bluebird, 1 singing Varied Thrush, 13 American Robins, 1 Song Sparrow and 10 singing *montanus* Dark-eyed Juncos. Two White-tailed Deer fed in the meadow in the morning and 2 in the evening, and 3 Mule Deer were seen near Lorette Ponds. Only 4 visitors made it to the site today.

12 hours (503.8) BAEA 1 (201), GOEA 7 (2059) TOTAL 8 (2341)

Monday, April 15 Beaver Mines [Day 44] 0645-2045 (Peter Sherrington assisted by Hilary Atkinson). The temperature was 0C at 0645, the high of 9C was reached at 1600 and 1700 and it was 3C at 2045. Winds were WSW-W all day 30-45 gusting to 55 km/h and cloud cover was 100-30% cirrus, cirrostratus, cumulus and altocumulus to 1500, 20-30% cumulus to 1750 after which it was cloudless. Migration and observation conditions were excellent all day and produced a fairly strong April count of 50 birds of 9 species between 0856 and 1940. The flight was 10 Bald Eagles (7a, 2sa, 1j), 2 female Northern Harriers (1a, 1j), 2u Sharp-shinned Hawks, a season-high 11 adult Red-tailed Hawks (10 light morph *calurus* and 1 dark morph *harlani*), 1 dark unidentified *Buteo*, 20 Golden Eagles (10a, 2sa, 8j), 1 male American Kestrel, 1 male *columbarius* Merlin, 1 female dark grey Gyrfalcon and 1u Peregrine Falcon. Movement was slow and steady to 1815 after which 23 more migrants were seen, 15 moving between 1815 and 1900 and 8 between 1900 and 1940. Seven Golden Eagles glided high to the NNW together at 1827. A male Northern Harrier displayed at 1108 and again at 1140, and at least 4 adult Red-tailed Hawks (probably 2 pairs) were seen frequently between 1047 and 1925. Today's non-raptor birds were a pair Canada Geese, 3 Mallards, 3 Rock Pigeons, 1 Downy Woodpecker, 1 Northern Flicker, 1 Black-billed Magpie, 21 American Crows, 32 Common Ravens, 2 Black-capped Chickadees, 2 Mountain Chickadees, 4 American Robins, 75 European Starlings, 25 Evening Grosbeaks, 25 Pine Siskins a pair of *hyemalis* Dark-eyed Juncos and 3 male Red-winged Blackbirds.

14 hours (531.8) BAEA 10 (198), NOHA 2 (18), SSHA 2 (21), RTHA 11 (94), UB 1 (6), GOEA 20 (568), AMKE 1 (2), MERL 1 (9), GYRF 1 (6), PEFA 1 (5) TOTAL 50 (990)

Monday, April 15 Steeples (Vance Mattson) NO OBSERVATION.

Tuesday, April 16 Mount Lorette [Day 45] 0715-2015 (Blake Weis, assisted by Brian McBride). The temperature at 0715 was -5C, the high was 8C between 1600 and 1900 and it was 6C at 2015. Ground winds were S-SW 0-5 gusting 15 km/h to 1300, variable SW-W-NW 0-5 gusting 20 km/h between 1300 and 1500, and then W-SW 0-5 gusting 25 km/h for the rest of the day. Ridge winds were SW all day, light to moderate to 1300, moderate to 1900 then light to moderate for the rest of the day. Cloud cover was 80-90% cirrus and cirrostratus to 1100 that reduced to 70% altocumulus and cirrus at 1300, and 20% altocumulus at 1600 after which it increased again to 90% altostratus, altocumulus, cirrus and cirrostratus for the rest of the day. All ridges were clear. A total of 18 migrant raptors of 3 species moved between 1120 and 1830 comprising 2 adult Northern Goshawks, 1 adult light morph *calurus* Red-tailed Hawk and 15 Golden Eagles (8j, 7u). Movement was slow and steady throughout with a maximum hourly count of only 4 Golden Eagles between 1500 and 1600. The two goshawks and 2 Golden Eagles were initially located at the northern end of the Fisher range, 3 Golden Eagles were first seen over Mount Lorette and probably came from Wasootch Creek, while the rest moved on the western route with most birds soaring over Olympic Summit before gliding high to the NW behind the summit of Mount Allan. Non-migrant birds were 1 resident adult Northern Goshawk that hunted north of the site and displayed above the southern end of Hummingbird Plume Hill, 1 adult Red-tailed Hawk that soared over Hummingbird Plume Hill and the resident pair that was seen in a spectacular talon-gripping free-fall display just south of Olympic Summit at 1740 after the male was seen displaying there earlier at 1458. Yet another flock of Snow Geese, this time 50 birds, flew high across the valley and over the Fisher Range to the east at 1900, and other birds noted were 3 Canada Geese, 3 Mallards and a pair of Bufflehead (new for the year) on the river, 4 Ruffed Grouse, one of which 3 drummed, 1 female American Three-toed Woodpecker on Stoney Trail west of the site, 1 Hairy Woodpecker, a pair of Northern Flickers, 1 Pileated Woodpecker, 3 Canada Jays, 1 Black-billed Magpie, 1 American Crow, 10 Common Ravens, the first Northern Rough-winged Swallow of the season at 1430, 5 Black-capped Chickadees, 5 Mountain Chickadees, 1 Boreal Chickadee, 3 Red-breasted Nuthatches, 1 Brown Creeper, 1 Golden-crowned Kinglet, 1 singing Ruby-crowned Kinglet, 2 pairs of Mountain Bluebirds, 2 singing Varied Thrushes, 20 American Robins, 2 European Starlings, 3 American Pipits, 1 White winged Crossbill, 2 Pine Siskins, 2 American Tree Sparrows, 1 Fox Sparrow that sang at 0930, 1 Song Sparrow and 10 Dark-eyed Juncos, 3 of which were *montanus*. Eight White-tailed Deer fed in the meadow in the evening and there was only 1 visitor at the site today.

