

Brockway Mountain Hawk Watch 2023 season report

Thru June 15 the season count was 94 % of the average since 2010. Most of the species were at or above average but the thermal loving Broad-winged Hawks were only 84 % of the average. I think some untimely weather hampered this species numbers. The last 2 weeks of April and the first week of May had a lot of cold or wet or fog.

June started out with some warm weather and helpful winds but it soon turned chilly and with wrong way winds. A warm front with southerly winds was coming and we decided to extend the count. On June 17th the count was 453, the 18th a rollicking 1892, the 19th 182 and the 21st a nice 338 to end the season. These late flights pushed the season to 17 % above average and the Broad-winged Hawks to 16 % above average.

March

6 days were lost to weather and the month seemed warmer and less windy than normal but not many birds.

March	Obs Hrs	BV	TV	OS	BE	NH	SS	CH	NG	RS	BW	SW	RT	RL	GE	AK	ML	PG	TOTAL
Total	67	0	0	0	110	0	0	0	4	1	0	0	1	0	6	0	0	0	122

The count was 44% of the March average.

March	Obs Hrs	BV	TV	OS	BE	NH	SS	CH	NG	RS	BW	SW	RT	RL	GE	AK	ML	PG	TOTAL
Avg 2010-2022	80	0	0	0	212	4	5	0	4	2	0	0	22	7	11	1	1	0	274
Actual 2023	67	0	0	0	110	0	0	0	4	1	0	0	1	0	6	0	0	0	122
% of Avg for 2023	83				52	0	0		96	65			5	0	53	0	0		44

The chart below compares this year's March counts of our nearest hawk watch neighbors as a % of historic averages. For example, the Mac Bridge was 116 % of their March average for Bald Eagles, meaning they had 16 % more Bald Eagles than their average March. I may be over explaining this because it sometimes confuses me. I did not average in the years of the other sites that seemed to have minimal hours or no counts at all.

March % of the Avg for 2023	Obs Hrs	BV	TV	OS	BE	NH	SS	CH	NG	RS	BW	RT	RL	SW	GE	AK	ML	PG	Total
Mac Bridge	78		96		116	35		75	150	113	0	87	21		97		204	45	92
Duluth	167		14		94		6	42				20	3		138	59	35		80
Brockway	83				52				96	65		5			53				44

April

For the month of April, the count was 108 % of the monthly average, or 8 % above average with 2320 birds.

April	Obs Hrs	BV	TV	OS	BE	NH	SS	CH	NG	RS	BW	SW	RT	RL	GE	AK	ML	PG	TOTAL
2023																			
4/1	4.83																		0
4/2	7				21	1			1				11		1				35
4/3	6.92																		0
4/4	7				2														2
4/5	0																		0
4/6	1.5																		0
4/7	7.92				48				1	1			28	1	3				82
4/8	7.5		13		19	1				1			19		4			1	58
4/9	9		36		74	7	7	2		1			54	21	2	10	6	2	222
4/10	8		13		11	7	4		1				18	6			1		61
4/11	8		19		10	3	10						31	15		1	1		90
4/12	8.75		42		9	20	11						63	26	1	3	2	1	178
4/13	7.67		5		7	2	6	1					24	6	1	1			53
4/14	9.5		105	1	64	42	186		2	1	1		82	306	2	16	5	2	815
4/15	6		14	1	15	2	3			1			10	30	1			1	78
	Obs Hrs	BV	TV	OS	BE	NH	SS	CH	NG	RS	BW	SW	RT	RL	GE	AK	ML	PG	TOTAL
4/16	0																		0
4/17	0																		0
4/18	4.75																		0
4/19	7		14	1	1								6	2		1			25
4/20	0																		0
4/21	8		12		10	7	51	2	3	1			39	66	3		1		195
4/22	0																		0
4/23	5																		0
4/24	3.5		7		6		1												14
4/25	6		9	1	10		14				4		15	1	1				55
4/26	8.5		12		29	6	22		2		10		27	18	2	1	2		131
4/27	6.75		35	3	8	17	81		1	1	19	1	24	29		6	1		226
4/28	0																		0
4/29	0.5																		0
4/30	0																		0
Total	150	0	336	7	344	115	396	5	11	7	34	1	451	527	21	39	19	7	2320

