



Hawk Watch 2025 Summary Report

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Top Left: A Golden Eagle soaring overhead. Top Right: A Broad-winged Hawk flying. Bottom: A front view of a Sharp-shinned Hawk gliding (Jake Bramante).

Introduction

Glacier National Park boasts one of the most important Golden Eagle migration routes in North America. Biologists recorded nearly 2,000 Golden Eagles migrating past Mount Brown annually from 1994 through 1996 from the Lake McDonald parking lot area. Recent trend data from the Hawk Migration Association and the Raptor Population Index, however, indicate significant declines in their numbers, attributed to environmental contaminants, habitat loss, prey declines, poaching, and climate change. Due to Glacier National Park's location on this critical flyway for migrating Golden Eagles, we can collect critical data to aid in the population assessment and conservation of Golden Eagles. While Golden Eagles are the focal species at Glacier National Park, we collect data on all migrants following Hawk Watch International protocols to aid in the conservation of all raptors and to provide a transformational wildlife experience to visitors, volunteers, and staff.

In 2018, we initiated the Mount Brown Hawk Watch program, with a goal to assess if migratory Golden Eagle numbers through Glacier National Park stayed the same as numbers recorded in the mid-1990s. We surveyed migrating raptors from two locations. The main location is on the Mount Brown Trail about 800 feet below the Mount Brown Lookout. The second location is near Lake McDonald Lodge in front of Jammer Joe's parking lot where biologists surveyed eagle migration in the mid-1990s.

The Mount Brown site brings visitors much closer to raptors (Figure 1), facilitating reliable identification. With a 4.5-mile hike and an over 4000 feet elevation gain, it serves visitors with the capacity for more strenuous recreation. The Lake McDonald site was used historically by Glacier biologists in the mid-1990's, thus enabling comparisons with historical data, and is accessible by road allowing families and visitors of all physical capabilities to engage in raptor watching. Both sites provide an incredible opportunity to inform visitors about this spectacular annual migration, teach participants how to identify multiple raptor species, and educate them about raptor conservation. This project combines the dual mandate of the Organic Act, by "conserving the scenery and the natural and historic objects and the wildlife therein" while simultaneously "providing for their enjoyment in such manner and by such means as will leave them unimpaired for the enjoyment of future generations".

The year 2025 marked the 5th year for Glacier National Park to support Mount Brown as an official Hawk Watch site ([HawkCount](#)). By becoming a member of a network of over 300 Hawk Watch sites across North America, people worldwide can check in to see how the season is progressing and reach out to us and plan a visit to volunteer. Along with this involvement, Glacier National Park joined in with the mission of Hawk Migration Association of North America program ([HMA's Mission – Hawk Migration Association](#)) to advance scientific knowledge and promote conservation of raptor populations through study, enjoyment, and appreciation of raptor migration." At both the sites, we have numerous folks stop by daily and ask us what we are doing. We have learned that this is an invaluable opportunity to teach about the importance of raptors and some of the risks they face, how to identify them, and what people can do to aid raptor conservation.

Word has spread about Mount Brown and the parade of Golden Eagles that pass by this site every year. An increasing number of volunteers reach out every year. Folks are excited to watch, count, learn, and contribute! It is always fun to see the look on people's faces if a Golden Eagle happens to fly by closely while we are talking with them. For many, it is a once-in-a-lifetime experience.



Figure 1. Picture of immature Golden Eagle soaring past Mount Brown observation point (Photo by BJ Worth).

Methods

Each year we kick off Hawk Watch season with a training session in late August to train or re-train volunteers on raptor identification, survey protocols and safety (Figure 3). We begin conducting surveys at the Mount Brown site after Labor Day when accipiters begin their migration. Surveys at Lake McDonald start when Golden Eagle migration picks up a few weeks later in September. This later start date is aligned with the beginning of Golden Eagle migration, since smaller raptors like accipiters, which migrate first, are not readily detectable from the Lake McDonald Observation Point (OP). This site is located at the Jammer Joe's Parking Lot adjacent to Lake McDonald Lodge. We continue daily surveys at each location until early November or until weather makes the sites inaccessible. Surveys at Lake McDonald Lodge are performed every day from noon to 4 pm, which coincides with peak Golden Eagle flight times. At the Mount Brown OP, along the trail one mile below Mount Brown Lookout, we conduct surveys each day starting at 10 am until at least 4 pm. On days where raptors continue to be detected while migrating, observers stay for additional 30-minute increments until raptor flight tapers off or until 6 pm.

During surveys, at least one Primary Observer and one additional observer are stationed at the OPs at each site. The observers continuously scan the entire area visually and use 10-power binoculars to scan for raptors that are more distant than can be detected with the naked eye. At the Lake McDonald OP, we also set up spotting scopes to zoom in on raptors to aid in identification. Each raptor is identified to species, age, and sex (whenever possible), and counted as a migrating raptor once they pass south of the OP. Observers use weather instruments and a mobile data collection app called Trektellen to document each raptor and document metadata about the weather conditions (e.g. wind direction and speed, barometric pressure, cloud cover, visibility) and the flight patterns.

For survey data to be reliable we mentor new participants who are willing to commit sufficient time to becoming Primary Observers. Primary Observers are volunteers or staff who have conducted enough surveys under our mentorship, or at other Hawk Watch sites, to provide reliable identification of migrating raptors. Prior to attaining enough experience to provide reliable data on raptor identification, new participants serve as secondary observers in a trainee role while under mentorship.

Mount Brown Site Results

In 2025 due to a shortened season from the government shutdown, we counted 1,259 migrating raptors from the Mount Brown Hawk Watch site. This was our lowest count since we began in 2018 (Table 1). Only 36 percent of all raptors counted in 2025 were Golden Eagles: our lowest percentage since we began (Figure 4).

During the survey period at Mount Brown, a total of 29 survey days were conducted. Of these, 24 were full survey days, with only five partial days resulting from inclement weather. In September, surveys were cancelled only on two days, September 15 and September 30, due to poor weather conditions and preparations associated with the government shutdown. Overall, one or more observers were present at the Mount Brown observation point for a total of 184 survey hours. When accounting for the cumulative effort of all observers, this equates to 535 total survey hours.

