

THE
NORTHERN
SHAWANGUNK
MOUNTAINS

OF ULSTER COUNTY
NEW YORK STATE

1978. K. Beard

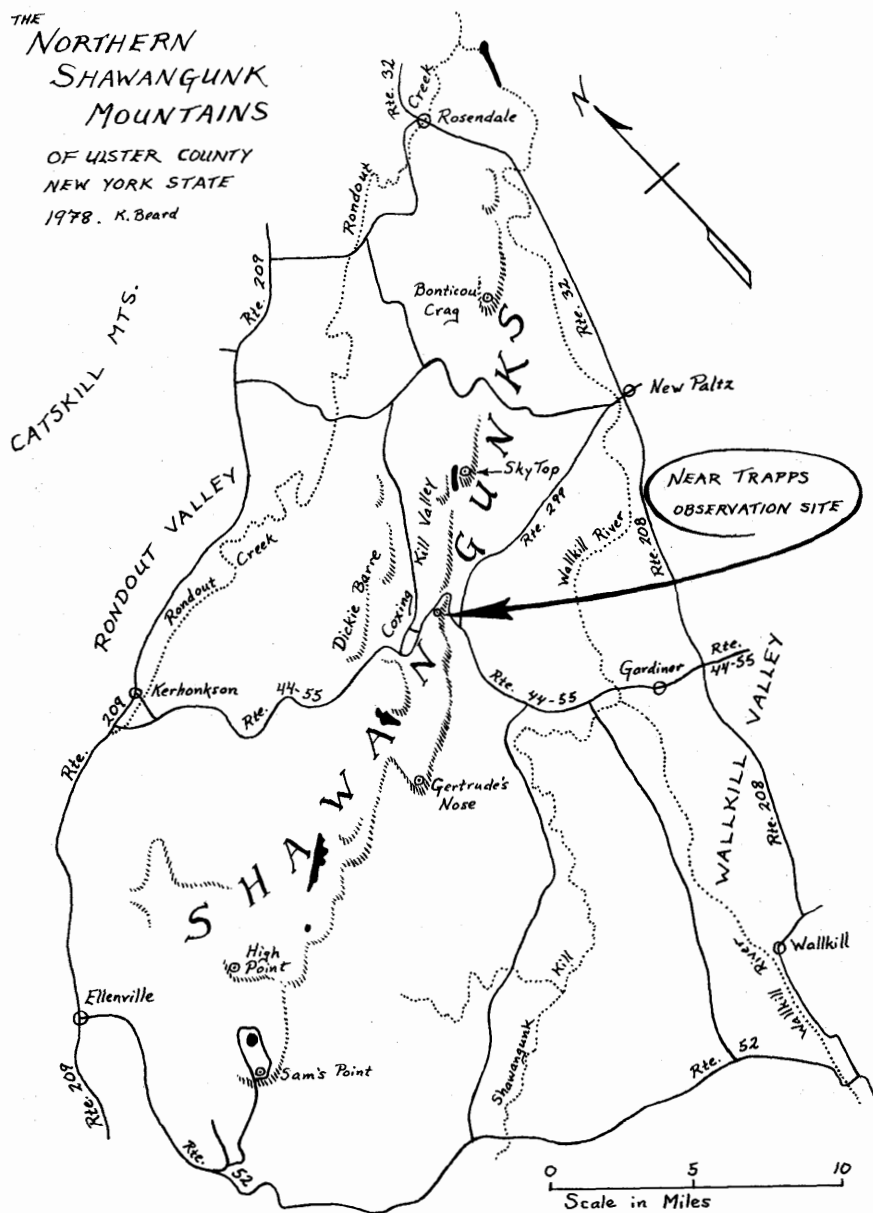


FIGURE 1

1979 FALL HAWK MIGRATION AT THE NEAR TRAPPS, SHAWANGUNK MOUNTAINS, N.Y.

JANET R. CARROLL

Since 1954 official hawk watches have been conducted two days each fall by members of the John Burroughs Natural History Society at the Near Trapps cliffs in Gardiner, Ulster County, New York (see Figure 1). These cliffs are part of a 5,000-acre preserve under the stewardship of The Mohonk Trust. The observation site is the northernmost hawk watch site along the mountain range that includes the Kittitinnny ridge. With support from The Mohonk Trust, a daily hawk watch was conducted from 19 September 1979 through 15 November 1979 in order to determine more accurately the extent of the hawk migration over this area.