Flights started getting bigger on April 7 and warmer weather, with south or moderate west or north winds, kicked in on April 9th with a high of 64 F. The 14th had a high of 75 F and the warmth started fading on the 15th which was 58 F at 9 A.M. and dropped to 41 by 2 P.M. A lot of snow melted in this heat wave and in a 9 day span 1637 raptors flew by. The 14th was a great hawk watching day with the south wind pushing the birds to the Lake Superior shoreline and then right for Brockway and the next ridge south. The first Osprey and Broad-winged arrived and Sharp-shinned Hawks had their first big day. 4 species had their season high counts: Turkey Vulture, Northern Harrier, Rough-legged Hawk and Red-tailed Hawk. Northern Harrier and Rough-legged Hawk each had the highest single day counts since the official count started in 2010. A day of great variety, but it was a Rough-legged Hawk day with 306. For some perspective, the season average is 212, the season max was 385 in 2013 and the previous single day high was 141. Joe Youngman sent me data from a Brockway raptor count in

1992 done by Jon Peacock. The season high for Rough-legged Hawks that year was 475. I met Jon Peacock in 2018 and he told me of an informal day in the past when he counted over 350 (I can't remember the exact number) Rough-legged Hawks in a single day.

Cooler weather started on the next day and 7 days were lost to weather in the last 2 weeks of April. In all April lost 9 days to inclement weather.

Below is the comparison of this April's count to previous counts.

Year	Obs Hrs	BV	TV	OS	BE	NH	SS	CH	NG	RS	BW	SW	RT	RL	GE	AK	ML	PG	TOTAL	
Apr-23	149.58	0	336	7	344	115	396	5	11	7	34	1	451	527	21	39	19	7	2320	
Apr-22	135.83	0	342	14	195	59	480	5	6	0	57	1	194	163	13	38	14	14	1596	
Apr-21	160.75	0	223	3	209	58	155	0	18	13	0	0	463	277	17	21	8	5	1536	
Apr-20	195.2	0	140	4	117	23	86	1	4	1	25	0	232	52	23	5	5	2	733	
Apr-19	163.5	0	493	4	172	53	723	11	10	3	106	0	353	169	19	44	5	5	2170	
Apr-18	193.75	0	349	17	237	64	601	8	6	6	281	2	307	160	15	23	5	13	2095	
Apr-17	167.5	0	259	10	247	54	267	0	9	4	776	2	400	80	11	24	6	4	2158	
Apr-16	187.25	0	391	3	216	97	394	3	8	8	41	0	680	148	20	36	5	4	2054	
Apr-15	203.75	0	279	5	263	43	279	2	4	5	96	0	524	109	15	31	6	2	1718	
Apr-14	140.5	0	514	10	689	32	225	3	6	5	3	0	642	80	28	32	23	4	2297	
Apr-13	158.5	0	817	33	676	92	1792	9	26	5	416	1	893	315	46	116	22	30	5378	
Apr-12	223.83	0	172	18	192	89	450	2	14	5	802	3	350	96	13	36	3	4	2264	
Apr-11	194.42	1	257	6	209	44	403	3	13	3	99	0	329	68	15	29	11	6	1508	
Apr-10	192.5	0	432	21	201	107	663	6	8	6	180	2	429	99	9	69	17	9	2341	
April	Obs Hrs	BV	TV	OS	BE	NH	SS	CH	NG	RS	BW	SW	RT	RL	GE	AK	ML	PG	TOTAL	
Avg 2010-																				
2022	178	0	359	11	279	63	501	4	10	5	222	1	446	140	19	39	10	8	2142	
Apr-23	150	0	336	7	344	115	396	5	11	7	34	1	451	527	21	39	19	7	2320	
% of Avg for April	84	0	94	61	123	183	79	123	108	142	15	118	101	377	112	101	190	89	108	

The spreadsheet below compares this year's April counts of BMHW and our nearest hawk watch neighbors as a % of historic averages.