13 hours (516.8) NOGO 2 (15), RTHA 1 (10), GOEA 15 (2074) TOTAL 18 (2359)

Tuesday, April 16 Beaver Mines [Day 45] 0645-2030 (Peter Sherrington assisted by Hilary Atkinson). The temperature was -1C at 0645, the high at 1700 was 11C and it was 6C at 2030 when observation ceased. Winds were generally light NW-SW to 1330 when they significantly increased to WSW-W 20-35 gusting to 45 km/h for the rest of the day. Cloud cover was 100-80% cirrostratus with minor altocumulus and cumulus to 1300, 10-40% cumulus to 1730, 90-100%

altostratus, cumulus, cirrus and altocumulus to 2000 that quickly dwindled to 10% altocumulus at 2030. Observing conditions were excellent throughout and a total of 30 migrants of 6 species were seen between 1037 and 2016 that comprised 9 Bald Eagles (5a, 3j, 1u), 3 Northern Harriers (1 adult female, 1 juvenile female and 1 juvenile male), 1u Sharp-shinned Hawk, 2 adult Northern Goshawks, 4 Red-tailed Hawks (1a and 1u light morph *calurus*, and 2 birds of unknown race or age) and 11 Golden Eagles (5a, 4j 2u). Movement was fairly steady throughout with a maximum hourly count of 6 birds between 1037 and 1100, and single adult Bald Eagles at 2003 and 2016 were the first migrants seen after 2000 this season. A resident pair of Northern Harriers was seen with the male displaying on a couple of occasions, birds from two pairs of Red-tailed Hawks were conspicuous throughout the day and a male resident Golden Eagle flew from the ridge to the SE at 1106. Other birds seen were a pair of Canada Geese, 5 Mallards, 1 male Common Merganser, 17 Rock Pigeons, at 0830 a pair of Sandhill Cranes unconcernedly fed in the valley close to a family group of three Coyotes, and 3 other birds flew high to the SW above the ridge at 1116, 2 Downy Woodpeckers, 1 Hairy Woodpecker, 1 Northern Flicker, 2 Blue Jays, 21 American Crows, 20 Common Ravens, 1 Black-capped Chickadee, 1 Mountain Chickadee, 1 male Mountain Bluebird, 4 American Robins, 129 European Starlings, 30 Evening Grosbeaks, 1 female Cassin's Finch, 20 Pine Siskins and 6 male Red-winged Blackbirds.

13.75 hours (545.5) BAEA 9 (207), NOHA 3 (21), SSHA 1 (22), NOGO 2 (26), RTHA 4 (98), GOEA 11 (579) TOTAL 30 (1020)

Tuesday, April 16 Steeples [Day 38] 1300-1800 (Vance Mattson). The temperature was 9C, it was calm with intermittent W winds and cloud cover was initially 50% cumulus but quickly became 100% altostratus for most of the day. No migrant raptors were seen, but non-migrant birds were 5 Turkey Vultures, 7 Bald Eagles (4a, 3j) that included 2 pair-flights, and 1 adult light morph *calurus* Red-tailed Hawk that indulged in a spirited aerial duel with a raven.

5 hours (168) TOTAL 0 (689)

Wednesday, April 17 Mount Lorette [Day 46] 0715-2045 (Cliff Hansen, assisted by Rick Robb and Chris Hunt). The starting temperature was 3C, the high at 1700 was 11C and it was 7C at the end of observation. Ground winds were SW all day 0-5 gusting 20 km/h and up to 35 km/h after 1700, while ridge winds were moderate to strong W-NW in the morning that became NW to 1700 after which they were strong NW for the rest of the day. Cloud cover was initially 80% cumulus that brought light snow flurries and was then 90-60% cumulus for the rest of the day. The ridges were clear all day and observing conditions were good throughout, but the only migrants seen were a subadult Golden Eagle that glided high from the Fisher Range to above Mount Lorette at 1618 and an unaged Golden Eagle that glided very high on the same route at 1940. Resident and non-migrant raptors were 4 adult Bald Eagles (probably two pairs) that soared above the Fisher Range at 1645 and interacted vigorously before flying to the east, a Northern Goshawk that called from the nest site at 1000, a pair of Red-tailed Hawks that soared

above Hummingbird Plume Hill at 1536 and 1 or 2 adult resident Golden Eagles that were occasionally seen hunting up to 1214. Other birds in the area were also scarce and comprised 3 Canada Geese, 11 Mallards and a pair of Common Mergansers on the river, 2 drumming Ruffed Grouse, 1 pair of Northern Flickers, 6 Common Ravens, 2 Red-breasted Nuthatches, 1 singing Varied Thrush, 4 American Robins, a small flock of perched Red Crossbills, 1 Song Sparrow, 2 Dark-eyed Juncos, 1 of which was *cismontanus* and 1 male Red-winged Blackbird. Four White-tailed Deer fed in the meadow late in the evening and there were 4 visitors at the site today.

13.5 hours (530.3) GOEA 2 (2076) TOTAL 2 (2361)

Wednesday, April 17 Beaver Mines [Day 46] 0645-2045 (Peter Sherrington assisted by Hilary Atkinson). The temperature at 0645 was 4C, reached a high of 12C at 1500 and 1600 and was still 8.5C at 2045. Winds were strong W-WSW all day, 30-45 gusting to 80 km/h, and it was initially cloudless with 30% cumulus developing at 0800 after which cloud cover was variable 30-80% cumulus, cirrus and cirrocumulus to late in the day when it was again cloudless. There was sporadic very light flurries or light rain to 1100, but observing conditions were excellent all day. A total of 25 migrant raptors of 6 species moved between 0755 and 1629 comprising 3 Bald Eagles (1a, 1sa, 1u), 4 Northern Harriers (2a females, 1j male, 1u), 5 Sharp-shinned Hawks (2a, 3u), 5 adult light morph *calurus* Red-tailed Hawks, 5 Golden Eagles (2a, 3j) and 3 American Kestrels (2 females, 1 male). Movement was slow but steady to 1629 with a maximum hourly count of 5 between 1200 and 1300 and again between 1600 and 1629 after which no further migrants were seen although there was no change in the weather conditions. Resident birds were a pair of Northern Harriers, and 2 pairs of Red-tailed Hawks that were seen regularly to 1651 when they also disappeared until 2015 when a single bird was seen hunting high above the valley and at 2032 a single bird soared high above the centre of the valley just below the full moon before flying north, presumably to roost. Other birds seen were a pair of Canada Geese on the creek and 2 that flew very high to the north, 2 male and 1 female Wood Ducks on a flooded pasture adjacent to the creek at 1956 which were the first ever seen here, a pair of Mallards, 1 Ruffed Grouse, 16 Rock Pigeons, 1 Sandhill Crane that fed briefly in the valley at 1003 before flying low to the SW, and 3 single birds that flew high above the ridge at 1008, 1325 and 1328, 3 Downy Woodpeckers, 1 Northern Flicker, 5 Blue Jays, 2 Black-billed Magpies, 19 Common Ravens, 3 Black-capped Chickadees, the first Ruby-crowned Kinglet of the year, 4 American Robins, 252 European Starlings, 31 Evening Grosbeaks, 12 Pine Siskins and 8 male Red-winged Blackbirds.