The Near Trapps is part of the Shawangunk Mountain range, which extends in a southwesterly direction from its origin in Kingston, New York, to Port Jervis, New York. At the Pennsylvania border it becomes the Kittitinnny range. Unique to the Shawangunks is a 20-mile ribbon of sheer cliffs on the southeast side of the ridge. The northwest side slopes steeply toward the Catskill Mountains.

The observation site is located on the shoulder of the crest of the Near Trapps. The view is approximately 280 degrees from west to southeast. To the west and northwest, the view extends across the Coxing Kill Valley to Dickie Barre, a lesser parallel-running ridge. The Catskill Mountains are visible across the Rondout Valley to the north. To the northeast, the crest of the ridge continues across a small gap, and the Wallkill and Hudson River valleys run from the ridge to the east and southeast.

Daily watches were conducted, beginning on 19 September 1979, from 0700 hrs. to 1600 hrs., although members of the John Burroughs Natural History Society had been observing as time permitted since 31 August. Observations continued until 15 November with the hours decreasing from nine per day to seven per day.

Data gathered included number of individuals identified to species, wind speed and direction, sky conditions and temperature. The data were recorded on Hawk Migration Association of North America forms and submitted to them.

Tables 1, 2 and 3 show the results of the observations at the Near Trapps. Most of the migrating raptors were observed close to the

ridge using the updrafts created by winds bouncing off the cliffs, or off the northwest slope of the ridge, depending on wind direction. On days when the winds were strong, more activity was seen out over the valleys. These flights were generally at low altitude. On the few very clear days with northwesterly winds, hawks were observed coming south from the Catskills and cutting toward the ridge over Dickie Barre. The hazy conditions that usually prevailed lowered the frequency of observations of this type of flight.

The timing of the migration was consistent with patterns documented at Hawk Mountain (Brett and Nagy, 1973). Limited observation of the Broad-winged Hawk migration indicated a peak from 7 September to 15 September. Clear skies and northerly winds on the 13th and 15th provided the thermals and updrafts necessary to their movement. Red-tailed Hawks were seen throughout the observation period, building up during the middle of October and decreasing the middle of November. The few Red-shouldered Hawk sightings were recorded from 6 October to 10 November.

The major flights of both Sharp-shinned and Cooper's Hawks were between 1 October and 25 October, dramatically dropping off after the 25th. The peak Sharp-shinned Hawk days were on 4 October and 6 October, both days having gentle easterly winds and clear or partly cloudy skies, and on 13 October, when strong westerly winds and mostly cloudy skies prevailed. Eight Goshawks were seen between 11 October and 12 November.

American Kestrels passed by the observation area regularly, beginning in September and ending on 23 October. Following a day of rain, westerly winds and clear skies brought a high of 54 through on 8 October. Only two Merlins were observed, one on 8 October and another on 15 October. Although a total of 15 Peregrine Falcons were seen, four captive-bred Peregrines were released in the area in August and one sub-adult male and an adult female were in residence, so our sightings were not always of migrants. For this reason, Tables 1, 2 and 3 do not include Peregrine sightings. Of the 15 observations, based on observation date, behavior and the presence or absence of markers, it is estimated that one-half of the Peregrines observed were migrants, and these during the period 27 September through 22 October.

Marsh Hawks were not abundant, but were sighted regularly with the greatest concentration between 6 October and 31 October. While also not numerous, Ospreys were seen from the beginning of the ob-

servation period until 25 October. Only two individuals were observed from 16 October through 26 October, one of them appearing to have a wing injury. An immature Bald Eagle was seen on 15 October, a mature Golden Eagle was seen on 18 October and one Rough-legged Hawk was seen on 20 October.

