



## **Detroit River Hawk Watch 2013 Season Summary**

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Photo credit: Andrew Sturgess

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## ABSTRACT

The 2013 count represented the 31<sup>st</sup> consecutive year of monitoring diurnal raptor and turkey vulture migration from the mouth of the Detroit River and the 16th year of consistent coverage at Lake Erie Metropark (LEMP). There were 642.5 hours of data collection with counts conducted on 88 days between 1 September and 30 November. A total of 128,715 raptors of 17 species were recorded. Bald eagle (*Haliaeetus leucocephalis*), turkey vulture (*Cathartes aura*), rough-legged hawk (*Buteo lagopus*), peregrine falcon (*Falco peregrinus*) and merlin (*Falco columbarius*) were detected above their long-term average (LTA) since 1998. One species, Swainson's hawk (*Buteo swainsoni*), was detected in average numbers. All other species were detected below their LTA: osprey (*Pandion haliaetus*), sharp-shinned hawk (*Accipiter striatus*), Cooper's hawk (*Accipiter cooperii*), northern goshawk (*Accipiter gentilis*), broad-winged hawk (*Buteo platypterus*), red-shouldered hawk (*Buteo lineatus*), red-tailed hawk (*Buteo jamaicensis*), golden eagle (*Aquila chrysaetos*), northern harrier (*Circus cyaneus*) and American kestrel (*Falco sparverius*).

## METHODS

An hourly count of diurnal raptors was conducted each day between 1 September and 30 November 2013. 642.5 hours of coverage occurred at the Lake Erie Metropark Boat Launch (LEMP; N 42.0792, W 83.1937). Observations began at 07:00 EST and ended at 15:00 EST. Some additional coverage beyond 15:00 EST occurred if the flight continued and was delayed a maximum of two hours due to declining day length during the latter part of the season. All counting was conducted by allowing observers to freely scan the skies with 8 to 10X magnification binoculars. Spotting scopes with 20 to 60X magnification were used only to confirm the identification of raptors previously sighted using 8 to 10X magnification binoculars or the naked eye. Days with excessive rain, exceptionally strong winds, or heavy fog were excluded. Raptors were determined to be migrating if they were observed crossing (and not returning) an imaginary line originating at the observer and running to the northwest and southeast.

Wind direction and speed, cloud cover, visibility, precipitation, humidity, and temperature were collected at the beginning of each hour with a Kestral 3000®, Nielsen-Kellerman, by the counter standing at the count site. Counts attempted to estimate birds exiting kettles in a stream-like fashion during periods of large migration volume. Results are reported in relation to LEMP's long-term averages since 1998 when consistent coverage began there.

## Monthly Reports

### September

Unlike last fall, when beneficial weather conditions led to a surprisingly productive first half of the month, September started off much slower this time around. More consistent with prior seasons, this fall it was the second half of the month that was far more active than the first, likely due to a helpful string of days featuring light winds and a nice mix of sun and clouds, the optimal conditions for this site. Throughout the month, only a handful of days featured overcast skies and strong winds with a northerly or southerly component, conditions that frequently lead to raptors being blown well to our south or north and out of viewing range.

The first few days of the month featured no consistent wind direction and several dreary, overcast days, which led to a limited flight. Things began to pick up on 6 September when clearing skies and light east winds sent many raptors aloft, particularly bald eagles (19), osprey (7), Cooper's hawks (21) and sharp-shinned hawks (158). After a slow 7 September, helpful conditions led to another productive flight on 8 September, with broad-winged hawks (250) having their first triple-digit day, red-tailed hawks (36) up and active and sharp-shinned hawks (106) continued to fly.

Limited movement occurred over the next five days but on 13 September broad-winged hawks (1,062) were again moving, as were sharp-shinned (145) and Cooper's hawks (21), which built on their seasonal high count of 24 from the previous day. Broad-winged hawks (4,335) continued to move the next day, 14 September, along with northern harriers (14) and bald eagles, which asserted themselves in a big way, posting a seasonal high of 23 birds counted.

Moving into the middle of the month, anticipation began to build for a big broad-winged hawk flight, which traditionally falls somewhere between the dates of 15 September and 20 September at this watch site. And as expected, on 16 September, strong north winds pushed several large kettles of broad-winged hawks well to our south, with reports from observers at Point Mouillee State Game Area estimating a flight of greater than 40,000 broad-winged hawks seen (Mark Wloch personal communication). The next day, 17 September, light northeast wind brought the flight line much closer to us and over the course of the day 34,123 broad-winged hawks were counted.