14 hours (559.5) BAEA 3 (210), NOHA 4 (25), SSHA 5 (27), RTHA 5 (103), GOEA 5 (584), AMKE 3 (5) TOTAL 25 (1045)

Wednesday, April 17 Steeples (Vance Mattson) NO OBSERVATION. It was a clear day but unfortunately work commitments prevented Vance from observing.

Thursday, April 18 Mount Lorette [Day 47] 0715-2010 (Blake Weis, assisted by Rachel MacKay). The temperature at 0715 was 5C, the high was 14C from 1700 to 1900 and it was 12C at 2010. Ground winds were W-SW all day, 2-5 gusting 15 km/h to 0900 and then 5-10 gusting to 32 km/h for the rest of the day, while ridge winds were moderate to strong NW all day. Cloud cover was initially 40% altocumulus, lenticular cirrus and altostratus that gradually spread to 70% at 1100; between 1100 and 1300 it was 80-90% cumulus, altocumulus, altostratus, cirrus, cirrocumulus and cirrostratus, at 1300 and 1400 it was 100% altostratus and cumulus and for the rest of the day it was variable 50-80% cumulus, altocumulus, altostratus and cirrus with minor stratocumulus developed to the west. The variety of cloud forms was not matched by the number of raptor migrants as again only two were seen: 1 adult light morph *calurus* Red-tailed Hawk that flew north from the Fisher Range at 1458 and an immature Bald Eagle that flew from the south face of Mount Lorette to Mount McGillivray and on to the NW at 1844. Resident birds were a pair of Red-tailed Hawks soaring over Hummingbird Plume Hill and single birds, probably of the same pair, that hunted north of the site, and an adult Golden Eagle that flew low from Mount Lorette to the Fisher Range at 1140. Other birds noted in the area were 3 Canada Geese and a pair of Mallards on the river, 3 drumming Ruffed Grouse, 1 Hairy Woodpecker, 3 Northern Flickers, 1 Canada Jay, 1 American Crow, 7 Common Ravens, 3 Black-capped Chickadees, 2 Mountain Chickadees, 2 Boreal Chickadees, 2 Red-breasted Nuthatches, 1 American Dipper seen at Troll Falls, 1 Golden-crowned Kinglet, 1 singing Ruby-crowned Kinglet, 1 male and 2 female Mountain Bluebirds, 2 singing Varied Thrushes, 15 American Robins, 2 American Pipits, 12 White winged Crossbill, 2 Pine Siskins, 1 Fox Sparrow that sang only in the morning, 1 singing Song Sparrow, 10 Dark-eyed Juncos, 3 of which were *montanus*, the first Western Meadowlark of the season and 1 male Red-winged Blackbird. Three White-tailed Deer fed in the meadow early in the morning and again late in the evening, a single Bighorn Sheep was seen on Olympic Summit, and there were 5 visitors to the site today.

13.92 hours (544.2) BAEA 1 (202), RTHA 1 (11) TOTAL 2 (2363)

[Addenda to **April 17** report: while driving to the site, at 0945 Cliff saw an adult light morph Ferruginous Hawk soaring low at the confluence of the Kananaskis and Bow Rivers, 18 km NNE of the Hay Meadow site. Three Mountain Bluebirds, 2 males and 1 female, were also seen in the Hay Meadow.]

Thursday, April 18 Beaver Mines [Day 47] 0630-2045 (Peter Sherrington assisted by Hilary Atkinson). The temperature at 0630 was already 7C, the high at 1200 and again at 1600 was 14C and it was still 10.5C at 2045. Winds were again strong WSW-W all day, 40 to 50 gusting 70 km/h and to 90 km/h at 1400 and 2045. Cloud cover was 60-100% altostratus, cumulus, cirrus, cirrocumulus, altocumulus and lenticular to 1530, 20-70% cumulus to 1900 and then 100-30% thin cirrostratus and cumulus for the rest of the day. Observing conditions were very good all day and produced a varied if sporadic movement of 22 raptors of 11 species between 0926 and 1821. The flight was 1u Turkey Vulture at 1703, 1 Osprey at 1640, both of which were the first of the season, 1 subadult Bald Eagle, 3u Sharp-shinned Hawks, 2 Cooper's Hawks (1a, 1u), 2 Northern

Goshawks (1j, 1u), 1 adult light morph Ferruginous Hawk, 1 dark morph Rough-legged Hawk, 7 Golden Eagles (3a, 4j), 2 *columbarius* Merlins (1 male, 1 female) and 1 male Prairie Falcon. Resident birds were 1 male Northern Harrier and sporadic sightings of hunting Red-tailed Hawks. Other birds seen were 1 Canada Goose, 2 male and 1 female Wood Ducks, 5 Mallards and 2 pairs of Green-winged Teal on the creek, a lek of 8 Wild Turkeys that comprised 5 very aggressive displaying males that fought amongst themselves and 3 females that completely ignored them and calmly fed close by, 17 Rock Pigeons, single Sandhill Cranes that flew high to the SW at 0913 and 1801, 1 Wilson's Snipe, 1 Downy Woodpecker, 2 male Northern Flickers, 6 Blue Jays, 2 Black-billed Magpies, 4 American Crows, 32 Common Ravens, 1 Tree Swallow, 4 American Robins, 65 European Starlings, 30 Evening Grosbeaks, 1 female Cassin's Finch, 15 Pine Siskins and 7 male Red-winged Blackbirds.

