

Hawk Ridge Bird Observatory
Migration Count Final Report
Fall 2022



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Introduction

The 51st consecutive fall migration count at Hawk Ridge Bird Observatory (HRBO) was conducted from the main overlook along East Skyline Parkway in Duluth, Minnesota between 08/15/22 and 11/30/22. A total of 896.75 count hours were logged during this time. The count was staffed by three primary counters (Jess Cosentino, Sean McLaughlin, Grace Sangmeister) in addition to two count trainees (Tyler Connell, Em Daly). Daily counts began at, or slightly before, sunrise and continued until roughly two to three hours prior to sunset on most days. All migrant bird species (raptor and non-raptor) were recorded. The following report summarizes the HRBO Fall 2022 count season.

Weather Summary

As at most hawkwatch sites, weather conditions are a critical component for daily flights. Wind direction and speed often dictate how good or poor the flight along the ridge and lakeshore will be on any given day throughout the count season. The final two weeks in August were generally warm, with average temperatures in the low-to-mid 60's (Fahrenheit) and highs in the low 80's. There were several stretches of multiple days with southerly winds, which do not generally promote the best flights; however, as certain days shifted to more northerly winds, the first triple digit day counts of the season were recorded (August 22, 30, 31).

September experienced an average monthly temperature (58 F) and relatively lower average monthly precipitation levels (0.03") compared to the 10-year averages (58 F and 0.07", respectively). The first week brought variable wind directions; however, by September 13, winds shifted to the northwest and brought the first four-digit Broad-winged Hawk day count.

Following a longer stretch of inclement weather over multiple days throughout the second full week of the month, favorable conditions returned. Westerly and northwesterly winds over a three day stretch (September 20-22) brought the bulk of the Broad-winged Hawk flight coupled with good raptor movement across several other species.

October experienced a slightly above average monthly temperature (47 F) and slightly lower precipitation levels (0.03") relative to the long-term averages (44 F and 0.07", respectively). The beginning of the first week brought less-than-ideal southerly and easterly winds off of the lake; however, shifted to blustery north winds and plummeting temperatures to the mid-30s. The first

snowfall came with several inches on October 15 but was melted over the following day. The days that brought strong northwest winds and cooler temperatures throughout the second half of the month also shuffled along fantastic Red-tailed Hawk flights (October 17-20). Though the weather patterns shifted in the final week of the month and consistent balmy temperatures (up to the mid-60s) made for unseasonably warm counting conditions, which was also somewhat reflected in the lower-than-averages species totals.

November experienced an average monthly temperature (31 F) relative to the long-term average (30 F); however, average monthly precipitation (0.11") was nearly double the long-term average (0.05"). Snow depth level was only 0.03" compared to a long-term average of 0.12".

Unseasonably warm conditions continued for the first days of the month, with temperatures as high as 68 F. This quickly shifted to more seasonal conditions and temperatures, with several days of snow fall (November 14 and 15) resulting in no counts.

Raptor Migration Summary

The general trend for raptor migrants this fall was lower-than-average season totals for most species, with the exception of Broad-winged Hawks, Northern Harriers, and American Kestrels. All three of these species experienced a higher-than-average season count total compared to their respective ten-year averages. The lower season totals for the remaining species were likely an artifact of weather conditions that did not promote strong migration movement over the count period.

Species Accounts

The following are individual species accounts for all 18 raptor species documented during the Fall 2022 migration period. An asterisk (*) indicates a new site record.

Species: Season Total (High Day Count and Date), 10-Year Average (2012-2021)

Turkey Vulture: 1132 (September 27: 172), 10-Year Average: 1624

With North American populations continuing to increase, numbers of migrant Turkey Vultures moving south along the ridge each fall have reflected this trend over recent decades. Local resident birds continue to linger throughout much of September, until a notable shift occurs, and

migrants begin steadily moving southward. The majority (55%) of migrants cleared out within the first ten days of October, with only a few lingering vultures trickling southward later into the month.