Records from previous hawk watches at the Near Trapps showed that sightings of all the above-mentioned species except the Golden Eagle and Rough-legged Hawk had been made in the past.*

Turkey Vultures were normally not counted, because there is a local population believed to include 13 individuals. The vultures roosted on Dickie Barre and were seen daily soaring up and down the ridge and out over the valleys. On 29 September, however, two groups of Turkey Vultures were simultaneously observed soaring in kettles through the Coxing Kill Valley heading southeast. One kettle contained approximately 75 individuals, the other 15.

The total number of hawks sighted at the Near Trapps for the period 19 September through 15 November was 2,887. For the same period, 19,821 hawks were seen at Hawk Mountain. This clearly shows the limited migration over the Near Trapps; only 14.6% of the total observed at Hawk Mountain. When comparing the same data by species, a disproportionately large percentage of American Kestrels (44.9%), Marsh Hawks (39.1%), and Ospreys (25.2%) were sighted at the Near Trapps (see Table 4).

Comparisons have been made of the number of hawks by species seen at several hawk lookouts at more southern locations along the ridge. The data suggest that more hawks join the ridge as they move further south, gradually building up in numbers (Heintzelman, 1975). If all the American Kestrels, Marsh Hawks and Ospreys seen at the Near Trapps continued to follow the ridge to Hawk Mountain, very few more of these species would have picked up the ridge further south. It seems more likely that at least some of these raptors left the ridge. The Hudson River Valley to the east would seem a favorable alternate route. American Kestrels prefer coastal migration routes and could have followed the river to its coastal terminus. Marsh Hawks use both inland and coastal routes (Heintzelman, 1975) and some of these hawks may have also left the ridge to follow the river to the coast. The Hudson River Valley habitat would also serve the Osprey well.

* Hawk watch records are held by The Mohonk Trust.

Because of limited observation in the past, it is not known whether this disparity has occurred before, and the small migration over the Near Trapps would bias the present percentage data to some extent. The data suggest, however, the possibility that individuals of these species may use the ridge for only a short distance, then leave it for other routes.

Compared to a major migration observation site such as Hawk Mountain, the Near Trapps is of secondary importance. The site is apparently too close to the northern terminus to have a concentration of raptors like that seen at more southern locations on the ridge. The Catskills to the west and the Berkshires and Hudson River Valley to the east provide alternate migration routes through the area.

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LITERATURE CITED

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- Heintzelman, Donald S. 1975. *Autumn Hawk Flights, The Migration in Eastern North America*. Rutgers University Press, New Brunswick, New Jersey.

TABLE 1. HAWK SIGHTINGS FOR MONTH OF SEPTEMBER 1979

SPRING, 1980

S E P T	Wind Speed	Goshawk	Sharp shinned	Cooper's	Red- tailed	Red- shouldered	Broad- winged	Rough legged	Golden Eagle	Bald Eagle	Marsh Hawk	Osprey	Merlin	American Kestrel	Uniden- tified	Total
1	No observation															
2	No observation															
3	No observation															
4	No observation															
5	No observation															
6	No observation															
7	4-7 WSW		30	1			107				7	3		10	8	166
8	4-7 N		4	1	4		75				1					85
9	8-12 NNE		2				15									17
10	No observation															
11	8-12 W		1		2		2					2		2	3	12
12	4-7 ENE		1				59									60
13	8-12 NE		6	3	1		282				2	1		3	1	299
14	No observation															
15	13-18 WNW		16		5		154					8		5		188
16	4-7 NE		31		1		113				3	2		8		158
17	1-3 WSW		17	1			28					1		1		48
18	4-7 E		16		2		14							2		34
19	4-10 WNW		40		2		26					4		4	5	81
20	0-7 ESE		20	2	4		68				2	2		6	1	105
21	1-5 SW		2				2									4
22	Rain															
23	3-8 NNE		32	1	9		41				1	3		8	5	100
24	1-5 VAR		25	1	2		27				1	4		1	6	67
25	1-5 VAR		47	2	2		39				4	7		1		102
26	0 None		19	2			15				1	6		8	1	52
27	0-3 SSE		74	1	2		3				3	10		6		99
28	0-3 SE															0
29	Rain															
30	Rain															
TOTALS			383	15	36		1,070				25	53		65	30	1,677

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TABLE 2. HAWK SIGHTINGS FOR MONTH OF OCTOBER 1979