14.25 (573.8) TUVU 1 (1), OSPR 1 (1), BAEA 1 (211), SSHA 3 (30), COHA 2 (4), NOGO 2 (28), FEHA 1 (3), RLHA 1 (26), GOEA 7 (591), MERL 2 (11), PRFA 1 (8) TOTAL 22 (1067)

Thursday, April 18 Steeples [Day 39] 1300-1730 (Vance Mattson). The temperature was 14C, winds were moderate to strong S and cloud cover was 100% altostratus and cumulus that slightly obscured the ridges at 1700 and brought light rain. It was another slow day with no migrant raptors and just one non-migrant juvenile Bald Eagle seen.

4.5 hours (190.5) TOTAL 0 (689)

Friday, April 19 Mount Lorette [Day 48] 0715-1600 (Cliff Hansen, assisted by Rick Robb). The temperature at 0715 was 7C, the high was 9C between 1000 and 1200 and it was 4C when the count was abandoned for the day in the rain at 1600. Winds were light (<5 km/h) at the Hay Meadow site, where the 100% stratus cloud cover produced light rain and descended to substantially cover the ridges by 0900 when the observers decided to relocate to the Lusk Creek site. There winds were NW 5-10 gusting 25 km/h, cloud cover was 100% stratus and cumulus and the ridges were clear, but rain started at 1200 and by 1300 all ridges were obscured. One resident adult *calurus* Red-tailed Hawk was seen, but there were no migrants. Other birds at the Hay Meadow were 6 Canada Geese, a pair of Mallards, 1 drumming Ruffed Grouse, 1 Northern Flicker, 2 Common Ravens, 1 male Mountain Bluebird, 6 American Robins, 2 Black-capped Chickadees, 2 Mountain Chickadees, 1 Red-breasted Nuthatch and 1u Dark-eyed Junco. At Lusk Creek other birds were 1 Downy Woodpecker, 1 Pileated Woodpecker, 1 singing Townsend's Solitaire, 1 American Robin and 6 singing Dark-eyed Juncos. One visitor stopped by the Lusk Creek site.

8.75 hours (553) TOTAL 0 (2363)

Friday, April 19 Beaver Mines [Day 48] 0630-2030 (Peter Sherrington assisted by Hilary Atkinson). The temperature at 0630 was 12C that rose to a season-high 19C at 1330 before

quickly dropping down to 9C at 2030. Winds were strong W-WSW 45-55 gusting 80 km/h to 1700 after which they moderated to 20-30 gusting 40 km/h. Cloud cover was 0-20% cumulus to 1200 when it thickened to 60% altocumulus, altostratus, cirrus and cumulus and throughout the afternoon it was 90-100% altostratus, stratus and cumulus that brought light to moderate rain between 1500 and 1830 and then occasional showers for the rest of the day. There was a fairly varied raptor movement involving 20 birds of 7 species between 0932 and 1456 when rain stopped migration which did not restart despite seemingly ideal migration conditions after 1830. The count was 1 adult Turkey Vulture, 1 adult female Northern Harrier, 3 Sharp-shinned Hawks (1a, 2u), the first 2 light morph Broad-winged Hawks (1a, 1u) of the season that soared high above the centre of the valley with a Golden Eagle at 1248, 5 Red-tailed Hawks (2a and 2u *calurus* light, and 1 dark adult *harlani*), 7 Golden Eagles (3a, 2sa, 1j, 1u) and 1u *columbarius* Merlin. The resident Northern Harrier pair hunted throughout the day and up to 4 resident Red-tailed Hawks were seen hunting before the rain started. Other birds seen in the area were a pair of Canada Geese and 8 that flew high to the SW in 2 flocks, 2 pairs of Wood Ducks, 3 pairs of Mallards and 3 pairs of Green-winged Teal, 12 Rock Pigeons, 1 pair of Downy Woodpeckers, 1 pair of Northern Flickers, 4 Blue Jays, 2 Black-billed Magpies, 6 American Crows, 8 Common Ravens, 1 pair of Tree Swallows, 8 American Robins, 5 European Starlings, 15 Evening Grosbeaks, 10 Pine Siskins and 4 male Red-winged Blackbirds.

14 hours (587.8) TUVU 1 (2), NOHA 1 (26), SSHA 3 (33), BWHA 2 (2), RTHA 5 (108), GOEA 7 (598) MERL 1 (12) TOTAL 20 (1087)

Friday, April 19 Steeples (Vance Mattson) NO OBSERVATION (weather). It was a rainy and overcast day. The mountains partially cleared by 1700 but there was little prospect of raptor movement so Vance decided not to visit the site.

Saturday, April 20 Mount Lorette [Day 49] 0705-2015 (Blake Weis, assisted by Ruth Morrow). The starting temperature was 0C, the high was 8C at 1700 and 1800 and it was 6C at the end of observation. Ground winds were SW 0-5 km/h to 1000, N-NW 0-5 gusting 20 km/h to 1900 and N-NW 0-10 km/h for the rest of the day, while ridge winds were moderate SW all day. Cloud cover was 100% low stratus and fog that obscured all ridges to 1000 when it began to break to 90% stratocumulus, cumulus, cirrus and stratus and further reduced to 70% at 1500, and was then 70-80% cumulus, cirrus, altocumulus and cirrocumulus for the rest of the day. The eastern ridges did not fully clear until 1700 and the west not until 1800, but the only precipitation was light snow flurries between 1100 and 1200. Locating conditions were excellent after 1000 and resulted in the highest count since April 12 that comprised 33 migrants of 6 species seen between 1117 and 1952. The count was 2 Ospreys that were the first of the season. 3 Bald Eagles (1a, 2sa), a season-high 4 adult Northern Harriers (3 males, 1 female), 2 adult light morph *calurus* Red-tailed Hawks, 4 Rough-legged Hawks (3 light, 1 dark), 2 unidentified *Buteos*, 15 Golden Eagles (3a, 2sa, 9j, 1u) and 1 unidentified eagle. Birds moved fairly steadily throughout and peaked between 1800 and 1900 when 1 Osprey and 8 Golden Eagles were seen. Most birds were