Volunteer participation on the slopes of Mount Brown was substantial even with a shorter season, with 37 individuals hiking up to assist with raptor counts and identification, including 27 volunteers and 10 staff members (Figure 2). Participation would have likely been even greater had surveys extended into October, as volunteer sign-ups were recorded for every day from October 1 through October 28. Collectively, staff and volunteers hiked more than 496 hours in the 2025 season for a combined total of 1,031 hours invested at the Mount Brown site, all in hopes of catching close-up glimpses of migrating raptors.

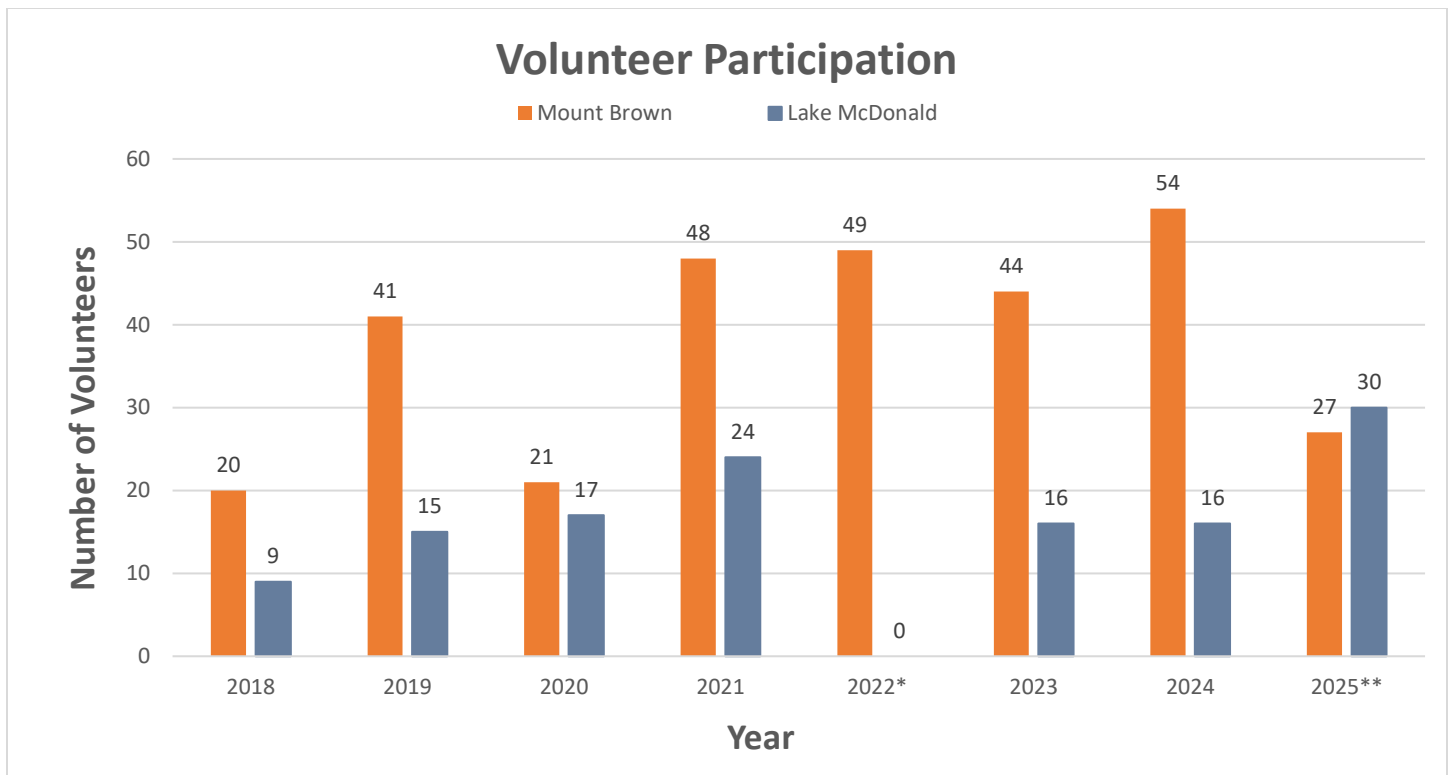


Figure 2. Comparison of volunteer participation at both Mount Brown and Lake McDonald Hawk Watch sites from 2018 to 2025. 2022*- There were no volunteers at Lake McDonald due to the closing of the Going-to-the-Sun Road for construction. 2025**- Volunteer numbers only reflect one month out of a two-month season, when the government was not shut down.



Figure 3. Screenshot of an article from the Flathead Beacon on August 18th by Katie Bartlett highlighting the 2025 Glacier National Park Hawk Watch program.

Table 1. Season totals for all raptor species observed at Mount Brown OP, number of days surveyed, effort in hours, total number of species and the average number of birds passing per hour by year.

Species	2018*	2019	2020	2021	2022	2023	2024	2025**	Mean
Turkey Vulture	-	-	1	-	-	-	-	1	0.3
Osprey	-	1	1	1	-	5	6	6	3
Bald Eagle	61	40	35	43	49	29	57	32	43
Northern Harrier	1	4	8	8	23	20	11	5	10
Sharp-shinned Hawk	87	67	185	163	372	373	399	282	241
Cooper's Hawk	45	34	85	57	145	164	147	127	101
American Goshawk	7	14	26	13	18	10	19	7	14
Accipiter sp.	31	26	45	35	93	105	104	97	67
Broad-winged Hawk	4	4	11	5	16	12	16	40	14
Swainson's Hawk	1	-	2	-	3	5	4	1	2
Red-tailed Hawk	16	19	52	65	65	57	66	110	56
Ferruginous Hawk	-	2	-	2	-	-	-	1	1
Rough-legged Hawk	13	4	6	6	18	9	9	-	8
Buteo sp.	13	4	4	24	25	22	23	14	16
Golden Eagle	1683	1149	1531	1536	2163	854	1782	453	1394
American Kestrel	3	-	6	7	8	5	16	11	7
Merlin	5	3	8	9	5	8	5	1	6
Peregrine Falcon	4	4	5	5	6	2	5	4	4
Prairie Falcon	2	1	4	7	7	5	14	8	6
Gyr Falcon	-	-	-	-	-	-	1	-	0.1
Unidentified Falcon	15	13	11	11	11	12	12	19	13
Unidentified Eagle	2	22	11	6	8	3	14	3	9
Unidentified Raptor	20	21	25	13	29	77	31	37	32
Total	2013	1432	2062	2016	3064	1777	2741	1259	2046
Survey Days	24	35	36	42	46	43	49	29	38
Effort in hours	125	162	205	239	298	256	314	184	223
Passage Rate (birds/hr)	16.1	8.8	10.1	8.5	10.3	6.9	8.7	6.8	10
Total Species	14	14	16	16	14	16	17	16	15
Percentage of Golden Eagles	84	80	74	76	71	48	65	36	67

 Limited Survey Coverage (Access Restrictions)

 Full Survey Coverage

2018*- Only partial surveys were possible at Lake McDonald Lodge due to area restrictions from the Howe Ridge fire.