Osprey: 124 (September 10: 14), 10-Year Average: 229

Generally, one of the earliest raptor migrants to begin moving southward each fall, Osprey numbers peaked by mid-September with 20% of the season total moving in August alone. Only a handful of individuals were observed into October, with the final late migrant passing on October 14.

Bald Eagle: 4180 (September 21 and November 04: 129), 10-Year Average: 5327

With one of the most temporally protracted migration periods, migrant Bald Eagles can be spotted moving southward along the lakeshore and ridge on any given day between August into November. This is reflected in tied season day high counts in both September and November, while triple digit day counts in August are not uncommon from the ridge. On the final day of the season, a near triple-digit day count was documented on a blustery day with strong northwest winds. Bald Eagle migration likely continues in modest numbers well into December, after the official count ends.

Northern Harrier: 572 (September 13: 60), 10-Year Average: 524

One of the few raptor species with an above-average fall total, Northern Harrier movement southward generally begins by mid-September and continues steadily into mid-to-late October. Typically, juveniles represent the earlier migrants which are gradually replaced by adult females and males. The highest day count paralleled the first significant movement of Broad-winged Hawks of the season, as favorable northwest winds brought a strong pulse of migrants along the ridge and lakeshore.

Sharp-shinned Hawk: 14034 (September 19: 1065), 10-Year Average: 16542

As one of the most abundant raptor species to pass the ridge each fall, Sharp-shinned Hawks begin moving steadily by mid-September and can continue with consistent triple-digit day counts well into mid-October. Typically, juveniles comprise the bulk of migrants moving early in the

season which shifts to adults later into October. However, this season experienced only a single four-digit day count, which is reflected in a slightly lower-than-average season total.

Cooper's Hawk: 84 (October 05: 6), 10-Year Average: 103

With a limited breeding range to the north compared to their close Accipiter relatives, Sharp-shinned Hawks, migrant Cooper's Hawks are far less abundant in passage along the ridge each fall. That is not to say they do not challenge even the most experienced hawkwatchers below with their strikingly similar silhouettes while in flight. Similar to Sharp-shinned Hawks, this year experienced a slightly lower-than-average season total; however, the "unidentified Accipiter species" total likely accounts for additional Cooper's Hawks that were not recorded here.

Northern Goshawk: 64 (October 17: 8), 10-Year Average: 207

One of the most emblematic raptor species along the ridge, Northern Goshawks experienced the lowest season total this year since the mid-1980s. This year was the second consecutive fall count where this species did not experience a triple-digit season total. This is a stark contrast to the historic eruptions along the ridge where thousands of the large, enigmatic accipiters have poured out of the northern boreal forests in awe inspiring numbers.

Red-shouldered Hawk: 3 (September 27, October 9, and October 18: 1), 10-Year Average: 2

A less common raptor migrant each fall, mainly due to limited breeding range extending north of the ridge, spotting a Red-shouldered Hawk moving south always adds excitement to any count. Typically, only a few birds pass along the ridge each fall, with this season total being consistent with that average.

Broad-winged Hawk: 39426 (September 12: 12020), 10-Year Average: 28908

One of the most brilliant migration spectacles both along the ridge and throughout North America, the Broad-winged Hawk flight once again experienced an above average fall count for a second consecutive season. Almost like clockwork, the swarming buteo kettles began appearing by mid-September and gradually built over several days of both four- and five-digit day counts. Long after most had made it to Veracruz, Mexico in the millions, a late migrant Broad-wing was spotted on November 7 working its way down the distant lakeshore among kettles of Red-tailed Hawks.

Red-tailed Hawk: 4397 (October 17: 518), 10-Year Average: 6426

One of the champion late-season migrant raptors, Red-tailed Hawks seem to wait until the days become shorter and winds more raw before moving in modest numbers. By mid-October, kettles of the large buteos swirl skyward as blustery northwest winds shuffle them down the distant lakeshore and along the ridgeline. While the season total is somewhat below the long-term average, several impressive triple-digit flights were observed throughout October as a mix of different subspecies of varying phenotypes made passage south.