Beyond a sizable echo flight of 5,969 broad-winged hawks on 23 September, the next week featured poor conditions and limited movement. That all changed on 24 September when clear skies and light east wind led to one of our best days of the fall. On 24 September, we achieved seasonal high counts for sharp-shinned hawk (306), American kestrel (193), northern harrier (35), osprey (11) and Swainson's hawk (2) and monthly high counts for turkey vulture (925), red-tailed hawk (46) and Merlin (3). After that big day, the last week of the month featured building turkey vulture numbers and consistent but not particularly high-volume raptor flights.

## October

The first week of October picked up where September left off: consistent movement but low numbers overall. A variety of poor weather conditions (drizzle, strong southeast winds, overcast skies) conspired to suppress the raptor flight during that first week. Conditions improved over the course of the rest of the month, though, particularly the last week, when buteos began to move through in greater and greater numbers.

It took until 8 October for any large-scale movement to take place, when monthly high counts for Cooper's hawk (22), bald eagle (22) and Merlin (4) were recorded as well as our first day of more than a thousand turkey vultures (2,116). Coinciding with our traditional 10 October peak for this species, turkey vultures continued to move in large numbers on 9 October (6,198) and 10 October (6,866). They kept right on coming throughout the rest of the month as well, eclipsing 5,000 birds on 14 October, 22 October, 23 October and 24 October en route to our second highest single season total in the count's history for this species.

While turkey vultures might have dominated the month's overall totals, other species did make a few notable appearances. On 18 October, our first rough-legged hawk of the season was observed as well as

a season high of six peregrine falcons. Interestingly, two late October Swainson's hawks were seen on 22 October and 28 October, two straggling late October broad-winged hawks were seen on 27 October and 29 October and one very late Osprey was seen on 26 October. Later than usual, our first golden eagle of the fall was not spotted until 24 October and in what was a down year for northern goshawks, our first individual of this species was not seen until 29 October.

Many other raptors were also seen on 29 October in addition to that goshawk. In what was one of the fall's most productive days, a seasonal high of 646 red-tailed hawks, 155 red-shouldered hawks and 8 rough-legged hawks were spotted. It was the most red-shouldered hawks seen in a single day here since 2002 and the most rough-legged hawks seen in a single day here since 2006.

## November

As is often the case, the first week of November was by far the most active of the month. Buteos and eagles continued to move through in good numbers for that first week but thereafter began to be seen far more sporadically, even on days where weather conditions appeared optimal. As the season wound to a close, the second half of the month, when the weather turned cold and windy, featured a fair number of days where the overall numbers of raptors counted was no higher than single digits.

On 2 November, red-tailed (234) and red-shouldered hawks (55) posted monthly high counts. The next day, 3 November, both species continued to move in solid numbers but were this time joined by a monthly high count of 15 Cooper's hawks, 6 rough-legged hawks and 669 turkey vultures as well as 11 golden eagles and, most interestingly, a single black vulture, which was only the fourth black vulture to be recorded in the count's history. On 4 November, though overall numbers tailed off quite a bit, golden eagles continued to fly, posting a seasonal high count of 15 birds recorded.

Two days of poor conditions and limited movement followed, but then on 7 November, eagles were once again up and active, with 7 golden eagles and a monthly high of 9 bald eagles tallied. After 7 November, though, high volume days were tough to come by. Turkey vultures and red-tailed hawks were the only two species seen with anything approaching regularity, as both species posted several double-digit count days. The most notable bird the rest of the way was the last bird of the season, a late Merlin speeding past.

## **Species Accounts**

### Turkey Vulture

69,723 between 1 September and 30 November was 53% percent above the previous 15-year average for LEMP (Table 1). Turkey vultures were seen in their second highest overall numbers this season. Only in 2010, when 122,325 were counted, have turkey vultures been seen in greater numbers over the last 16 years. This season's migration featured two distinct peaks, one from October 8-14 and the other from October 22-25.

High Count: (6,890) 24 October

### Osprey

71 between 1 September and 26 October was 52% percent below the previous 15-year average for LEMP. Osprey numbers remained in the double-digits for a fifth straight year, again failing to break into triple digits, which had been a common occurrence for much of the site's history.

High Count: (11) 24 September

### Bald Eagle

350 between 3 September and 30 November was 133 percent above the previous 15-year average for LEMP. Shattering the previous season high, we eclipsed the 300 individuals observed plateau for the first time in the count's history. Bald Eagles were abundant throughout the season, observed in migration from the start of the count all the way to the end.