2025**- Only partial surveys were possible at Lake McDonald Lodge due to the government shutdown.

When the government shutdown began on October 1, 2025, staff and volunteers were prohibited from proceeding with any Hawk Watch activities. The park, however, was not closed to the public and this allowed some passionate birders to visit both the Mount Brown and Lake McDonald Hawk Watch sites during the shutdown. We so appreciated this effort, and this contributed to the pulse of Golden Eagle counts recorded on October 3 and 6 at Mount Brown (Figure 5), when over 146 and 160 raptors were counted, respectively.

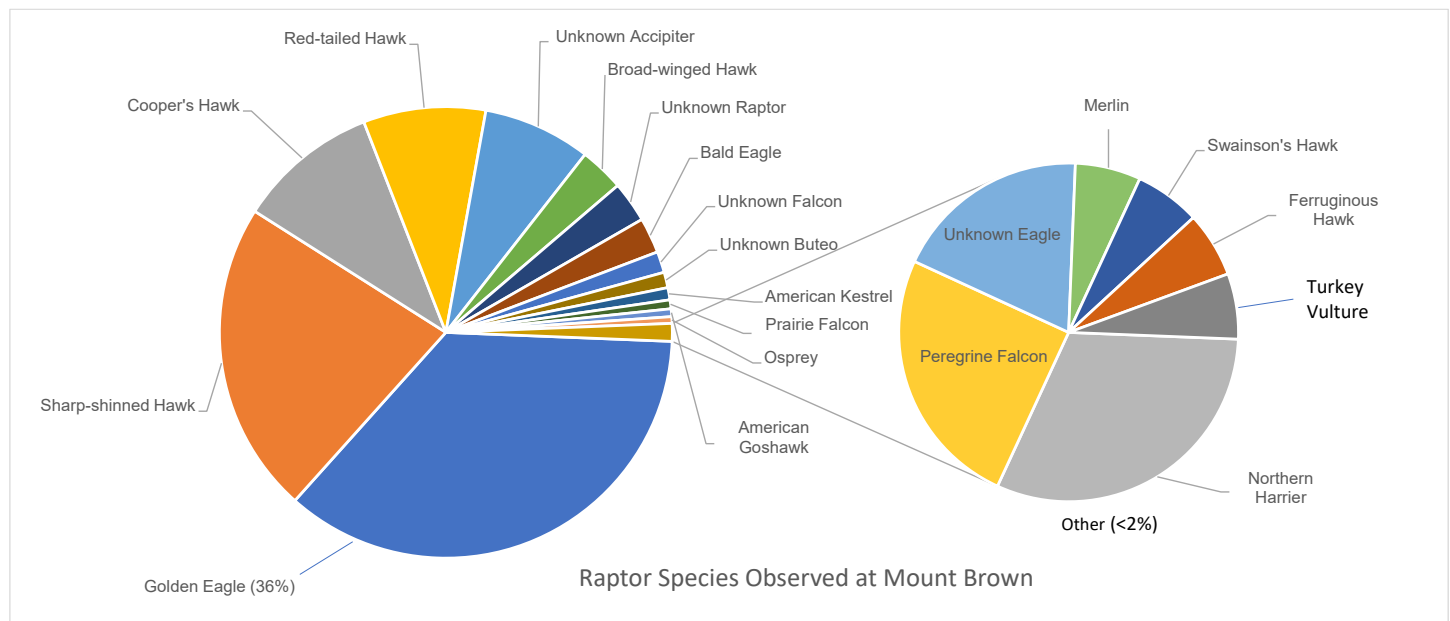


Figure 4. Proportion of each raptor species (n = 1,259) counted at the Mount Brown site in 2025. Of these, 453 were Golden Eagles (36%).

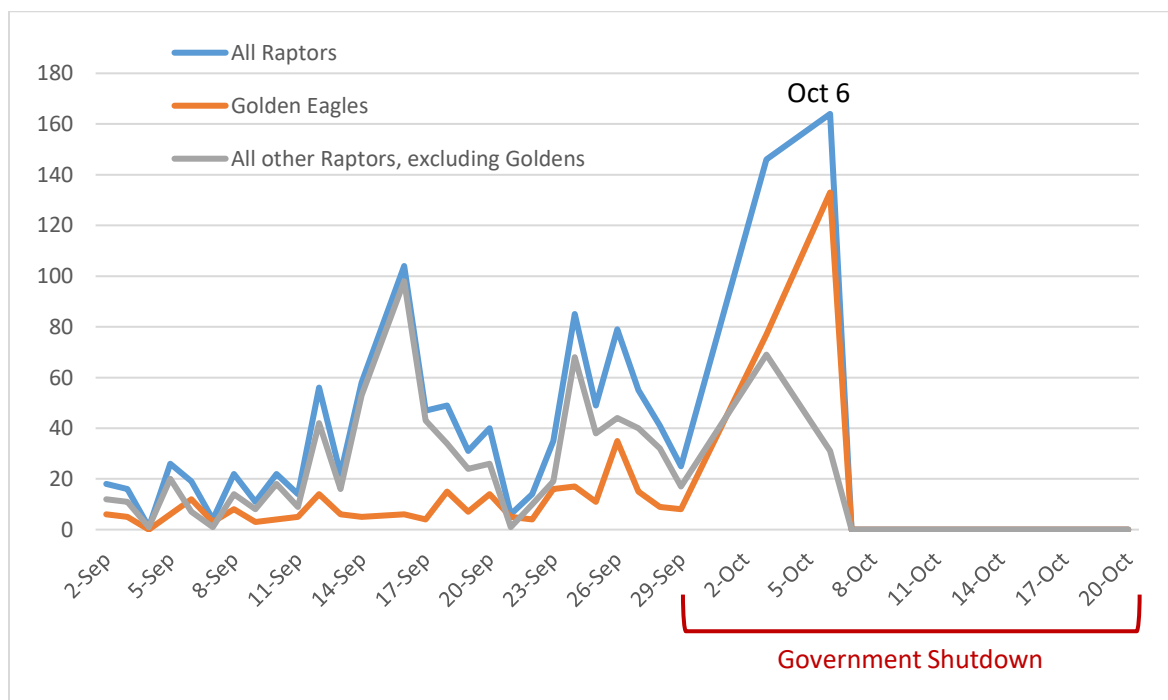


Figure 5. Peak migration dates for all raptors, just Golden Eagles, and all raptors excluding Golden Eagles at Mount Brown Hawk Watch Site in 2025.