Rough-legged Hawk: 210 (November 06: 23), 10-Year Average: 704

Another charismatic late-season raptor migrant, these buoyant buteos depart their Artic breeding grounds and trade the expansive tundra habitat for open country of North America throughout the winter season. Rough-legged Hawks typically pass the ridge in good numbers throughout October into November; however, this fall only witnessed a fraction (30%) of the long-term average in passage. This is a stark contrast to recent fall counts where over one thousand migrants have been documented in a season.

Swainson's Hawk: 4 (September 10: 2), 10-Year Average: 9

A raptor of the open country, this species breeds in the far western edges of the state; however, the occasional wayward migrant passing along the lakeshore is always a welcomed surprise. Often mixing in with the large kettles of Broad-winged Hawks throughout September, it is common to spot a few of these long-winged buteos swirling alongside them as they both make their way towards Veracruz in impressive numbers.

Golden Eagle: 183 (October 30: 20), 10-Year Average: 191

One of the most regal raptors to make passage along the ridge each fall, the first Golden Eagle to be spotted among the more abundant Bald Eagles is a mid-to-late season highlight. This species experienced an above-average October month total, which was largely attributed to a season day high count on the second-to-last day of the month where an impressive 20 eagles were documented, flying late into the final hours of fading sunlight. This momentum did not carry over into November, likely attributed to an absence of favorable weather patterns and wind

conditions; however, still the species did manage to end with a season total generally consistent with the long-term average.

American Kestrel: 1205 (September 11: 153), 10-Year Average: 1156

Our most abundant falcon to migrate south each fall, American Kestrels begin moving in greater numbers by mid-September with only a few lingering migrants late into mid-October. One of the few raptor species this fall to experience an above average season total, which is somewhat promising as kestrels are experiencing range-wide population declines throughout North America.

Merlin: 145 (October 16: 10), 10-Year Average: 275

While local Merlins do take up residence in and around Duluth, migrants begin moving by September and continue steadily well into late October. An interesting record was a less common, paler subspecies “prairie Merlin” (*Falco columbarius richardsoni*) being observed passing the ridge on September 27.

Peregrine Falcon: 64 (September 20: 8), 10-Year Average: 123

Another species exhibiting a lower-than-average season total, migrant Peregrine Falcons were somewhat scarce along the ridge and lakeshore relative to the long-term average. The monthly total for September was well below the historic average and remained low throughout the remainder of the October.

Mississippi Kite: 1 (August 22: 1), 10-Year Average: < 1

Typically, a breeding raptor at more southerly latitudes, the occasional wayward migrant Mississippi Kite turning up along the lakeshore during the early season is a welcomed treat, as some years do not turn up any. Usually observed moving throughout August into early September, these kites are some of the first raptor species to arrive in Veracruz, Mexico in large numbers. The single bird that did pass the ridge this fall was detected distant and out towards the lakeshore on a warm August afternoon, swirling high in a late day thermal, tapered wings extended outward in a diagnostic silhouette, before peeling off in a lengthy glide towards downtown Duluth.

Swallow-tailed Kite*: 1 (August 20: 1), 10-Year Average: *No Previous Records*

One of the main highlights of this fall season as the *first HRBO site record* of Swallow-tailed Kite was recorded in late August. The elegant bird made a slow pass directly over the ridgeline, providing excellent views to those along the roadway and observation platform.

Non-Raptor Migration Summary

A total of 129 non-raptor migrant bird species were documented throughout the season. The most abundant non-raptor bird species include:

- Blue Jay (60523; *New HRBO season record high total*)
- American Robin (14639)
- Cedar Waxwing (11902)
- Unidentified warbler species (9644)
- Yellow-rumped Warbler (9546)
- Canada Goose (8554)
- Purple Finch (6284)
- Rusty Blackbird (4648)
- American Crow (3395)
- Common Grackle (2015)

The table below provides a complete species list including both season totals and high day counts (with date in parentheses) for each. **Bold highlight indicates new site season record.**