High Count: (23) 14 September

### Northern Harrier

234 between 1 September and 30 November was 51 percent below the previous 15-year average for LEMP. Highly cyclical at this watch site, 2013 was another relatively low season for northern harriers.

High Count: (35) 24 September

### Sharp-shinned Hawk

3,230 between 1 September and 30 November was 52 percent below the previous 15-year average for LEMP. Sharp-shinned hawk numbers declined for a third straight season as September observations of this species again lagged.

High Count: (306) 24 September

### Cooper's Hawk

460 between 2 September and 29 November was 14 percent below the previous 15-year average for LEMP. Cooper's hawk numbers remained down, nearly equaling last year's relatively low totals. An expected late October peak of adults never materialized and most birds seen well enough to be aged during the latter portion of the season were aged to juvenile.

High Count: (22) 8 October

### Northern Goshawk

3 between 29 October and 20 November was 88 percent below the previous 15-year average for LEMP. The first goshawk of the season was aged to adult. The other two were aged to juvenile. A highly irruptive species, this season was the lowest number of goshawks seen in 16 years of consistent monitoring at LEMP.

High Count: (1) 29 October, 13 November, 20 November

### Red-shouldered Hawk

532 between 17 September and 30 November was 18 percent below the previous 15-year average for LEMP. Red-shouldered hawk numbers were up compared to the previous three seasons, with juveniles in particular putting in a second straight solid showing.

High Count: (155) 29 October

### Broad-winged Hawk

49,629 between 2 September and 29 October was 21 percent below the previous 15-year average for LEMP. A fairly typical season for this species, broad-winged hawks were seen in close to average numbers and peaked 17 September, very much within the usual window of 15 to 20 September when big flight days are most frequently observed.

High Count: (34,123) 17 September

### Swainson's Hawk

5 between 23 September and 28 October was 9 percent above the previous 15-year average for LEMP. This was the first season with multiple October records for Swainson's hawk since 2009.

High Count: (2) 24 September

### Red-tailed Hawk

3,473 between 1 September and 30 November was 29 percent below the previous 15-year average for LEMP. A fairly typical season, red-tailed hawk numbers were very much in line with the previous six seasons, peaking during late October.

High Count: (646) 29 October

### Rough-legged Hawk

43 between 18 October and 29 November was 12 percent above the previous 15-year average for LEMP. A great season for rough-legged hawks, this highly irruptive species was seen in its highest numbers since 2004.

High Count: (8) 29 October

### Golden Eagle

69 between 24 October and 29 November was 34 percent below the previous 15-year average for LEMP. Variable from year-to-year, golden eagle numbers were up slightly from last year but remained low when compared to years previous.

High Count: (15) 4 November

### American Kestrel

681 between 2 September and 29 October was 31 percent below the previous 15-year average for LEMP. In what was a great falcon year overall, American kestrels were seen in their highest numbers since 2007.

High Count: (193) 24 September

### Merlin

53 between 2 September and 30 November was 16 percent above the previous 15-year average for LEMP. Merlins were seen in their highest numbers since 2005.

High Count: (4) 8 October

Peregrine Falcon

46 between 2 September and 12 November was 12 percent above the previous 15-year average for LEMP. Peregrine falcons were seen in their highest numbers since 2007.

High Count: (6) 18 October

Black Vulture

A single black vulture was spotted on 3 November, only the fourth black vulture recorded in the count's history.

**Table 1. 1998–2013 data from the sixteen regularly occurring species at Detroit River Hawk Watch with the 2013 percent deviation from the previous 15-year mean. Seasonal records in bold. See Table 2 for a reference to the species codes.**