seen over the western part of the valley to 1400 after which they were mainly located above the Fisher Range although some eagles seen over Mount Lorette later in the day may have originated from Wasootch Creek north of the Fisher Range. Resident birds were 1 adult Bald Eagle that flew south from Mount Old Baldy at 1400, 3 sightings of single adult Northern Goshawks and 1 calling from the nest site, three sightings of single soaring Red-tailed Hawks and 1 adult Golden Eagle that soared high above the Fisher Range at 1555 before gliding high to the south. Other birds in the area were 4 Canada Geese, 5 Mallards, 3 drumming Ruffed Grouse, 1 Killdeer, 1 Wilson's Snipe that performed its winnowing display flight for the first time this season early in the morning, 1 Hairy Woodpecker, 4 Northern Flickers, 12 Common Ravens, 3 Tree Swallows, 2 Black-capped Chickadees, 6 Mountain Chickadees, 2 Boreal Chickadees, 6 Red-breasted Nuthatches, 3 American Dippers 2 of which were seen at Troll Falls, 10 Golden-crowned Kinglets, 3 Ruby-crowned Kinglets, 2 male and 1 female Mountain Bluebirds, 6 singing Varied Thrushes, 39 American Robins including a single flock of 13, 2 American Pipits, 1 White winged Crossbill, 2 Red Crossbills, 7 Pine Siskins, 1 singing Fox Sparrow, 4 Song Sparrows, 16 Dark-eyed Juncos, 1 of which was *hyemalis* and 3 *montanus*, and 1 male Red-winged Blackbird. Three White-tailed Deer fed in the meadow late in the evening, 3 Bighorn Sheep were seen on Olympic Summit and there were fresh tracks of Canada Lynx and Black Bear in the 2cm of snow that had fallen overnight. There were 15 visitors to the site today.

13.16 hours (566.2) OSPR 2 (2), BAEA 3 (205), NOHA 4 (5), RTHA 2 (13), RLHA 4 (15), GOEA 15 (2091), UB 2 (3), UE 1 (26) TOTAL 33 (2396)

Saturday, April 20 Beaver Mines [Day 49] 0630-2030 (Peter Sherrington assisted by Hilary Atkinson). The temperature at 0630 was 2C, the high was 7C at 1700 and it was 5C at 2030. Winds were calm or light (<5 km/h) to 1400, then NE 10 km/h and finally SW-W 10-15 km/h after 1900. Cloud cover was 100% stratus almost throughout the day that began to break at 2015 and reduced to 80% cumulus at 2030. Steady light and occasionally moderate rain started falling at 0840 and persisted to 1550 after which there were further periods of rain to 1820, and the ridge was obscured between 0930 and 1200. There was a compressed raptor movement of 12 birds of 7 species between 1503 and 1752 that comprised 3 Bald Eagles (1a, 2j), 2 adult Northern Harriers (1 female and 1 male), 1u Sharp-shinned Hawk, 2 adult light morph *calurus* Red-tailed Hawks, 1 light morph juvenile Ferruginous Hawk, 1 subadult Golden Eagle and 2 female *columbarius* Merlins (1a, 1u). Six of the birds were seen between 1503 and 1600 and 4 between 1711 and 1752. Resident birds were a pair of Northern Harriers and 2 pairs of Red-tailed Hawks that hunted low above the bottom of the valley, a non-migrant juvenile Northern Goshawk that made three low hunting passes at a group of Mallards on the creek, the third of which was presumably successful as it failed to re-appear from the willow shrub behind which it dived at 1943, and a male Prairie Falcon hunted songbirds in the rain near the site at 1215. Other birds were 1 Greater White-fronted Goose that flew to the NE above the valley at 1910, a pair of Canada Geese, 2 pairs of Wood Ducks, 12 Mallards, 1 pair of Green-winged Teal, a pair of Common Mergansers that flew high to the north at 1732, 9 Rock Pigeons, a pair of Sandhill Cranes that fed by the creek at 1518, 2 pairs of Downy Woodpeckers, 1 pair of Hairy Woodpeckers, 1 pair of Northern Flickers, 4 Blue Jays, 1 Clark's Nutcracker, 5 American Crows, 11 Common Ravens, 14 Tree

Swallows most of which flew high towards the SW, 2 Black-capped Chickadees, 2 Mountain Chickadees, 2 Red-breasted Nuthatches, 1 American Dipper that flew high to the NE above the creek at 2028, 1 Ruby-crowned Kinglet, 5 American Robins, 88 European Starlings, 32 Evening Grosbeaks, 2 female Cassin's Finches, 10 Pine Siskins and 11 Red-winged Blackbirds that included 5 females which were the first seen here this year.

14 hours (601.8) BAEA 3 (214), NOHA 2 (28), SSHA 1 (34), RTHA 2 (110), FEHA 1 (4), GOEA 1 (599), MERL 2 (14) TOTAL 12 (1099)

Saturday, April 20 Steeples [Day 40] 1300-1800 (Vance Mattson). The temperature was 15C, winds were moderate N and cloud cover was 100% thin altostratus and cumulus that reduced to 40% cumulus and produced mainly sunny conditions. The 6 migrants seen comprised 5 Bald Eagles (3a, 2j) and 1u Sharp-shinned Hawk, with 3 of the Bald Eagles moving between 1545 and 1600. Non-migrants were 11 Turkey Vultures, 4 Bald Eagles (1a, 3j), 1 adult Northern Goshawk, three sightings of single Red-tailed Hawks including one that displayed, and 1 juvenile Golden Eagle that was intensely harried by a Red-tailed Hawk but remained entirely aloof throughout a series of bombing flights.

5 hours (195.5) BAEA 5 (217), SSHA 1 (2) TOTAL 6 (695)