People often ask us when the peak Golden Eagle migration happens at Mount Brown, and the answer is that “it depends.” Every year the weather patterns differ in the fall, which affects the migration patterns. Figure 6 illustrates peak migration numbers by date each year since surveys began in 2018. The days when zero raptors migrated were almost always due to inclement weather or poor wind conditions. In some cases, in the earlier years, it may have been due to a lack of primary observers. After six years of data collection, however, it is fair to say that peak Golden Eagle migration will occur sometime in the first three weeks of October. Sadly, we were prohibited from collecting data during the peak migration dates in 2025 at Mount Brown.

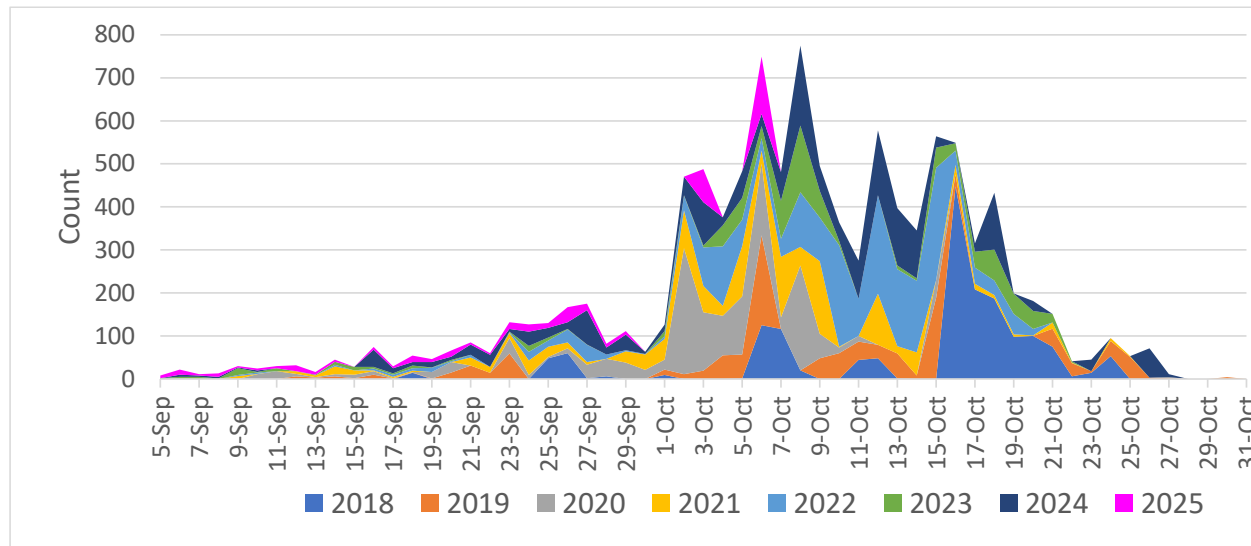


Figure 6. Peak migration numbers by date each year since Hawk Watch counts began at Mount Brown.

Three other Hawk Count sites are around Mount Brown in the Rocky Mountains: Mount Lorette, Bridger Ridge, and Jewel Basin (Figure 7). We used the Trektellen website to check if slow flights were specific to Mount Brown or affected by all sites due to varying wind and weather conditions. In 2025, Mount Lorette had the highest Golden Eagle count with 1,971 observations, while Jewel Basin had the lowest with 332 but observed 1,852 sharp-shinned hawks (Figure 8). Bridger Ridge saw an increase from 900 Golden Eagles in 2024 to 1,401 in 2025. These numbers reflect counts from September and October at each site. Comparing migration counts on Trektellen for nearby Hawk Watch sites aids in analyzing Mount Brown's seasonal data.