	Hours	TV	OS	BE	NH	SS	CH	NG	RS	BW
<b>1998</b>	451.3	19,743	135	111	807	4,968	378	17	517	63,689
<b>1999</b>	481	17,559	58	69	556	6,534	299	23	556	45,711
<b>2000</b>	510.2	29,421	133	83	138	7,132	408	<b>49</b>	875	57,585
<b>2001</b>	526	28,237	213	115	757	<b>14,715</b>	693	46	858	19,386
<b>2002</b>	561.5	42,644	<b>238</b>	185	696	7,307	572	22	962	91,499
<b>2003</b>	545.3	54,975	234	147	<b>1,005</b>	10,643	709	28	533	84,085
<b>2004</b>	478.8	36,893	201	118	214	5,027	461	<b>49</b>	869	27,381
<b>2005</b>	456.3	29,699	218	116	291	5,623	432	18	299	56,229
<b>2006</b>	475.8	51,722	196	162	616	7,013	628	7	1,019	50,718
<b>2007</b>	598.5	62,882	195	211	818	9,909	724	6	<b>1,026</b>	69,574
<b>2008</b>	464.9	35,173	140	141	149	3,593	294	10	185	36,216
<b>2009</b>	519.4	54,989	46	118	169	3,259	335	24	615	20,016
<b>2010</b>	564.5	<b>122,325</b>	63	220	465	6,504	<b>834</b>	21	488	79,572
<b>2011</b>	591.5	52,745	85	<b>235</b>	278	5,331	763	26	487	<b>195,858</b>
<b>2012</b>	619	43,285	70	222	248	3,590	468	18	450	40,923
<b>2013</b>	642.5	69,723	71	<b>350</b>	234	3,230	460	3	532	49,629
<b>Average</b>	530.4	47,000.9	143.5	162.7	465.1	6,523.6	528.6	22.9	641.9	61,754.4
<b>2013 Mean Dev.</b>	22.9	53.3	-52.1	133.0	-51.3	-52.1	-13.7	-87.6	-18.1	-20.7



	SW	RT	RL	GE	AK	ML	PG	UNK	TOTAL
<b>1998</b>	5	3,782	17	33	1,046	<b>95</b>	52	86	95,481
<b>1999</b>	8	3,504	76	<b>208</b>	664	30	49	47	75,951
<b>2000</b>	5	5,754	55	188	790	34	24	37	102,711
<b>2001</b>	3	8,153	55	120	1,026	50	48	45	74,520
<b>2002</b>	0	6,565	63	79	<b>2,277</b>	64	52	15	153,240
<b>2003</b>	<b>12</b>	5,789	31	60	2,128	72	<b>82</b>	0	160,533
<b>2004</b>	0	6,155	<b>101</b>	79	470	38	20	0	78,076
<b>2005</b>	8	2,619	30	45	1,018	55	37	0	96,737
<b>2006</b>	8	6,025	27	124	1,314	40	38	0	119,657
<b>2007</b>	2	<b>9,406</b>	29	124	1,275	41	67	8	156,297
<b>2008</b>	0	2,507	18	89	404	19	23	0	78,961
<b>2009</b>	4	2,474	13	117	441	39	35	14	82,708
<b>2010</b>	5	3,207	29	76	675	52	40	18	214,594
<b>2011</b>	5	4,100	19	167	664	21	21	169	<b>260,974</b>
<b>2012</b>	4	2,986	14	51	531	38	30	182	93,110
<b>2013</b>	5	3,473	43	69	681	53	46	112	128,714
<b>Average</b>	4.6	4,781.2	38.8	101.8	962.8	46.3	41.5	45.8	123,266.5
<b>2013 Mean Dev.</b>	8.7	-28.7	11.8	-33.7	-30.6	15.6	11.7	170.5	4.7

## **Non-raptor Summary**

### Waterfowl

Small numbers of wood ducks were seen during the months of September and October. Small rafts of pied-billed grebes were frequently seen throughout the season foraging in the channel. Flocks of blue-winged teal were noted passing by in September and two times in November a single green-winged teal was observed. Northern shovelers were more abundant this season, seen on multiple occasions in September, October and November. American black ducks and gadwall were observed on multiple occasions in November. Canada geese were on the move earlier this year, arriving in large numbers in late September and being seen frequently throughout the rest of the season. Tundra swans were later than usual this season, with the first swan not being seen until 7 November. Many more tundra swans were seen over the rest of November with a peak of more than 350 seen on 16 November.

The location of the count site does not effectively capture migration of divers (canvasback, redhead, scaup) through the region, which number in the tens of thousands offshore from lakes St. Clair to Erie during the fall and winter. We did note the first lesser scaup in mid-October and they continued to be seen often through the end of November. Common loons were very abundant this season, with multiple sightings during all three months, but peaking in November. Hooded mergansers were spotted on two separate occasions during the month of November. Several small flocks of red-breasted mergansers were seen toward the end of November. Two common mergansers were spotted on both 28 and 30 November. Small numbers of ruddy duck, bufflehead and common goldeneye began to be seen in early November and were present throughout the rest of the month. A female long-tailed duck flew by in late October.