O 82	C T	Wind Speed	Goshawk	Sharp- shinned	Cooper's	Red- tailed	Red- shouldered	Broad- winged	Rough legged	Golden Eagle	Bald Eagle	Marsh Hawk	Osprey	Merlin	American Kestrel	Uniden- tified	Total
		Direction (mph)															
	1	3-5 VAR		23	1	1		10				1	2		1	4	43
	2	Rain															
	3	Rain															
	4	1-3 SE/SW		192	8	10						1	7		6		224
	5	8-12 SSE		53	3	1		1				3	7				68
	6	4-7 SE		185	5	5	2	1				8	8		14	1	229
	7	1-3 VAR		84	5	3						5	8		25		130
	8	8-15 W		138	4	8	4						2	1	54		211
	9	Rain															
	10	Rain															
	11	5-7 SSE/SW	1	29	1	2						2	5				40
	12	Rain															
	13	7-15 WSW/W	1	227	13	14	3					4	9		14	1	286
	14	10-15 WSW/W		14	1	10						1					26
	15	8-12 SW		29	1	7	3				1			1		1	43
	16	0-3 VAR	1	35	3	23	3					4			1	6	76
	17	3-7 ESE/SSW		107	2	26	1					8					144
	18	0-5 WNW		47		23	1			1		2					74
	19	1-3 E		15		2						2			2		21
	20	0-5 NE/SE		48	2	7			1			2					60
	21	3-5 SSE/VAR	1	46	1	6	1					3			1		59
	22	5-10 ESE		127	3	26						4			1		161
	23	7-15 SE/VAR		92	3	11	2					2			2	2	114
	24	No observation															
THE KINGBIRD	25	10-15 W		4	3	21	3					4				4	39
	26	Rain															
	27	0-5 WNW		1		2						1					4
	28	Rain															
	29	3-7 W		3		31						6				2	42
	30	1-5 NW				3						1	1			2	7
	31	0-5 VAR				31	4					1					36
	TOTALS		4	1,499	59	273	27	12	1	1	1	65	49	2	121	23	2,137

SPRING, 1980

TABLE 3. HAWK SIGHTINGS FOR MONTH OF NOVEMBER 1979

N O V	Wind Speed		Sharp-		Red-	Red-	Broad-	Rough-	Golden	Bald	Marsh		American	Uniden-	Total
	Direction (mph)	Goshawk	shinned	Cooper's	tailed	shouldered	winged	legged	Eagle	Eagle	Hawk	Osprey	Merlin	Kestrel	tified
1	3-7 SW/SE	1	1		12						1	1			16
2	10-15 VAR		5		3	1					2				11
3	No observation														
4	5-10 VAR	1	1		5	1					1			3	12
5	0-5 SE/VAR	1			32	1								2	36
6	3-5 VAR				26										26
7	5-7 W				20										20
8	0-5 W		2	1	21						2				26
9	Rain														
10	Rain														
11	0-5 NW														0
12	5-10 N	1			16	3									20
13	3-7 NW										1				1
14	10-15 WNW				8										8
15	3-7 W		1		6						2				9
TOTALS		4	10	1	149	6					9	1		5	185

	<u>Hawk Mountain*</u>	<u>Near Trapps</u>	<u>%</u>
Goshawk	40	8	20.0
Sharp-shinned Hawk	11,301	1,768	15.6
Cooper's Hawk	377	69	18.3
Red-tailed Hawk	3,408	443	13.0
Red-shouldered Hawk	195	33	16.9
Broad-winged Hawk	3,495	233	6.7
Rough-legged Hawk	4	1	25.0
Golden Eagle	29	1	3.4
Bald Eagle	1	1	100.0
Marsh Hawk	220	86	39.1
Osprey	345	87	25.2
Merlin	61	2	3.3
American Kestrel	345	155	44.9
Total	19,821	2,887	14.6

Table 4. Near Trapps Sightings Expressed as a Percent of Hawk Mountain Sightings for the Period 19 September through 15 November 1979.

*Unofficial totals for Hawk Mountain supplied by and used with permission of Hawk Mountain Sanctuary, Kempton, Pa.