

1986 Fall Hawk Migration  
Over Vicksburg, Mississippi

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In 1985 birders in Vicksburg, Mississippi, learned of the interest of the Hawk Migration Association of North America in establishing a fall hawkwatch in our general area. Their interest was aroused due to reports of large flights of Broad-winged Hawks (*Buteo platypterus*), especially sightings from the early 1950's. From 1952 through 1956 a New Orleans aerial waterfowl surveyor reported over 35,000 Broad-winged Hawks on more than one day during each of five consecutive fall seasons near Winnsboro, in northeastern Louisiana (Feerick and McKenzie 1986). Since flight movement was partially from the east, it was felt that many of these hawks were likely passing over Mississippi. We began hawkwatches in the fall of 1985 on a limited basis with a total sighting of approximately 800 hawks, mostly Broad-wingeds.

Though 1985 data are limited, a comparison of peak flight dates and cold front passage down the Mississippi River Valley and Appalachian regions during the fall 1985 migration (Kellogg 1986) leaves open the possibility that two major corridors of Broad-winged Hawks may have passed over northern Mississippi: those migrating south through the Great Lakes region and southwest along the Appalachians. If so, many thousands of Broad-winged Hawks may cross our state each fall.

Encouraged by this possibility, six other experienced birders and I made sustained hawk watches in Vicksburg from 1 September through 31 October 1986. The watches were subsequently extended through 10 November 1986. These were the first sustained hawkwatches ever held in Mississippi on behalf of the Hawk Migration Association.

Fort Hill, located in the Vicksburg National Military Park, was chosen as the primary observation site because it provided an almost 360-degree view of the horizon. Four other sites were

also used, primarily the author's backyard and a downtown Vicksburg location.

For the 10-week period, a total of 8149 migrating raptors mostly Broad-winged Hawks, was recorded during 127 hours of observation (see Table 1). Buteos, accipiters, and vultures followed a general path from northeast to southwest. Due to the small numbers of other species, no common flight path could be identified. During the watch period, at least 200 Broad-winged Hawks were recorded at every hour between 0800 and 1600 (CST) with 1500-1600 having the largest total (2119). However, because observation time favored certain hours, no conclusions can be drawn as to the preferred time to observe migrating Broad-wings.

The results in Table 1, coupled with the fact that the most hawks originated from the northeast, clearly reveal the value of west-central Mississippi in observing the fall migration of Broad-winged Hawks.

Since Mississippi Kites (Ictinia mississippiensis) are generally August migrants (Feerick and McKenzie 1986), this species would have already passed over before our watch began. Large numbers of Sharp-shinned Hawks (Accipiter striatus) and Red-tailed Hawks (Buteo jamaicensis) are counted at northern hawkwatching sites (Kellogg 1986), sometimes numbering in the hundreds as far south as St. Louis, Missouri (Peters 1986). However, large numbers of these species were not sighted in Vicksburg. Nevertheless, Sharp-shinned Hawks were the second most common hawk reported. Though only 27 are listed, many of the 52 unidentified accipiters, unnamed largely due to our inexperience in distinguishing Cooper's Hawks (A. cooperi) from Sharp-shinned, can be safely assumed to be Sharp-shinned. Accipiter counts from sites to our north and northeast show a predominance of this species (Kellogg 1986).

Although Black (Coragyps atratus) and Turkey Cathartes aura vultures appeared almost daily, their meandering flight paths made it difficult to establish their migratory status. Only those individuals that maintained a generally direct, north-to-south flight path from horizon to horizon were listed as migrants. Only two migrating falcons were sighted.

Of all the migratory birds of prey, Broad-winged Hawks are the ones most likely to be seen in large numbers in our area. Since their movements are tied closely to weather-related events (Mead 1983), weather forecasts provided by services such as The Weather Channel and NOAA radio were studied daily. The first evidence of Broad-winged migration over Vicksburg was recorded

with the passage of two relatively weak cold fronts on 8 and 12 September. Such frontal activity, accompanied by northerly winds, has been recognized as the ideal condition for Broad-winged Hawk movements (Bent 1937, Heintzelman 1985). Flights of 236 and 398 respectively, were recorded.

Soon afterward, stationary fronts positioned from Iowa to Indiana effectively blocked cold front movement through Vicksburg during a three-week period. However, during the week of 14 September, a cold front did manage to slide down the Appalachian and Great Smoky Mountains, washing out as it edged into northeastern Mississippi. Early the following week, the largest Broad-winged flight of the fall was observed. Since no fronts passed over Vicksburg, this washed-out front, along with a low pressure area which crossed the state during the night of the 20th, was the only weather-related event which could have been the impetus for the movement. We recorded 3238 Broad-winged Hawks from 21-23 September. Most passed overhead within about 30 minutes during each of the three days. Although some were seen in their characteristic kettles, large masses of circling hawks rising with thermals, most were observed gliding overhead in loose formations, the largest single group being 296.