### Shorebirds

Killdeer were heard overhead at various points throughout the season. Small numbers of lesser yellowlegs were detected several times during the months of September and October. A long-billed dowitcher flew by on 18 September and identified via photo. Two solitary sandpipers were spotted on 11 September. Small flocks of American golden-plovers were spotted twice in September.

### Gulls and Terns

The season's first Bonaparte's gulls were seen later than usual, not showing up until mid-October. Thereafter, small numbers of this species were present into November with peak activity occurring in early November. A great black-backed gull was seen multiple times throughout the month of November. Herring gulls were abundant for a second straight season and were seen particularly often during the month of November. Caspian and Forster's terns were seen frequently during the month of September and, unlike previous years, continued to be seen well into mid-October.

### Wading Birds

Very much like previous seasons, black-crowned night herons were noted several times throughout the month of September. In October and much of November, there were very few sightings of this species. In late November, though, herons began to be seen more frequently, moving through the viewing area in flocks of more than five birds. Great blue herons could be seen flying past in greater abundance during the month of November, often during the morning hours. Great egrets were noted on several occasions during the months of October and November.

### Corvids

The first migrant blue jays were detected later than usual this season, on 25 September. Thereafter, blue jay migration was more diffuse than past years, lasting longer into October and with many fewer big flight days. As opposed to last year when the largest flight day was more than 40,000 jays, this year's highest flight day was only 10,000. The first migrant American crows were detected on 17 October. Peak movement occurred during late October and early November with the single largest flight on 28 October when more than 250,000 were noted. Throughout their migratory period, there were several days when the number of American crows exceeded 50,000.

### Icterids

The first red-winged blackbirds of the season were seen moving through in early September and continued to be seen throughout the fall with flocks continuing to fly past into November. Like blue jay migration, red-winged blackbird migration was not as condensed this year, without a traditional late October peak and without many big flight days. Small numbers of rusty blackbirds were detected in the red-winged blackbird flocks starting on 8 October. Flocks of rusty blackbirds continued to be seen in varying numbers up until early November with a peak movement occurring in late October when more than 600 were seen on 28 October. Common grackles were seen mixed in among the flocks of blackbirds, most frequently in late October. Of note, European starlings were much more abundant this season, particularly in November, when several large flocks passed overhead.

### Swifts and Swallows

Purple martins and swallows peak just before the count starts in September and migration slowed considerably by mid-September. Small numbers of bank swallows were noted on two days in early September. Barn swallows were noted in small numbers through the end of September. There were unusually large numbers of tree swallows continuing to be seen into October. Chimney Swifts were first seen on 2 September, peaked in late September and continued to be seen into early October.

### Sparrows and Finches

Winter finches were far less common this year, with no redpolls, crossbills, grosbeaks or siskins noted at any point throughout the season. Snow buntings and lapland longspurs were observed on several days during the month of November. American goldfinches were noted throughout the entirety of the count period with peak movement during early November. House finches were noted on multiple occasions in October and November and purple finches were noted a few times during the month of October. Dark-eyed juncos were first noted in mid-October and were frequently seen in November. The first white-throated sparrows of the season were detected in late September and seen often thereafter. The first American tree sparrows arrived in early November.

### Warblers

Wood-warblers were not particularly abundant for a second straight season. A total of 9 species were detected during the months of September and October including blackpoll, Cape May, palm, black-throated blue, black-throated green, magnolia, yellow-rumped and American redstart.

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### Table 2 Species codes used in Table 1.

**TV:** turkey vulture (*Cathartes aura*)

**OS:** osprey (*Pandion haliaetus*)

**BE:** bald eagle (*Haliaeetus leucocephalis*)

**NH:** northern harrier (*Circus cyaneus*)

**SS:** sharp-shinned hawk (*Accipiter striatus*)

**CH:** Cooper's hawk (*Accipiter cooperii*)

**NG:** northern goshawk (*Accipiter gentilis*)

**RS:** red-shouldered hawk (*Buteo lineatus*)

**BW:** broad-winged hawk (*Buteo platypterus*)

**SW:** Swainson's hawk (*Buteo swainsoni*)

**RT:** red-tailed hawk (*Buteo jamaicensis*)

**RL:** rough-legged hawk (*Buteo lagopus*)

**GE:** golden eagle (*Aquila chrysaetos*)

**AK:** American kestrel (*Falco sparverius*)

**ML:** merlin (*Falco columbarius*)

**PG:** peregrine falcon (*Falco peregrinus*)

**UNK:** unknown raptor species