Non-Raptor Migrant Species List

#	Species	Season Total	High Day Count
1	Snow Goose	69	31 (Sept 23)
2	Ross's Goose	1	1 (Sept 23)
3	Cackling Goose	42	13 (Sept 23)
4	Canada Goose	8554	1491 (Sept 13)
5	Tundra Swan	21	13 (Oct 26)
6	American Wigeon	8	8 (Oct 14)
7	American Black Duck	18	18 (Oct 17)
8	Mallard	218	32 (Nov 04)
9	Blue-winged Teal	16	13 (Sept 25)
10	Northern Shoveler	5	4 (Nov 03)

11	Northern Pintail	16	7 (Oct 15)
12	Green-winged Teal	16	15 (Sept 23)
13	Greater Scaup	17	12 (Nov 11)
14	Common Goldeneye	13	7 (Nov 07)
15	Hooded Merganser	4	4 (Aug 19)
16	Common Merganser	183	74 (Nov 11)
17	Red-throated Loon	2	2 (Oct 06)
18	Common Loon	88	18 (Oct 26)
19	Double-crested Cormorant	208	74 (Sept 21)
20	American White Pelican	671	136 (Sept 22)
21	Great Blue Heron	10	1 (<i>Several Days</i>)
22	Sandhill Crane	605	181 (Oct 06)
23	Black-belled Plover	2	1 (Sept 25, Oct 09)
24	American Golden Plover	6	3 (Sept 23)
25	Semipalmated Plover	3	1 (Aug 18, Aug 29, Sept 1)
26	Wilson's Snipe	43	12 (Oct 13)
27	Solitary Sandpiper	10	3 (Aug 18)
28	Greater Yellowlegs	3	2 (Aug 26)
29	Ring-billed Gull	6	5 (Nov 3)
30	Herring Gull	90	23 (Oct 30)
31	Common Tern	106	106 (Sept 20)
32	Short-eared Owl	1	1 (Oct 21)
33	Common Nighthawk	717	239 (Aug 23)
34	Chimney Swift	86	33 (Aug 18)
35	Ruby-throated Hummingbird	114	16 (Aug 29)
36	Belted Kingfisher	22	5 (Sept 26)
37	Red-headed Woodpecker	1	1 (Sept 18)
38	Red-bellied Woodpecker	2	1 (Oct 22, Nov 05)
39	Yellow-bellied Sapsucker	21	9 (Oct 5)
40	Downy Woodpecker	3	1 (Sept 19, Oct 23, Nov 02)
41	Hairy Woodpecker	11	2 (Nov 21)
42	Northern Flicker	130	24 (Sept 23)
43	Olive-sided Flycatcher	23	5 (Aug 18)
44	Eastern Wood-Pewee	3	3 (Aug 29)
45	Yellow-bellied Flycatcher	1	1 (Aug 18)
46	Alder Flycatcher	1	1 (Aug 18)
47	Least Flycatcher	3	1 (Aug 16, Aug 26, Aug 31)
48	Eastern Phoebe	2	1 (Sept 02, Sept 13)
49	Eastern Kingbird	12	3 (Aug 29, Sept 01)
50	Northern Shrike	18	2 (Oct 22, Nov 24, Nov 26)
51	Blue-headed Vireo	6	1 (<i>Several Days</i>)
52	Philadelphia Vireo	2	1 (Sept 10, Oct 05)
53	Red-eyed Vireo	6	3 (Sept 01)
54	Blue Jay	60523	6883 (Sept 20)
55	American Crow	3395	705 (Oct 31)