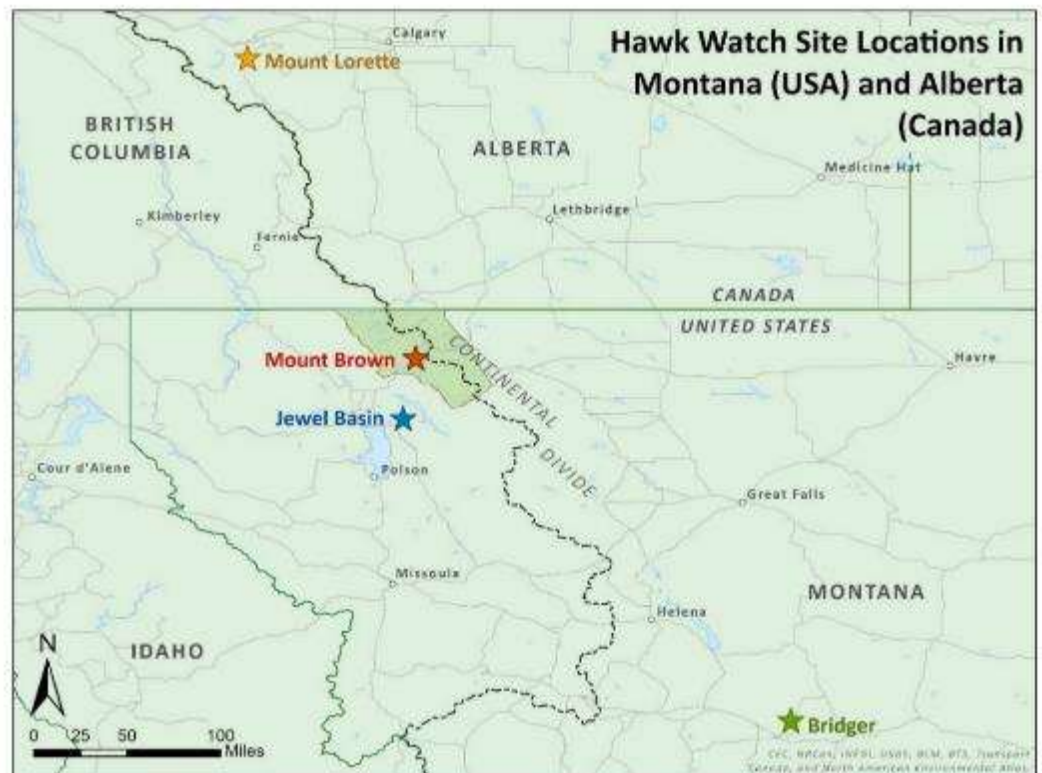


Figure 7. Map of Hawk Watch sites along the Continental Divide.

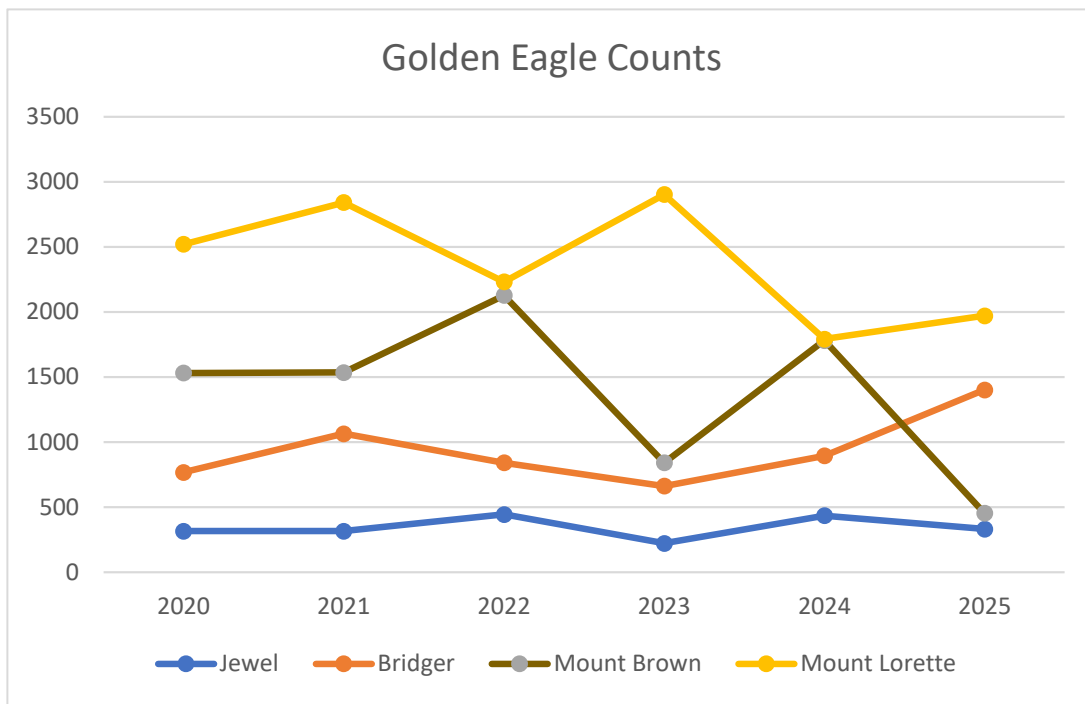


Figure 8. Counts of Golden Eagles along Continental Divide at four different Hawk Watch sites in 2025.

Participants that made it up to the observation point on the slopes of Mount Brown, often were treated to closeup views of eagles. We have learned that a picture is worth a thousand words, and where the human eye is not fast enough to definitively identify a fast-moving bird, a camera is. So, with guidance from our professionals, we invested in a camera in 2023 and began training staff and volunteers on how to use it. Check out the stunning photos by J. Bramante showing close views of a Golden Eagle and a Sharp-Shined Hawk (Figure 9). Please see Appendix 1 for more raptor photographs from the 2025 season.

As planned, Primary Observers committed to surveying two or more days in a row and their trainees, were treated to a rare overnight stay in the Mount Brown Lookout where both sunrises and sunsets were magnificent (see photo gallery in Appendix 2)! In 2025 we expanded this opportunity greatly by overlapping new observers with primary observers so that more people could experience the magic of staying at the refurbished Mount Brown Lookout. The restoration of the Mount Brown Lookout is a win-win for both cultural and natural resources!



Figure 9. Left: Close up view of a Golden Eagle (J. Bramante). Right: A Sharp-Shined Hawk soaring in the sky (J. Bramante).

Lake McDonald Lodge Site Results

In 2025, we again waited until late September to begin raptor surveys from the Lake McDonald Lodge site. This time coincides when Golden Eagles really begin their migration south (Figures 5 and 6). Prior to this time, many of the raptors observed from Lake McDonald are too hard to see, let alone identify to species.

We counted 898 raptors from the Lake McDonald site in 2025. Of these, 67 percent, or 604 were Golden Eagles (Figure 10). These were our highest counts to date from the Lake McDonald site to date (Table 2).

In 2025, surveys at the Lake McDonald site began on September 22, which also served as the annual training day for participants. This initial day focused on orienting observers to raptor migration patterns, proper scanning techniques, data input protocols, and the effective use of optical equipment for species identification. Attendance at the Lake McDonald training was high, with 35 participants and 4 staff members actively engaged in the kickoff to the season.

With the assistance of 36 participants, including six staff members and 30 volunteers, surveys were conducted over a total of 82 hours at Lake McDonald Lodge. This was the highest number of volunteer participants at Lake McDonald Lodge to date. When accounting for the cumulative effort of all observers, this represented 218 total survey hours, with an additional 88 hours contributed for travel time to and from the lodge. Across 21 total survey days, staff and volunteers also engaged with 382 curious park visitors, providing a brief explanation of the program and importance of golden eagle migration.