April	Obs	BV	TV	OS	BE	NH	SS	CH	NG	RS	BW	RT	RL	SW	GE	AK	ML	PG	TOTAL
Mac Bridge	82	220	174	62	82	121	128	158	55	239	303	165	72	0	52	155	191	43	206
Duluth	120	0	193	46	160	154	83	99	0	125	20	64	184	71	76	137	219	339	82
Whitefish	77	0	423	40	109	64	81	75	15	131	139	66	92	0	159	59	52	42	92
BMHW	84	0	94	61	123	183	79	123	108	142	15	101	377	118	112	101	190	89	108

The Mackinac Bridge had an awesome 206 % of their historic April count and the Broad-winged Hawks were at 300 % of average.

May

May came in like a lion with the first week bringing snow, rain and fog hampering some good SE winds. From May 15th thru the end of the month smoke from Western Canadian fires created strong haze on many days that obscured distant or high-flying birds. Despite these weather phenomena the count was 1 % above the May average. The first spreadsheet below is the day-by-day count.

Date	Obs Hrs	BV	TV	OS	BE	NH	SS	CH	NG	RS	BW	SW	RT	RL	GE	AK	ML	PG	TOTAL
5/1	0																		0
5/2	3																		0
5/3	4		7		10		25				4		15	1					62
5/4	9.25		33	10	5	11	233				10		13	4	1	36	4	1	361
5/5	8.25		2	7	2	9	60						2	5		19	4	6	116
5/6	4.5		7	3	2	3	89				5		2	3	1	5	1	1	122
5/7	0																		0
5/8	8.83		45	5	28	23	226	4	3		1077	1	65	15	1	14		1	1508
5/9	8		67		26	1	27	1	2		387	1	19	1	2			2	536
5/10	8.5		10		14	5	48		2		548		19	3	1	2	1		653
5/11	8		13	4	14	5	72		1	3	744		8	1		4		2	871
5/12	8.5		10	2	7	2	23				689	1	27		1	3		1	766
5/13	6		15		3		7				18		3	1			1		48
5/14	7		39	1	24		16				107		24		2	2			215
5/15	7		11	1	4		13				68		10						107
	Obs Hrs	BV	TV	OS	BE	NH	SS	CH	NG	RS	BW	SW	RT	RL	GE	AK	ML	PG	TOTAL
5/16	6.25				4		1									1		1	7
5/17	9.17		26		42		15				59		21	1	1				165
5/18	8.83		3	1	32	5	54		1		108		9	2	1	2	1	1	220
5/19	0																		0
5/20	7.75		12	1	19		10			1	62		11						116
5/21	8		3		13						58		3			1			78
5/22	10.17		54	5	71	4	64	1			519		74			5	2	1	800
5/23	8		20		20	1	6		1		89		17				1		155
5/24	7.75				16						13		4						33
5/25	8.42		30		7	1	8				60		11			1	1		119
5/26	8		7		14		3				106		16						146
5/27	7.75		14		33						97		2		1				147
5/28	7		19	1	5		1				99		5						130
5/29	9		47	2	43	1	2		1		474		41						611
5/30	8.25		39		12		6				266		24						347
5/31	8		20		46	1	2				139		11		1	2			222
Total:	213	0	553	43	516	72	1011	6	11	4	5806	3	456	37	13	97	16	17	8661

The next spreadsheet is the month of May counts from 2010 thru 2023. The first line below the May counts is the May average from 2010 thru 2022. The next line is the May 2023 count. The last line compares by percentage the May 2023 count to the previous 13 May counts.