Sunday, April 21 Mount Lorette [Day 50] 0615-2115 (Bill Wilson, assisted by Lori Anderson). The temperature at 0615 was -3C, the high from 1600 to 1800 was 13C and it was 4C at 2115. Ground winds were SW-SSE all day, 0-6 km/h to 1000, 5-10 gusting to 28 km/h to 1800 and then 2-5 km/h for the rest of the day; ridge winds were SW all day, light to moderate to 1100 and then then moderate to the end of observation. It was cloudless to 1300 when 40-100% thin to moderate altostratus developed that gave excellent viewing conditions for the rest of the day. The ridges were completely clear. There was a strong raptor movement for so late in the season with a total of 56 birds of 6 species moving between 1053 and 2032 that comprised 4 Bald Eagles (2a, 1 late subadult and 1 undifferentiated immature bird), a season-high 4 Sharp-shinned Hawks (1j, 3u), 1u Cooper's Hawk that was the first of the season, 3 Northern Goshawks (1a, 2u), 3 adult light morph *calurus* Red-tailed Hawks and 41 Golden Eagles (5a, 2sa, 11j, 23u). Both the combined species and the Golden Eagle counts are the highest since April 8. The first Golden Eagle was not seen until 1423, 15 moved between 1500 and 1600, 11 between 1900 and 2000 and 4 between 2000 and 2032. Most movement was on the western route to 1800 after which the birds glided high from the Fisher range to Mount Lorette. Four non-migrant Bald Eagles (2a, 2sa) moved to the south, single adult Northern Goshawks were seen on 2 occasions, at least 2 resident Red-tailed hawks were present and there were 4 sightings of single resident Golden Eagles including 3 display flights between 1700 and 1900, and the pair performed a talon-clasping fall to the south of Olympic Summit at 1830. Other birds recorded in the area were 3 Canada Geese on the river and a flock of 25 that flew high to the NE at 1740, 6 Mallards, a pair of Common Goldeneyes, 1 male Common Merganser, 5 Ruffed Grouse of which 4 were drumming, 1 Great

Horned Owl that called east of the site at 0755, 1 female American Three-toed Woodpecker, 1 Northern Flicker, 1 American Crow, 40 Common Ravens, 1 Tree Swallow, 2 Violet-green Swallows, 4 unidentified swallows, 1 Red-breasted Nuthatch, 2 Golden-crowned Kinglets, 1 singing Ruby-crowned Kinglet, 1 Mountain Bluebird, 2 singing Varied Thrushes, 4 American Robins, 2 Pine Siskins, 1 singing Fox Sparrow, 1 singing Song Sparrow, 2 Dark-eyed Juncos, 1 of which was *cismontanus*, and 1 male Rusty Blackbird. Six White-tailed Deer fed in the meadow late in the evening, and there were 45 visitors to the site today including 10 from the Edmonton Nature Club that unfortunately left just before the influx of Golden Eagles.

15 hours (581.2) BAEA 4 (209), SSHA 4 (9), COHA 1 (1), NOGO 3 (18), RTHA 3 (16), GOEA 41 (2132) TOTAL 56 (2452)

Sunday, April 21 Beaver Mines [Day 50] 0630-2100 (Peter Sherrington assisted by Hilary Atkinson). The temperature at 0630 was 0C the high at 1500 and again at 1700 and 1800 was 15C and it was still 10C at 2100. Winds were W 5-15 km/h to 0830, ESE-SSE 10-15 km/h to 1630 and then SSW-WSW 15-20 gusting 30 km/h for the rest of the day. It was cloudless to 1000, and then variably 20-50% cumulus to 1815 after which it was again cloudless for the rest of the day. There was a persistent and varied raptor movement involving 38 birds of 12 species between 1019 and 1955 that comprised 6 Bald Eagles (2a, 4j), 1 adult female Northern Harrier, 3u Sharp-shinned Hawks, 1a Cooper's Hawk, 1a Northern Goshawk, 2u light morph Swainson's Hawks that were the first for the season, 6 *calurus* Red-tailed Hawks (5 light morphs: 4a, 1j, and 1 adult dark morph), 1 adult light morph Ferruginous Hawk, 3 light morph Rough-legged Hawks, 1 unidentified *Buteo*, 11 Golden Eagles (1a, 2sa, 6j, 2u), 1 female American Kestrel and 1 male *columbarius* Merlin. Maximum hourly passage was 7 between 1300 and 1400. The resident male Northern Harrier displayed at 1131 and there were numerous sightings of up to 6 resident Red-tailed Hawks between 0941 and 1967. Other birds seen were a pair of Canada Geese, 1 pair of Wood Ducks, 5 Mallards, 10 Rock Pigeons, 1 pair of Downy Woodpeckers, 1 Hairy Woodpecker, 1 male Northern Flicker, 2 Blue Jays, 5 Black-billed Magpies, 12 American Crows, 25 Common Ravens, 10 Tree Swallows, 1 Red-breasted Nuthatch, 4 American Robins, 40 European Starlings, 21 Evening Grosbeaks, 1 female Cassin's Finch, 10 Pine Siskins and 5 Red-winged Blackbirds (3 males and 2 females).

14.5 hours (616.3) BAEA 6 (220), NOHA 1 (29), SSHA 3 (37), COHA 1 (5), NOGO 1 (29), SWHA 2 (2), RTHA 6 (116), FEHA 1 (5), RLHA 3 (29), UB 1 (7), GOEA 11 (610), AMKE 1 (6), MERL 1 (15) TOTAL 38 (1137)

Sunday, April 21 Steeples [Day 41] 1300-1730 (Vance Mattson). The temperature was 15C, conditions were calm and cloud cover of 10-20% cumulus and cirrus gave continuous sunshine. Only two migrants were seen: 1 juvenile Bald Eagle at 1528, and 1 juvenile Golden Eagle at 1423 that was the first migrant bird of the species seen at the site since April 6. Non-migrants

were 20 Turkey Vultures that included a kettle of 7 birds, 1 adult Bald Eagle, 1u Northern Goshawk and 3 sightings of single Red-tailed Hawks.

4.5 hours (200) BAEA 1 (218), GOEA 1 (454) TOTAL 2 (697)

[NOTE: tomorrow will be the last day of the spring 2019 count at all three sites.]