Volunteer participation at Lake McDonald remained strong throughout the 2025 season. October was shaping up to be one of the most comprehensively staffed months, with only four days lacking volunteer signups out of 31. This number likely would have been reduced to zero had operations not been interrupted by the government shutdown. Following the shutdown, several volunteers contacted staff to share that they had independently traveled to the Lake McDonald site to observe migrating raptors, underscoring the high level of public interest and dedication to the program (Figure 11).

Thanks to support from the Glacier National Park Conservancy and its donors, we were able to invest in a large pair of 18-powered binoculars and a tripod to view raptors with from the parking lot. For many volunteers, this option works better than trying to find the migrating raptor with a scope.

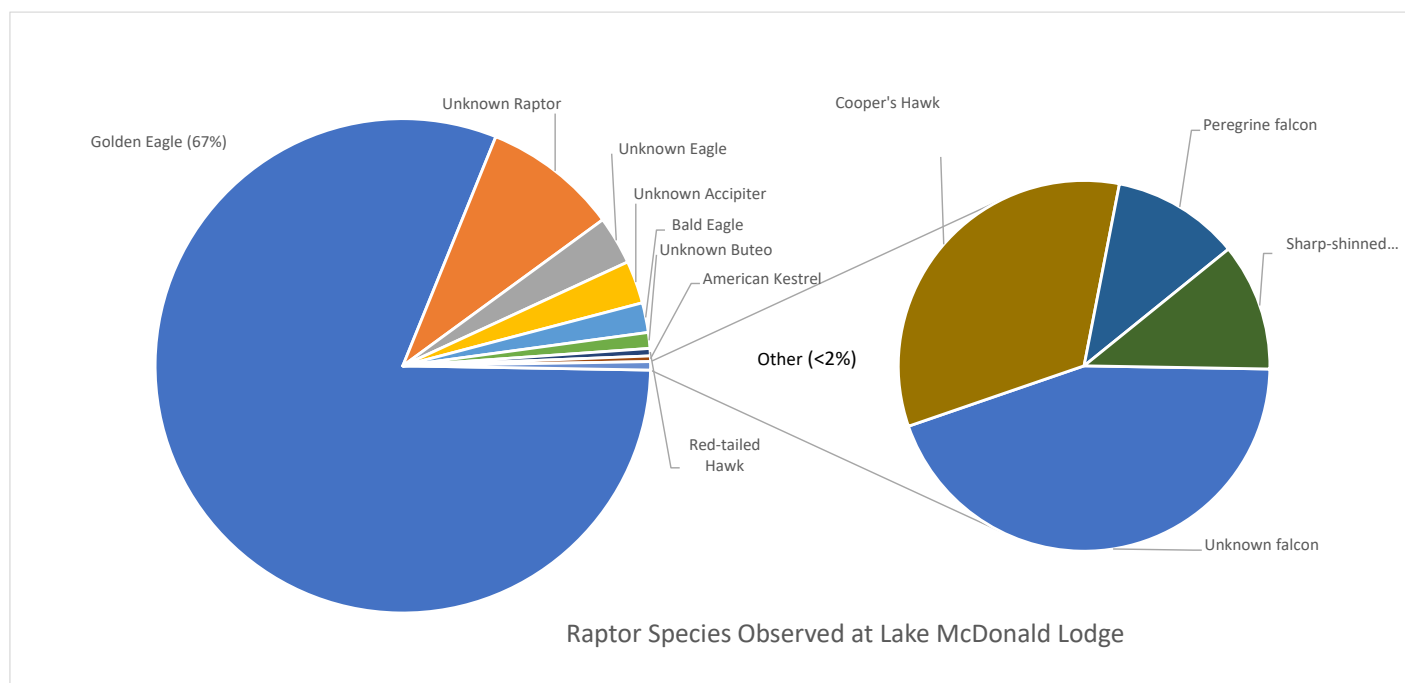


Figure 10. Proportion of each raptor species (n = 896) counted at the Lake McDonald site in 2025. Of these, 604 (67%) were Golden Eagles.

Table 2. Season totals for all raptor species observed at the Lake McDonald OP, number of days surveyed, effort in hours, total number of species and the average number of birds passing per hour by year.

Species	2018*	2019	2020	2021	2022**	2023	2024	2025***	Mean
Turkey Vulture	-	-	-	1	-	1	-	-	1
Osprey	-	1	1	-	-	-	-	-	1
Bald Eagle	4	17	29	5	-	26	52	34	24
Northern Harrier	4	3	1	-	-	2	-	-	3
Sharp-shinned Hawk	-	1	6	-	-	2	1	1	2
Cooper's Hawk	-	13	3	-	-	2	1	3	4
American Goshawk	-	3	2	-	-	-	-	-	3
Accipiter sp.	12	8	7	19	-	12	46	36	20
Broad-winged Hawk	-	-	-	-	-	1	-	-	1
Red-tailed Hawk	4	2	1	8	-	4	8	13	6
Rough-legged Hawk	-	6	4	-	-	1	-	-	4
Buteo sp.	8	2	12	10	-	22	17	26	14
Golden Eagle	251	587	646	685	-	657	1330	604	680
American Kestrel	-	1	-	-	-	-	-	6	4
Merlin	-	1	-	-	-	-	-	-	1
Peregrine falcon	-	-	-	-	-	-	-	1	1
Unidentified Falcon	4	9	6	4	-	2	1	4	4
Unidentified Eagle	-	36	25	20	-	5	32	67	31
Unidentified Raptor	38	72	74	56	-	108	145	101	85
Total	325	762	817	808	-	845	1633	896	887
Survey Days	13	19	19	24	-	26	35	21	22
Effort in hours	86	108	75	75	-	87	135	82	93
Passage Rate (birds/hr)	3.8	7.1	10.9	10.8	-	9.7	12.1	10.9	9
Total Species	7	11	10	6	-	11	6	7	8
Percent Golden Eagles	77	77	79	85	-	78	81	67	78

 Limited Survey Coverage (Access Restrictions)

 Full Survey Coverage

2018*- Only partial surveys were possible at Lake McDonald Lodge due to area restrictions from the Howe Ridge fire.

2022**- No surveys were conducted at Lake McDonald Lodge due to closure of Going-to-the-Sun Road while under construction.

2025***- Only partial surveys were possible at Lake McDonald Lodge due to the government shutdown.

