

Raptor View Research Update: Fall Migration 2012

November 9

Adam Shreading, Eric Rasmussen

Fall 2012 Count:

The last two weeks of raptor counts alternated drastically between extremely slow and extremely busy days. An arctic front from Canada settled over the region this past week. The day before the system moved in, November 7th, we witnessed a season-high raptor flight, with 218 raptors counted. The rain-shadow effect of the Bitterroot Mountains left an opening in the approaching storm front, with a gap of sunshine centered over the Bitterroot River floodplain stretching from Missoula to Hamilton. Strong north winds brought a surge of raptors, all heading for the sun. The results from this day represent the highest daily count of all fall migration surveys at MPG Ranch, and the second highest count for all spring and fall raptor surveys (last spring we counted 236 raptors in one day). Our 2012 fall season total of 2,216 now surpasses last year's total of 2,163 (Table 1). We will conduct a few counts next week after the storm passes, to officially end the season. With such a large count on November 7th, we suspect that a few more raptors will trickle through on a late migration.



The rain shadow effect of the Bitterroot Mountains leaves a small path of thermals for the perfect late-season migration route.

While the other raptor survey sites in Montana ceased counting in the past few weeks, our site catches the last big flights of the season. The other sites are at high-elevation ridge tops, where snow prevents access. When those same ridges are shrouded in late-season storms, especially from the north, it leaves few options for raptors. When they see an opening in the storm, like we just had, it appears that they funnel toward it.

Large raptors, like eagles and buteos, make up the bulk of our late-season migrants (Table 1). We counted a whopping 196 Red-tailed Hawks in the past week, bringing their total for the season to almost 700. Bald and Golden Eagle numbers also remain high. We see few accipiters and American Kestrels. We still see a few large falcons and Northern Harriers.

Table 1. Raptor Count Summary for weeks of 10/23/12-10/31/12 and 11/1/12-11/8/12 as well as monthly and season totals					
Species	10/23-10/31	Oct. Total	11/1-11/8	Nov. Total	Season Total
Turkey Vulture	0	5	0	0	23
Osprey	1	8	0	0	28
Bald Eagle	7	23	60	60	85
Northern Harrier	44	108	29	29	191
Sharp-shinned Hawk	24	148	5	5	377
Cooper's Hawk	6	64	2	2	134
Northern Goshawk	2	13	1	1	19
Broad-winged Hawk	0	0	0	0	25
Red-tailed Hawk	44	312	196	196	690
Rough-legged Hawk	49	159	71	71	230
Swainson's Hawk	0	2	1	1	8
Ferruginous Hawk	0	3	2	2	5
Golden Eagle	12	57	28	28	86
American Kestrel	2	30	3	3	190
Merlin	1	5	1	1	8
Peregrine Falcon	0	1	3	3	8
Prairie Falcon	1	7	2	2	11
Unknown Accipiter	1	11	0	0	27
Unknown Buteo	3	18	24	24	50
Unknown Falcon	0	1	0	0	1
Unknown Eagle	0	0	1	1	1
Unknown Raptor	1	2	10	10	19
Total:	198	977	439	439	2216

Fall 2012 Banding

Due to unfavorable weather, we were only able to trap from our high-elevation site on the Baldy Saddle a few days in late October. In general, passing raptors flew low over the foothills of the Baldy Mountain Complex, offering us few chances for capture. Before closing our trapping operations on October 31, we captured a Rough-legged Hawk and our first adult Northern Goshawk of the season. In total, we captured 63 migrating raptors (Table 2), representing a great improvement from our total of 24 captured in fall 2011 pilot efforts. We attribute this increase in trapping success to the more productive location of the trapping blind. We believe that the addition of a lower-elevation trapping site would increase trapping success on days with less favorable thermal lift, and could significantly increase the total number of captures in a given season. Overall, we are very pleased with this season's results.

Table 2. Raptor Capture Summary: 10/23/12-10/31/12			
Species	Week Total 10/23-10/31	Month Total	Season Total
Northern Pygmy Owl	0	0	1
Northern Harrier	0	2	2
Sharp-shinned Hawk	0	12	34
Cooper's Hawk	0	1	5
Northern Goshawk	1	3	5
Red-tailed Hawk	0	1	6
Rough-legged Hawk	1	3	3
American Kestrel	0	3	4
Peregrine Falcon	0	1	2
Prairie Falcon	0	0	1
Total:	2	26	63



Adam Shreading holds the first Rough-legged Hawk captured on the ridge this season.



During a period of particularly high winds, our blind was lifted off its foundation. Were it not for the large pine just behind, it's likely our blind would have been blown down into the draw to the south.



This adult Northern Goshawk was the last bird captured during the Fall 2012 season.

On September 13 2012, we banded our first adult Red-tailed Hawk of the migration season. On November 1, it was found by biologists performing mortality surveys on a wind farm near Livermore, California. The hawk was electrocuted while eating a squirrel on a poorly configured utility pole. Because of this mortality, the pole will be retrofitted in order to make it raptor safe. It is unfortunate that these precautions are not standard practice in a newly erected power array.



Prior to its death, this red-tailed hawk had flown approximately 700 miles in six weeks to travel from the MPG Ranch to Livermore, California.



Golden Eagle Tracking

Since our last update, both adult Golden Eagles have continued their southern migration. As of November 7th, they were both within 30 miles of the MPG Ranch. The male was hanging out northwest of Lolo, while the female was hanging out southeast of the Ranch, in the Sapphire Mountains. Both birds seemed to move south at a similar pace and remained at relatively similar latitudes throughout migration.



Both adult Golden Eagles have returned to the Bitterroot Valley. We look forward to seeing if they return to the MPG Ranch this winter.

Osprey Tracking:

All individuals from the two Osprey nests on the MPG Ranch have remained fairly sedentary over the past two weeks, though we are investigating the fates of two of the young birds.



On October 24, Young 1 from the North Center Pivot Nest was found dead by the owner of a ranch 15 miles SSW of Roscoe, Texas. The Osprey was located along a county road and the finder was unsure whether it had been struck by a car or a wind turbine located ~1/4 mile away. The finder is cooperative and we hope to learn more about the causes of mortality in the next few days. He has also committed to returning the transmitter to us.



The inset of this map shows the last known live locations for Young 1 from the North Center Pivot Nest.

We have all been anxiously watching the movements of Young 2 from the Ranch Entrance Nest. This individual was the only Osprey of the group that did not migrate, and was consistently located north of the Ranch along the Blackfoot River. For unknown reasons, we have not received a signal from Young 2 since October 25. At that time, the transmitter seemed to be functioning well, despite a lower than normal battery charge. On October 26, we drove to its last known location along the Blackfoot River and were able to locate it. The bird appeared in good condition, and the transmitter/harness were sitting on the bird as they should. We will be venturing back up the Blackfoot River to see if we can confirm the fate of this Osprey.



Young 2 from the Ranch Entrance Nest appeared in good health along the Blackfoot River one day after its last signal.