Year	Obs Hrs	BV	TV	OS	BE	NH	SS	CH	NG	RS	BW	SW	RT	RL	GE	AK	ML	PG	TOTAL
May-23	213.17	0	553	43	516	72	1011	6	11	4	5806	3	456	37	13	97	16	17	8661
May-22	150	0	350	16	344	38	752	9	7	4	8973	2	365	169	21	42	10	22	11126
May-21	218.48	0	393	6	280	12	611	1	10	4	2204	0	351	59	3	12	11	4	4008
May-20	226.42	0	282	8	203	19	241	1	4	3	1836	1	219	10	9	11	6	7	2867
May-19	203.58	0	367	10	436	28	673	2	4	2	3028	1	316	52	13	26	12	13	4985
May-18	237	0	433	31	368	45	1081	10	11	11	7807	4	360	191	15	42	9	23	10445
May-17	194.5	0	437	12	178	47	567	0	5	3	5083	1	554	25	14	42	5	11	6986
May-16	206.58	0	390	14	296	24	620	1	2	2	5287	1	585	13	13	27	16	20	7367
May-15	204.5	1	376	27	274	52	1006	0	5	10	3351	2	303	101	5	49	11	30	5730
May-14	168.5	0	956	62	459	30	628	9	2	8	10652	6	728	37	21	54	15	45	13712
May-13	184	1	992	124	357	36	1162	9	8	14	9290	4	1042	68	14	124	26	40	13311
May-12	230.25	0	105	41	261	67	1409	10	8	0	11485	2	736	79	4	22	7	20	14266
May-11	210.58	0	211	14	176	34	2008	4	7	0	7617	4	356	29	2	81	16	27	10594
May-10	225.25	0	283	23	169	12	896	15	8	2	4542	5	130	17	9	24	22	13	6246
May	Obs Hrs	BV	TV	OS	BE	NH	SS	CH	NG	RS	BW	SW	RT	RL	GE	AK	ML	PG	TOTAL
Avg 2010-2022	205	0	429	30	292	34	896	5	6	5	6243	3	465	65	11	43	13	21	8588
May-23	213.17	0	553	43	516	72	1011	6	11	4	5806	3	456	37	13	97	16	17	8661
% of Avg	104	0	129	144	176	211	113	110	177	83	93	118	98	57	118	227	125	80	101

The Broad-winged Hawks were 7 % below the May average. The first week of May did not have the best weather conditions for thermal loving birds. The low May percentage for Rough-legged Hawks was not a surprise considering their big flights in April.

The last spreadsheet is a comparison of our neighbors counts by percentage of each sites historic May counts to this season's may counts.

	Obs Hrs	BV	TV	OS	BE	NH	SS	CH	NG	RS	BW	RT	RL	SW	GE	AK	ML	PG	Total
Mac Bridge	87	180	173	89	157	368	159	125	225	442	120	157	7	300	61	464	147	161	126
Duluth	154		138	87	245	215	116	130	0	0	102	123	90	104	60	119	157	196	113
Whitefish	107	200	177	60	133	116	64	65	33	62	198	31	13	206	77	72	54	81	113
Brockway	104	0	129	144	176	211	113	110	177	83	93	98	57	118	118	227	125	80	101

The road opened on May 10th. In the last week of May we had 2 unexpected western birds, a Western Kingbird and a Rock Wren.

June

June began with warm weather and some favorable winds. with some south component or mild. Since June 6th the temperature had been on the cool side with not much S winds. A warm front with SE winds was coming after the 15th and we decided to continue the count. June 17th had mild to moderate N winds and warmth and the raptors were moving. The 18th was warm and had that magical S and SE winds and the birds kicked into a higher gear. The flight path was close enough to pick up the birds despite the thick smoke. The smoke haze continued but the 19th and 21st were also good flight days. This season's previous daily high count for Broad-winged Hawks was May 8th with 1077, but on June 18th the count was 1774 (mostly young birds but still some adults). The season daily high count for Bald Eagles was 74 on April 9 but June 17 and 18 still had strong flights of "southern" Bald Eagles with counts of 55 and 59. It is unusual to have the high daily count of the season on June 18 with 1892 raptors. The day by day for June:

Date	Obs Hrs	BV	TV	OS	BE	NH	SS	CH	NG	RS	BW	SW	RT	RL	GE	AK	ML	PG	TOTAL
	Hrs																		
6/1	8		13	2	33		1				306		4		1				360
6/2	7.92		4		30						180		2						216
6/3	8		10	1	27	1	3				174		1		1				218
6/4	7.83		10		3		1				149		2						165
6/5	7.25		3		2						3		1						9
6/6	7.25				12						11								23
6/7	7.67		22		10						40		9				1		82
6/8	7		11		8	1	4				65		2						91
6/9	6.5				3		2				37		10						52
6/10	1.75																		0
6/11	5.67										3								3
6/12	0																		0
6/13	1.25																		0
6/14	4.67										1		3						4
6/15	7.5										5		3				1		9
	Obs Hrs	BV	TV	OS	BE	NH	SS	CH	NG	RS	BW	SW	RT	RL	GE	AK	ML	PG	TOTAL
6/17	8.25		18		55						375		4			1			453
6/18	7		31	2	59		1				1774		25						1892
6/19	6.67		11		22						158		12						203
6/21	4.25		18	2	17						278		22					1	338
Total	114.42	0	151	7	281	2	12	0	0	0	3559	0	100	0	2	1	2	1	4118

Always a welcome to have late Sharp-shinned Hawks and Golden Eagles.

June 2023 compared to past June counts

Year	Obs Hrs	BV	TV	OS	BE	NH	SS	CH	NG	RS	BW	SW	RT	RL	GE	AK	ML	PG	TOTAL	
Jun-23	114	0	151	7	281	2	12	0	0	0	3559	0	100	0	2	1	2	1	4118	
Jun-22	69	0	19	1	80	0	3	0	0	0	787	0	58	0	0	0	0	0	948	
Jun-21	97	0	122	1	38	1	8	0	0	1	1201	0	58	1	0	4	5	0	1473	
Jun-20	99	0	126	1	65	5	11	0	4	1	1044	0	83	0	0	2	1	1	1344	
Jun-19	222	0	380	3	390	12	5	0	1	1	2278	0	348	2	2	7	7	0	3438	
Jun-18	119	0	112	8	160	3	18	0	0	1	1567	0	105	2	0	8	3	0	1987	
Jun-17	100	0	100	2	65	3	8	0	0	0	562	0	156	2	0	3	2	2	905	
Jun-16	86	0	85	4	79	1	5	0	1	0	1230	0	94	0	0	4	1	1	1505	
Jun-15	106	0	142	1	125	0	26	1	0	0	1189	0	109	0	0	3	2	1	1612	
Jun-14	66	0	297	2	178	3	10	2	0	0	1667	0	90	0	0	1	2	3	2255	
Jun-13	110	0	354	18	135	6	32	3	1	2	5947	0	246	1	0	19	3	0	6767	
Jun-12	87	0	6	3	57	4	25	2	0	0	2287	1	62	0	0	0	1	2	2451	
Jun-11	82	0	9	1	13	2	13	0	0	0	1630	0	51	0	0	4	0	1	1727	
Jun-10	72	0	44	3	21	1	4	1	0	0	212	0	14	0	0	3	1	0	306	
	Obs Hrs	BV	TV	OS	BE	NH	SS	CH	NG	RS	BW	SW	RT	RL	GE	AK	ML	PG	TOTAL	
Avg 2022 thru 2010	101	0	138	4	108	3	13	1	1	0	1662	0	113	1	0	4	2	1	2055	
Actual 2023	114	0	151	7	281	2	12	0	0	0	3559	0	100	0	2	1	2	1	4118	
% of 2023																				
to Avg	113		109	190	260	63	93	0	0	0	214	0	88	0	1300	22	93	118	200	

The late arriving warm front boosted the June count to 100% over the average. The Mac Bridge counted thru June 5 and were 195 % of normal.