The annual Hawk Watch Open House was scheduled to take place on October 4, 2025, but all plans were cancelled due to the government shutdown that began on October 1. In 2024 we had over 100 guests with live raptors in close-up view from Montana Wild Wings Recovery Center and we were excited to see engagement grow in 2025. Montana Wild Wings Recovery Center normally brings many of the raptors we typically observe in migration: Red-tailed, Sharp-shinned, Cooper's, and Rough-legged Hawks, Merlin, American Kestrel, Peregrine Falcon, and Bald Eagle. This event is an important component of the Hawk Watch program, providing staff biologists with an opportunity to discuss the significance of migration monitoring while offering an interactive setting for participants to learn in detail about each individual bird, its role within the ecosystem, and notable aspects of its life history and unique traits.

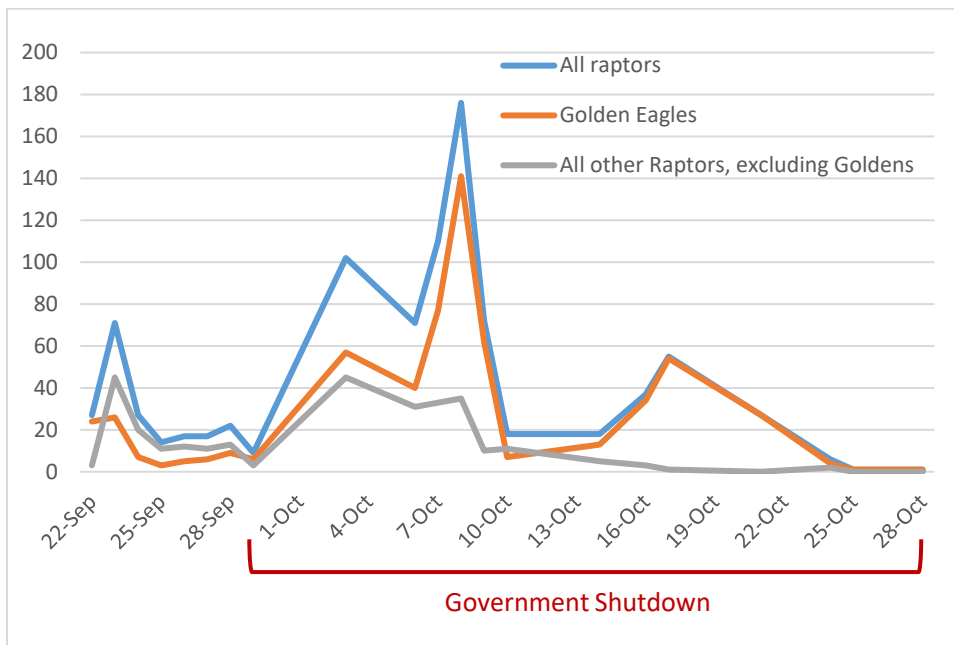


Figure 11. Peak migration dates for all raptors, just Golden Eagles, and all raptors excluding Golden Eagles at Lake McDonald Lodge in 2025.

Conclusions and Discussion

We experienced the largest impacts to our continuous data record for Glacier’s Hawk Watch in the year 2025 due to the government shutdown preventing data collection during peak migration in October. Just as Golden Eagle migration really began to ramp up at the end of September, we were told that no staff or volunteers could work on this project. Considerable preparation went into volunteer training, administrative onboarding, and seasonal scheduling for 2025, though those efforts were unfortunately not able to be implemented as planned. The good news that came out of this situation, however, was learning how passionate many of our volunteers are about continuing Hawk Watch into the future.

Long-term datasets are essential for accurately representing Golden Eagle migration patterns and population trends, and the Hawk Watch program at Glacier National Park has made a significant effort to build year-to-year survey continuity with the goal of reaching a 10-year dataset. Because Golden Eagle migration is naturally variable, shaped by weather conditions, prey availability, and broader ecological factors, short-term datasets often provide an incomplete picture of migration behavior. Multi-year monitoring at a decadal scale has become standard for producing reliable analyses of wildlife dynamics. This approach is reflected in the Raptor Population Index Project, which evaluates population trends of raptors, including Golden Eagles using 10-year and 20-year data windows ([Data Collection and Analysis Methods – Raptor Population Index](#)).

Having both the Mount Brown and Lake McDonald viewing sites brings visitors of all ages and capabilities into the park to enjoy the scenery and wildlife which directly supports the purpose of our enabling legislation which states in the Organic Act that the fundamental purpose of national parks “is to conserve the scenery and the natural and historic objects and the wildlife therein and to provide for their enjoyment in such manner and by such means as will leave them unimpaired for the enjoyment of future generations”.

This project also provides one of the only situations where wildlife biologists and their staff interact directly with residents and visitors' closeup to learn about the importance of Golden Eagle and raptor conservation. Both sites provide an incredible opportunity to inform visitors about this spectacular annual migration, teach participants how to identify multiple raptor species, and educate them about raptor conservation. It is this investment in time and resources that will fuel the next generation to conserve and protect wildlife in a world where many species face increasing risks to their survival.

Engaging people of all ages in understanding raptors and the need for their conservation is one of the primary goals of Glacier's Hawk Watch program. In a world where it is increasingly challenging to get young people to connect with the outdoors and bird conservation issues, Hawk Watch programs provide a unique opportunity for young people. Both in 2024 and 2025, we saw an uptick in the number of young people want to get involved with Hawk Watch. This is continually important as all Hawk Watch sites need to recruit and mentor new, and younger, primary observers as some participants move away or choose different volunteer opportunities due to changes in their physical capabilities.

Acknowledgements

Thanks to all the Glacier National Park volunteers and staff who helped to make this program a reality. We could not do it without you! Special thanks to Jake Bramante for his amazing pictures of migrating raptors. Extra thanks to Campbell Melton, Erin Miller, Theresa Ciraolo, Dee Baginski, Carley Tsiamas and all seasonal staff members for their efforts and involvement in program logistics for the 2025 season. Many NPS staff also assisted with this project by refurbishing the Mount Brown Lookout and its facilities, making trail improvements, and delivering supplies. Continuing thanks to the Northwest Lookout Association and Glacier facility staff for lookout improvements; it gets better every year. This project was made possible by generous grants from the Glacier National Park Volunteer Associates and Glacier National Park Conservancy and their donors.

Appendices

Appendix 1. Raptor photo gallery from the 2025 Hawk Watch season in Glacier National Park.