Numbers dwindled until 27 September when 622 were counted. This marked the beginning of a second surge, which lasted through 2 October, when 2713 were counted. During this period the largest single kettle was estimated at 300 individuals; the largest formation gliding overhead numbered 331. Expectations were high when the first cold front in 23 days cleared Vicksburg on 5 October. However, although we were vigilant for over five hours during the times recognized as peak periods, only 16 Broad-winged were found. A period of rainy weather ensued from 8 to 13 October, culminating in another cold front passage. To our surprise, 266 more Broad-winged were counted on 14 October. That week marked the end of our sightings, which totaled 7927 Broad-winged Hawks for the entire watch period.

As a result of our hawkwatches, some general observations can be made which may assist others in our state interested in observing migrating hawks. Although cold front passage and northerly winds are reported to be indicative of large Broad-winged Hawk movements, this was certainly not the case in Vicksburg this fall. Only moderate numbers were counted under such conditions. On the contrary, most Broad-winged Hawks were observed on light, southerly winds during the 23 days between cold fronts. Thus, such weather conditions were not inhibiting factors in Broad-winged movements over Vicksburg.

Two of the larger Broad-winged flights, 550 on 21 September and 939 on 1 October, occurred while thunderstorms were in the surrounding area, suggesting that isolated thunderstorm activity, in lieu of frontal activity, may be indicative of local hawk movements.

When the largest Broad-winged flight of 1510 on 22 September began in downtown Vicksburg, I telephoned two other hawkwatchers, 6.4 km northeast and 12.9 km south-southeast. All three of us observed large numbers of Broad-winged Hawks during the same period, indicating the passage of a broad front of hawks.

Successful observation of autumn hawk migration over Vicksburg required only a reasonable view of the northern and eastern horizons. Backyard watching also proved rewarding: 2662 Broad-wingeds were recorded at my home during the watch period.

Most of Vicksburg's 8149 hawks were visible only with binoculars (7X, preferably 10X). The most successful technique for locating hawks I found to be a constant scanning of the horizon; casual observation did not prove very useful. On several occasions large groups of Broad-winged Hawks were discovered by following a single Broad-winged which was in a flight path other than southwest. Such individuals were not wandering but headed for a nearby kettle.

These observations and the data gathered from the 1986 fall hawkwatch should assist in observing future autumn movements of migratory birds of prey over Vicksburg. However, only by the establishment of other fall hawk watches in our state, particularly in northern Mississippi, will their movements over Mississippi be more fully understood.

I thank Joyce Bennett, Marion Bragg, Hilda Candlish, Christine Drane, Hal Moore, and Jane Williams. Without their assistance, such a sustained watch would not have been possible.

Table 1. Season and daily totals for Vicksburg, Mississippi.

	Hours	BV	TV	OS	MK	BE	NH	SS	CH	RS	BW	RT	UA	UB	UF	UR	TOTALS*
TOTALS	127.0	36	13	2	4	1	6	27	13	4	7927	16	52	47	2	48	8149
BV Black Vulture      NH Northern Harrier      RT Red-tailed Hawk TV Turkey Vulture    SS Sharp-shinned Hawk    UA Unident. Accipiter OS Osprey            CH Cooper's Hawk        UB Unident. Buteo MK Mississippi Kite   RS Red-shouldered Hawk   UF Unident. Falcon BE Bald Eagle        BW Broad-winged Hawk    UR Unident. Raptor																	
Sept.																	
1	1.4																0
4	1.8																0
8**	2.8	3	1								236	2		12			250
9	2.1										7						7
11	1.3	1															0
12**	10.3	4	2		1				1		398			8			408
13	3.3										130					1	131
14	2.2				1		2				22					1	26
16	---				1												1
18	3.5					3					127			9		8	147
19	1.8										1						1
20	3.0																0
21	5.5	1					1	1			550			1	1	2	556
22	5.6	6							1		1510		2			3	1516
23	5.5	7	1							2	1178		1			6	1187
24	3.3							1	1		424		1	1		5	433
25	4.0	4						1			175		2			1	179
26	4.7										54						54
27	4.7	3									622		3			3	628
28	4.7										253		9			2	264
29	2.5		7								173		2				175
30	3.3										342		2				344
Oct.																	
1	2.0										939		4		1	4	948
2	2.8										384		9	1			394
3	2.3										49		2			1	52
4	2.1		2					2	2		67		2			1	74
5**	5.1										16	2	5	1		4	28
6	1.3				1			1	1								3
7	1.5							3	2		1	1	1	4		1	13
13***																	
14	4.3							7			266		2	4		2	281
15	2.2							1			3	2		1			7
16	1.5																0
17	2.3							1					3				4

(table continued next page)

Table 1 (continued)

	Hours	BV	TV	OS	MK	BE	NH	SS	CH	RS	BW	RT	UA	UB	UF	UR	TOTALS*
TOTALS	127.0	36	13	2	4	1	6	27	13	4	7927	16	52	47	2	48	8149
Oct. (continued)																	
19	3.6	1					1	2	2			1	1				7
21	2.5							3	1				1				5
25**	1.0																0
26	3.0	6				1			1							1	3
28	2.1							2	1								3
31	2.5							2		2				4			10
Nov.																	
2	2.0											2		1			3
7	0.8																0
9**	3.0						1					4				2	7
10	1.8																0

\* excluding vultures

\*\* cold front passage during early morning hours

\*\*\* cold front passage during early evening hours

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