Monday, April 22 Mount Lorette [Day 51] 0700-1845 (Blake Weis, assisted by Eric Langshaw). The starting temperature was 3C, the high was 15C from 1600 to 1800 and it was 12C at the end of the count. Ground winds were SSW to 1500 0-5 gusting up to 35 km/h, and SE-SW 5-10 gusting to 48 km/h for the rest of the day; ridge winds were SW all day, moderate to strong to 1300 after which they were strong to very strong. Cloud cover was 20-30% cirrus to 0900 and then 50-100% variable mixtures of cirrus, cirrostratus, altocumulus, cirrocumulus, cumulus and lenticular cloud with stratocumulus developing from the west after 1800, that 30% obscured the western mountains and brought rain that ended the count at 1845. Otherwise, the ridges were clear all day. The last day of the count saw a migration of 8 raptors of 5 species between 1134 and 1815 that comprised 1 Osprey, that was the only bird seen on the western route, 2u Sharp-shinned Hawks, 1u Cooper's Hawk, 1 adult light morph *calurus* Red-tailed Hawk, 2u Golden Eagles and one medium-sized unidentified distant raptor. Apart from the Osprey all birds moved above the Fisher Range ridge or above the eastern side of the valley at variable heights, and 4 of the birds were seen between 1300 and 1400. A resident adult Northern Goshawk displayed above Olympic Summit at 0920, an adult Red-tailed Hawk was seen hunting on three occasions over Hummingbird Plume Hill and a resident adult Golden Eagle hunted on the SW flank of Mount Lorette at 1235. Other birds recorded in the area were 3 Canada Geese, 1 pair of Mallards, 1 male Common Merganser, 4 drumming Ruffed Grouse, 1 Wilson's Snipe, 1 male Belted Kingfisher (the first of the season), 1 pair of Downy Woodpeckers, 1 pair of Northern Flickers, 6 Common Ravens, 6 Black-capped Chickadees, 9 Mountain Chickadees, 2 Boreal Chickadees, 3 Red-breasted Nuthatches, a pair of American Dippers at Troll Falls, 5 Golden-crowned Kinglets, 4 Ruby-crowned Kinglets, 1 pair of Mountain Bluebirds, 18 American Robins, 26 European Starlings, 1 American Pipit, 3 Pine Siskins, 1 singing Fox Sparrow, 2 Savannah Sparrows that were the first of the season, 2 Song Sparrows, 2 female Red-winged Blackbirds and 2 male Yellow-rumped Warblers (1 "Audubon's" and 1 of undetermined race) that were also new for the season. Seven White-tailed Deer fed in the meadow in the morning, and the last day of the count saw 43 visitors at the site.

11.75 hours (592.9) OSPR 1 (3), SSHA 2 (11), COHA 1 (2), RTHA 1 (17), GOEA 2 (2134), UU 1 (5) TOTAL 8 (2460)

Mount Lorette April 1-22 summary (With variance from the long-term 1993-2018 22-year average, that excludes the anomalously low counts in 2008-2010 and 2012 which are considered

invalid). 22 days (+4.1%), 272.3 hours (+11.7%), TUVU 1 (+633.1%), OSPR 3 (+61%), BAEA 87 (+22.5%), NOHA 5 (+27.9%), SSHA 10 (-54%), COHA 2 (-66.4%), NOGO 12 (-4.8%), UA 1 (+37.1%), BWHA 0, SWHA 0, RTHA 15 (-41.7%), FEHA 0, RLHA 11 (-21.7%), UB 3 (+127.6%), GOEA 834 (+66.9%) which is the highest April count since 2002, UE 7 (+366.7%), AMKE 0, MERL 5 (+12.2%), GYRF 0, PEFA 0, PRFA 0, UF 0, UU 2 (+51.7%) TOTAL 998 (+48.9%) of 11 species, which is the highest April count since 2002.

Mount Lorette spring 2019 summary March 1-April 22 (With variance from the long-term 1993-2018 22-year average, that excludes the anomalously low counts in 2008-2010 and 2012 which are considered invalid). 51 days (+2.5%), 592.9 hours (+6.8%), TUVU 1 (+340%), OSPR 3 (+61%), BAEA 209 (+14.5%), NOHA 5 (+7.8%), SSHA 1 (-54.9%), COHA 2 (-69.9%), NOGO 18 (-20.5%), UA 1 (-51.1%), BWHA 0, SWHA 0, RTHA 17 (-44.3%), FEHA 0, RLHA 15 (-22.5%), UB 3 (+43.5%), GOEA 2134 (-26.6% and the second lowest spring count ever), UE 26 (+434.6%), AMKE 0, MERL 6 (-10.8%), GYRF 1 (-35.3%), PEFA 0, PRFA 2 (-4.3%), UF 1 (+15.8%), UU 5 (+16191%) TOTAL 2460 (-23.7%) of 13 species.

Monday, April 22 Beaver Mines [Day 51] 0600-2100 (Peter Sherrington assisted by Hilary Atkinson). The temperature at 0600 was 7C, dropped to the day's low of 6C at 1700 before rising to a high of 16 C at 1300 and 1400 and again at 1600, and it was still 11C at 2100. Winds were W-WSW 15-25 gusting 40 km/h to 0900 after which they were strong W-WSW all day, 40-60 gusting to 85 km/h. Cloud cover was 100% cirrostratus and cirrocumulus to 1200, reduced to 80% cirrocumulus, cirrus and cirrostratus at 1300 and was mainly 100% stratus, lenticular, altocumulus and cumulus from the rest of the day, giving excellent viewing conditions throughout. There was a surprisingly strong and varied raptor migration for the last day of the count with 79 birds of a site record 16 species moving between 0757 and 2034. The flight comprised a site-record 4 Turkey Vultures (2a, 2u), 1 Osprey, 5 Bald Eagles (3a, 2j), 6 Northern Harriers (3 males: 2a, 1j, 2 females: 1a, 1j, and 1u), 10 Sharp-shinned Hawks (1a, 9u), 2 Cooper's Hawks (1a, 1u), 4 Northern Goshawks (2a, 2u), 3 light morph Broad-winged Hawks (1a, 2u), 1 juvenile light morph Swainson's Hawk, 4 light morph *calurus* Red-tailed Hawks (2a, 2u), 1 dark morph Rough-legged Hawk, 32 Golden Eagles (6a, 7sa, 15j, 4u), 2 American Kestrels (1 male, 1u), 1u *columbarius* Merlin, 1 adult female Peregrine Falcon and 2 Prairie Falcons (1 male, and 1 female that was the last bird of the spring 2019 count at 2034). Birds moved steadily all day and the highest hourly counts were 10 (1000-1100, 1400-1500 and 1800-1900). Resident birds were a pair of Northern Harriers, 3 pairs of Red-tailed Hawks and 1 adult Golden Eagle. Other birds seen were 2 pairs of Canada Geese, 1 pair of Wood Ducks, 11 Mallards, 1 pair of Green-winged Teal, 2 Common Mergansers, 10 Rock Pigeons, the first Common Loon of the year that flew high to the SW at 1812, 1 male Northern Flicker, 1 Blue Jay, 1 Black-billed Magpie, 1 American Crow, 23 Common Ravens, 6 Tree Swallows, 1 Black-capped Chickadee, 1 Townsend's Solitaire, 4 American Robins, 6 European Starlings, 11 Evening Grosbeaks, 8 Pine Siskins and 4 male Red-winged Blackbirds. It was an excellent end to what has otherwise generally been a poor and frustrating count.