56	Common Raven	484	125 (Oct 30)
57	Horned Lark	75	25 (Sept 25, Oct 04)
58	Northern Rough-winged Swallow	2	2 (Aug 18)
59	Purple Martin	10	5 (Aug 29)
60	Tree Swallow	91	28 (Aug 29)
61	Bank Swallow	6	3 (Aug 23)
62	Barn Swallow	84	14 (Sept 02)
63	Cliff Swallow	685	286 (Aug 29)
64	Black-capped Chickadee	22	13 (Oct 23)
65	Boreal Chickadee	5	1 (<i>Several Days</i>)
66	Red-breasted Nuthatch	186	32 (Sept 10)
67	Brown Creeper	5	2 (Sept 13)
68	Golden-crowned Kinglet	21	6 (Oct 30)
69	Ruby-crowned Kinglet	26	3 (Oct 04)
70	Eastern Bluebird	68	16 (Oct 21)
71	Townsend's Solitaire	2	1 (Oct 06, Nov 20)
72	Gray-cheeked Thrush	2	1 (Aug 29, Sept 09)
73	Swainson's Thrush	14	3 (Sept 10)
74	Hermit Thrush	2	1 (Sept 30, Oct 17)
75	American Robin	14639	3658 (Oct 05)
76	Gray Catbird	1	1 (Aug 26)
77	European Starling	5	3 (Oct 11)
78	American Pipit	843	171 (Sept 22)
79	Bohemian Waxwing	30	12 (Nov 25)
80	Cedar Waxwing	11902	1623 (Sept 10)
81	Lapland Longspur	67	22 (Oct 08)
82	Snow Bunting	104	18 (Nov 17)
83	Northern Waterthrush	4	2 (Aug 26)
84	Golden-winged Warbler	3	1 (Aug 16, Aug 26, Aug 29)
85	Black-and-white Warbler	39	7 (Aug 31)
86	Tennessee Warbler	379	39 (Aug 30)
87	Orange-crowned Warbler	2	1 (Sept 25, Oct 04)
88	Nashville Warbler	269	32 (Sept 21)
89	Connecticut Warbler	1	1 (Aug 30)
90	Mourning Warbler	1	1 (Aug 17)
91	Common Yellowthroat	1	1 (Sept 08)
92	American Redstart	190	24 (Aug 30)
93	Cape May Warbler	13	2 (Aug 24, Aug 31)
94	Northern Parula	9	2 (Sept 03, Sept 22)
95	Magnolia Warbler	56	5 (<i>Several Days</i>)
96	Bay-breasted Warbler	4	2 (Sept 01)
97	Blackburnian Warbler	7	2 (Aug 30)
98	Yellow Warbler	4	2 (Aug 18)
99	Chestnut-sided Warbler	19	4 (Aug 30)
100	Blackpoll Warbler	7	2 (Aug 16)

101	Palm Warbler	200	24 (Sept 25)
102	Pine Warbler	1	1 (Aug 20)
103	Yellow-rumped Warbler	9546	3217 (Oct 05)
104	Black-throated Green Warbler	5	2 (Aug 30)
105	Canada Warbler	3	1 (Aug 18, Aug 23, Aug 30)
106	Wilson's Warbler	10	3 (Sept 11)
107	American Tree Sparrow	9	2 (Oct 29)
108	Chipping Sparrow	40	9 (Aug 18)
109	Fox Sparrow	2	1 (Oct 06, Oct 14)
110	Dark-eyed Junco	276	82 (Oct 25)
111	White-crowned Sparrow	4	2 (Sept 22)
112	Savannah Sparrow	1	1 (Oct 30)
113	Scarlet Tanager	2	1 (Sept 20, Sept 24)
114	Rose-breasted Grosbeak	47	9 (Aug 30)
115	Indigo Bunting	2	1 (Aug 22, Sept 19)
116	Bobolink	32	5 (Sept 19)
117	Red-winged Blackbird	841	180 (Sept 10)
118	Rusty Blackbird	4648	802 (Sept 26)
119	Common Grackle	2015	391 (Sept 26)
120	Baltimore Oriole	12	4 (Aug 17)
121	Pine Grosbeak	241	69 (Nov 17)
122	House Finch	2	1 (Oct 11, Oct 31)
123	Purple Finch	6284	526 (Oct 04)
124	Red Crossbill	197	28 (Nov 30)
125	White-winged Crossbill	30	16 (Nov 28)
126	Common Redpoll	172	62 (Nov 26)
127	Pine Siskin	576	134 (Oct 30)
128	American Goldfinch	703	67 (Oct 30)
129	Evening Grosbeak	183	45 (Nov 02)