The underside of a Red-tailed Hawk (Jake Bramante).



A Cooper's Hawk soaring above (Jake Bramante).



The side profile of a Golden Eagle flying (Jake Bramante).



A Broad-winged Hawk in the air (Jake Bramante).



A Broad-winged Hawk soaring through the sky (Jake Bramante).



A Golden Eagle silhouette (Jami Belt).



A Swainson's Hawk flying high above an observer (Jake Bramante).

Appendix 2. Photo gallery from the 2025 Hawk Watch season. Photos include some of the animals, plants, mountains, clouds, and people who observed or were involved with the Lake McDonald Lodge and Mount Brown Hawk Watch program.



A mountain goat perched at the Mt. Brown OP with an incoming storm (Lisa Bate).



A Ruby-crowned Kinglet perched on a branch (Jake Bramante).



Supplies being dropped off to the Mt. Brown Lookout to start off the season (Jami Belt).



A stormy view from the Mt. Brown LO (Lisa Bate).



SIP Intern smiling on the hike to Mt. Brown (Whitney Formon).



Training day in West Glacier, MT (Theresa Ciraolo).



Lisa Bate and her son, Kieran smiling during a sunny day of Hawk Watch at Mount Brown (Lisa Bate).



The kickoff to the Hawk Watch season at Mt. Brown (Jami Belt).



A silly sunset scene on Mt. Brown after a great day of raptor counting (Ava Johnson).



Jami Belt carrying Hawk Watch supplies down to the OP (Connie Ward).



Julian and Laura ready for a wonderful day of counting raptors on Mt. Brown (Lisa Bate).



A hazy and stunning Mt. Brown sunset (Whitney Formon).



A picturesque view from inside the Mt. Brown lookout (Kieran Bate).



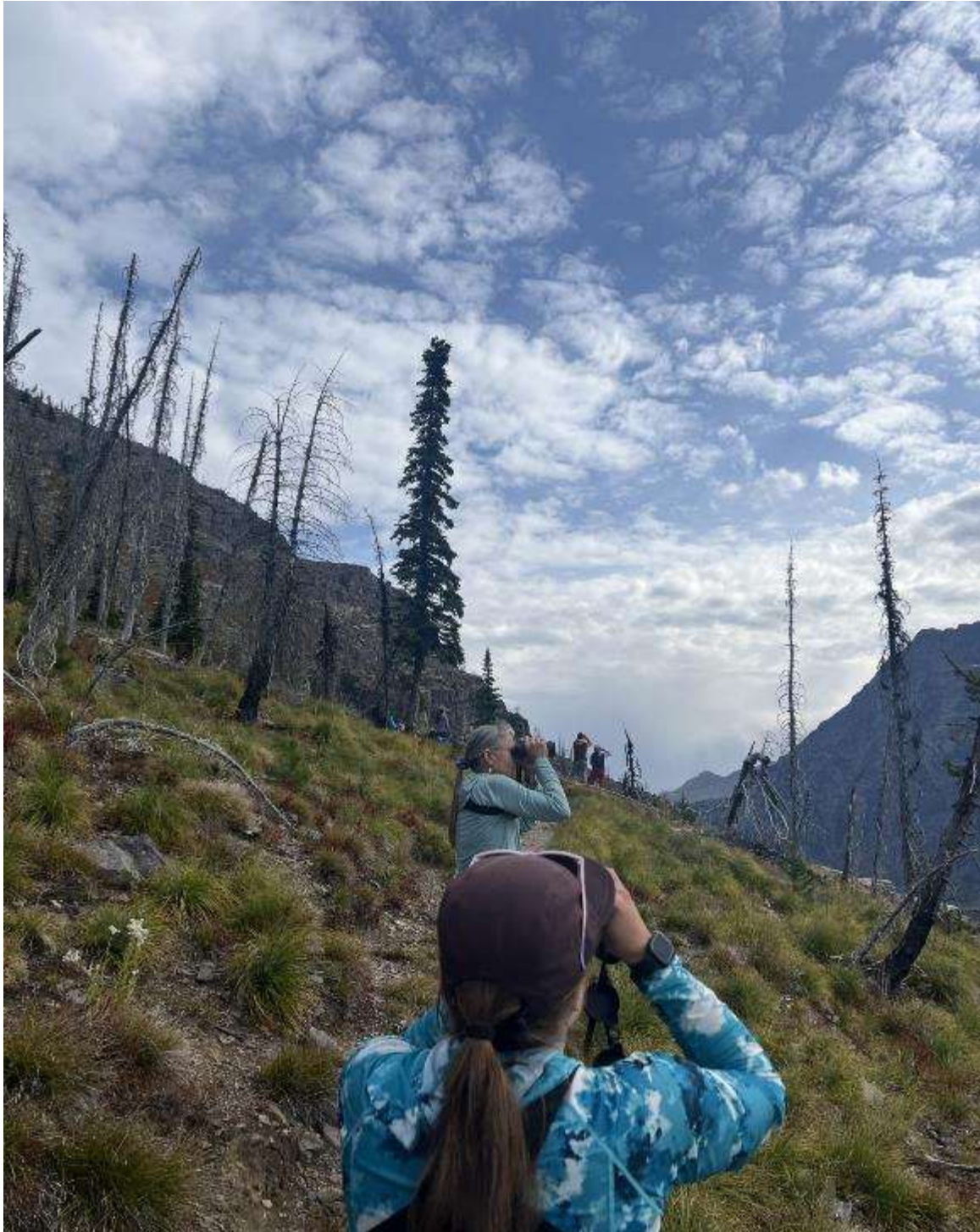
A beautiful northern lights scene from a night at Mt. Brown (Kat Barrs).



A lenticular sunrise behind a gorgeous mountain view (Lisa Bate).



Lake McDonald with a vibrant sunset (Kat Barrs).



Dee, Kathryn, and other volunteers scanning the sky for migrating raptors (Kat Barrs).



A bear sighting at the Mt. Brown OP (Theresa Ciraolo).



Lisa Bate giving instructions at the Lake McDonald training (Whitney Formon).



A buried pelican case of Hawk Watch supplies being recovered from the slopes of Mt. Brown after returning from the shutdown (Jami Belt).



A snowy scene of the Mt. Brown lookout (BJ Worth).