15 hours (631.3) TUVU 4 (6), OSPR 1 (2), BAEA 5 (225), NOHA 6 (35), SSHA 10 (47), COHA 2 (7), NOGO 4 (33), BWHA 3 (5), SWHA 1 (3), RTHA 4 (120), RLHA 1 (30), GOEA 32 (642), AMKE 2 (8), MERL 1 (16), PEFA 1 (6), PRFA 2 (10) TOTAL 79 (1216)

Beaver Mines April 1-22 summary (With percentage variance from the 4-year average 2015-2018). 22 days (+7.3%), 295.5 hours (+57.5%), TUVU (+1100%), OSPR 2 (-42.9%), BAEA 94 (-4.1%), NOHA 31 (-23.5%), SSHA 44 (-20.7%), COHA 7 (-40.4%), NOGO 20 (+9.6%), UA 0, BWHA 5 (+42.9%), SWHA 3 (+20%), RTHA 111 (-26.9%), FEHA 5 (+81.8%), RLHA 15 (+41.2%), UB 6 (-35.1%), GOEA 289 (+48.4%), UE 2 (+300%), AMKE 8 (+3.2%), MERL 14 (+80.6%), GYRF 2 (+33.3%), PEFA 5 (-28.6%), PRFA 6 (+140%), UF 0, UU 0 TOTAL 675 (+3.3%) of 18 species.

Beaver Mines spring 2018 summary February 25-April 22 (With percentage variance from the 4-year average 2015-2018). 51 days (+1%), 631.3 hours (+48.4%), TUVU 6 (+360%), OSPR 2 (-42.9%), BAEA 225 (-19.6%), NOHA 35 (-31.4%), SSHA 47 (-31.6%), COHA 7 (-47.2%), NOGO 33 (-38.3%), UA 0, BWHA 5 (-47.4%), SWHA 3 (+9.1%), RTHA 120 (-42.2%), FEHA 5 (-9.1%), RLHA 30 (-67.4%), UB 7 (-52.5%), GOEA 642 (-67.4%), UE 2 (-20%), AMKE 8 (-23.8%), MERL 15 (+4.9%), GYRF 6 (=), PEFA 6 (-29.4%), PRFA 10 (+53.8%), UF 0, UU 1 (-69.2%) TOTAL 1216 (-40.4%) of 18 species.

Monday, April 22 Steeples [Day 42] 1200-1800 (Vance Mattson). The temperature was 14C, winds were moderate S and cloud cover was 100% altostratus and dark cumulus. A very slow April ended in the same manner with just two migrants seen: 1 juvenile Golden Eagle at 1510 and 1 subadult Bald Eagle at 1722. Non-migrants were 14 Turkey Vultures, 1 juvenile Bald Eagle, 4 Red-tailed Hawks and 2 sightings of adult Golden Eagles that included one hunting stoop from high altitude.

6 hours (206) BAEA 1 (219), GOEA 1 (455) TOTAL 2 (699)

Steeples April summary (With percentage variance from the 9-year average 2010-2018). 16 days (+38.5%), 75.25 hours (+67.2%), TUVU 0, OSPR 0, BAEA 29 (+2%), NOHA 0, SSHA 1 (-76.3%), COHA 0, NOGO 0, UA 0, BWHA 0, SWHA 0, RTHA 4 (-52.6%), FEHA 0, RLHA 1 (-36.7%), UB 0, GOEA 33 (-8.3%), UE 1, AMKE 1 (-10%), MERL 0, GYRF 0, PEFA 0, PRFA 0, UF 0, UU 0 TOTAL 70 (-24.5%) of 18 species.

Steeple spring 2018 summary (With percentage variance from the 9-year average 2010-2018). 42 days (+28.6%), 206 hours (+56.4%), TUVU 3 (-67.5%), OSPR 0, BAEA 219 (+61.7%), NOHA 1 (+50%), SSHA 2 (-66%), COHA 0, NOGO 0, UA 0, BWHA 0, SWHA 0, RTHA 8 (-32.1%), FEHA 0, RLHA 3 (-15.6%), UB 0, GOEA 455 (+31.7%), UE 7 (+200%), AMKE 1 (-18.2%), MERL 0, GYRF 0, PEFA 0, PRFA 0, UF 0, UU 0 TOTAL 699 (+34.3%) of 8 species.

SUMMARY COUNTS, SPRING 2019			
	MOUNT LORETTE March 1-April 22	BEAVER MINES March 1-April 22	STEEPLES March 1-April 22
<i>DAYS</i>	51	51	42
<i>HOURS</i>	592.9	631.3	206
TURKEY VULTURE (TUVU)	1	6	3
OSPREY (OSPR)	3	2	0
BALD EAGLE (BAEA)	209	225	219
NORTHERN HARRIER (NOHA)	5	35	1
SHARP-SHINNED HAWK (SSHA)	11	47	2
COOPER'S HAWK (COHA)	2	7	0
NORTHERN GOSHAWK (NOGO)	18	33	0
<i>Accipiter sp.</i> (UA)	1	0	0
BROAD-WINGED HAWK (BWHA)	0	5	0
SWAINSON'S HAWK (SWHA)	0	3	0
RED-TAILED HAWK (RTHA)	17	120	8

FERRUGINOUS HAWK (FEHA)	0	5	0
ROUGH-LEGGED HAWK (RLHA)	15	30	3
<i>Buteo sp.</i> (UB)	3	7	0
GOLDEN EAGLE (GOEA)	2134	642	455
Eagle sp. (UE)	26	2	7
AMERICAN KESTREL (AMKE)	0	8	1
MERLIN (MERL)	6	16	0
GYRFALCON (GYRF)	1	6	0
PEREGRINE FALCON (PEFA)	0	6	0
PRAIRIE FALCON (PRFA)	2	10	0
<i>Falco sp.</i> (UF)	1	0	0
Unidentified Raptor (UU)	5	1	0
TOTALS	2460	1216	699