Season

For the season at Brockway all but 1 species, the Peregrine Falcon, were close to average or well above. Northern Harriers and Rough-legged Hawks set new season high records

Season	Obs Hrs	BV	TV	OS	BE	NH	SS	CH	NG	RS	BW	SW	RT	RL	GE	AK	ML	PG	TOTAL
S 2023	544	0	1040	57	1251	189	1419	11	26	12	9399	4	1008	564	42	137	37	25	15221
S 2022	429.08	0	711	31	683	97	1237	14	16	4	9817	3	617	332	43	80	24	36	13755
S 2021	539.73	0	738	10	677	75	775	1	30	20	3405	0	885	342	32	37	25	9	7213
S 2020	592.6	0	549	13	451	49	339	2	15	7	2905	1	537	62	46	19	12	10	5039
S 2019	651.83	0	1240	17	1205	93	1401	13	16	6	5412	1	1017	226	49	77	25	18	10820
S 2018	639.17	0	894	56	946	112	1700	20	19	18	9655	6	777	354	36	73	17	36	14724
S 2017	536.5	0	796	24	567	105	842	0	14	7	6421	3	1121	107	31	69	13	17	10144
S 2016	543.83	0	866	21	663	122	1020	4	13	11	6558	1	1371	161	39	67	22	25	11022
S 2015	580.75	1	797	33	772	95	1312	3	16	15	4636	2	937	211	24	83	19	33	9187
S 2014	463.75	0	1769	74	1658	65	864	14	20	13	12322	6	1461	117	68	87	40	53	18634
S 2013	532.25	1	2163	175	1441	134	2987	21	40	21	15653	5	2182	385	81	259	52	70	25765
S 2012	666.33	0	285	62	1155	175	1923	14	23	17	14574	6	1254	238	30	67	13	26	19907
S 2011	584.5	1	477	21	545	80	2425	7	23	5	9346	4	745	98	23	114	28	34	14000
S 2010	573	0	760	47	826	145	1584	22	29	9	4934	7	698	127	33	97	44	22	9567
Avg 2022 thru 2010	564	0	927	45	891	104	1416	10	21	12	8126	3	1046	212	41	87	26	30	13060
S 2023	544	0	1040	57	1251	189	1419	11	26	12	9399	4	1008	564	42	137	37	25	15221
% of Avg to 2023	96	0	112	127	140	182	100	106	123	102	116	116	96	266	102	158	144	84	117

Percentage of the season compared to the average for Brockway and nearby count sites

Season	Obs Hrs	BV	TV	OS	BE	NH	SS	CH	NG	RS	BW	RT	RL	SW	GE	AK	ML	PG	TOTAL
BMHW	96	0	112	127	140	182	100	106	123	102	116	96	266	116	102	158	144	84	117
Whitefish	73	2867	275	51	88	79	68	68	16	83	181	52	70	140	86	63	49	74	101
Bridge	83	284	165	73	122	181	133	142	120	161	159	144	49	225	83	186	179	82	154
Duluth	132	0	177	59	123	147	91	98	0	82	73	60	141	88	111	126	185	223	90

Percentage of the season and monthly counts compared to the historical average for Brockway and nearby count sites

	BMHW	Whitefish	Bridge	Duluth
Season	117	101	154	90
March	44		92	80
April	108	92	206	82
May	101	113	126	113
June	200		195	

Odds and ends

There were 9 days with 500 + birds accounting for 55 % of the season count and 5 of those days were consecutive May 8 – 12 (28.5 % of the count).

4/14	815	
5/8	1508	
5/9	536	
5/10	653	
5/11	871	
5/12	766	
5/22	800	
5/29	611	
6/18	1892	
Total	8452	55%

April, May and June all had 1 big day accounting for 27.7 % of the season total:

4/14	815	
5/8	1508	
6/18	1892	
Total	4215	27.70%

Joe Youngman and Debra Mues counted on my days off. Thank you.

Several people came up the mountain multiple times to help find and ID raptors. I am very appreciative of their help and company:

Bill Deephouse

Cathy Ptaszek

Joe and Lonnie Heywood

Becky Weeks and Mike Swaney

Luba

Marshall Weathersby

Phil Odum spent several days on Brockway with his excellent eyes and skill

Nancy Leonard, Bill Leonard, Emily Newhouse and Debra Mues helped cover the count after June 15th.

Debra Mues kindly went over this report to make sure it was readable.

Karen Karl, Hannah Rooks and Debra Mues kept the count well oiled and running.