

SUMMARY OF BROAD-WINGED HAWK FLIGHTS ACROSS TENNESSEE FROM 1951 THROUGH 1964

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Hawk migration across Tennessee has been a major study of the Tennessee Ornithological Society (T. O. S.) since the 1951 annual meeting. The primary interest has been centered on the flight of Broad-winged Hawks (*Buteo platypterus*) across the eastern section of the state. This is not to imply that the count of other predatory birds is of less importance or of less significance, but there is a very limited amount of data on these other birds; the little buteos dominate the fall count.

The following is a summary of the Broad-winged Hawk count carried out by the T. O. S. over this fourteen year period. All reports received were included if they contained sufficient information. No additional weight was given to reports from lookouts that are known to lie along the major flight path of the Broad-wings. More detailed accounts of the hawk flights have appeared in issues of "The Migrant", publication of the Tennessee Ornithological Society.

Observations made along the Clinch Mountain Range (running from Southwest Virginia, through Northeast Tennessee, and terminating slightly north and east of Knoxville, Tennessee) have accounted for approximately one-third of all Broad-wing sightings. An additional 7% have come from other locations in Northeast Tennessee. Twenty-five per cent of the sightings have been reported from Elder Mountain near Chattanooga, Tennessee. Of the remaining 35%, good reports have been received from as far west as Memphis, Tennessee.

The total numbers of Broad-winged Hawks sighted each year from 1951 through 1964 are listed in Table

Table I

TOTAL NUMBERS OF BROAD-WINGED HAWKS SIGHTED BY YEAR	
Year	Total Number of Hawks Reported
1951	3,901
1952	2,464
1953	896
1954	1,920
1955	532
1956	939
1957	2,885
1958	1,564
1959	10,998
1960	10,135
1961	5,915
1962	5,915
1963	5,433
1964	2,906
Grand Total for 14 Years	56,403
Average Per Year	4,028

I. The five year period 1959 through 1963 has accounted for the major number of hawk sightings. In

particular, 1959 and 1960 were banner years for the Broad-wings.

Table II is an attempt to estimate the density of the Hawk flights by calendar date. Since the duration of time spent observing was lacking on early reports, these data are based only on reports from 1955 through 1964 for which the total time spent in observing was included. The main Broad-winged flight occurs between September 12 and October 4. There are peaks in the number of hawks reported on September 15, September 16, September 22, September 25, and September 27. These are due to large flights reported on these dates

Table II

DENSITY OF BROAD-WINGED HAWKS BY CALENDAR DATE			
Calendar Date	Number of Hawks Reported	Hours Spent in Observing	Density, Hawks / Hour
8-13	19	5	3.80
19	9	3.5	2.57
25	14	3	4.67
28	1	1	1.00
30	20	3	6.67
31	13	8	1.62
9- 1	2	2.5	.80
2	4	2.5	1.60
3	2	6.5	.31
5	13	10	1.30
6	12	8	1.50
7	43	14	3.07
8	71	18	3.94
9	22	15	1.47
10	10	12	.83
11	49	15	3.27
12	439	47.5	9.24
13	1,491	39.5	37.75
14	364	44	8.27
15	4,227	82.75	51.08
16	2,074	42.5	48.80
17	3,428	75.75	45.25
18	820	65.25	12.57
19	2,432	79	30.78
20	2,687	83.5	32.18
21	2,201	88.6	24.84
22	4,588	96	47.79
23	995	132	7.54
24	1,536	108.75	14.12
25	6,997	87	80.43
26	1,516	103.5	14.65
27	3,672	92	39.91
28	318	47.5	6.69
29	616	46	13.39
30	449	45.5	9.87
10- 1	684	62	11.03
2	444	14	31.71
3	505	21	24.05
4	541	29	18.66
5	48	13.5	3.56
9	3	1	3.00
11	23	1	23.00
12	150	5	30.00

(September 15—1963, 2706 total. September 16—1963, 1346 total; 1964, 419 total. September 22—1956, 485 total; 1957, 869 total; 1962, 3011 total; 1964, 650

total. September 25—1960, 6467 total; 1961, 535 total. September 27—1957, 3011 total.). There has been a limited amount of time spent in observing from mid-August to mid-September and from the first to the middle of October, but from September 17 through October 1 the reports included not less than 45 total hours spent watching on any one calendar date.

Table III summarizes the hawk count data by time of day. The details required for this summary were availa-

ble for only the period from 1957 through 1964. All reports were included that listed Broad-wings, and also all reports including no Broad-wings seen if the observations were made during the migration period and in good weather. Aside from these conditions, no allowances were made for calendar date. The early morning and late afternoon data suffer from insufficient observations. From "9-9:30" through "3:30-4" at least 131 total half-hour intervals have been spent in observing.

The author is indebted to all of the members of the T. O. S. whose reports made this summary possible, and in particular to Mr. Thomas W. Finucane, the coordinator of the hawk count for the T. O. S., who allowed him access to these reports.

Table III
DENSITY OF BROAD-WINGED HAWKS BY TIME OF DAY

Time of Day	Number of Hawks Reported	Number of Time Intervals Spent in Observing	Density, Hawks / Time Interval
Before 8:00	0	18	0
8:00 - 8:30	58	31	1.87
8:30 - 9:00	139	68	2.04
9:00 - 9:30	1,384	131	10.56
9:30 - 10:00	1,524	162	9.41
10:00 - 10:30	3,128	219	14.28
10:30 - 11:00	3,178	235	13.52
11:00 - 11:30	2,743	254	10.80
11:30 - 12:00	3,590	259	13.86
12:00 - 12:30	2,547	247	10.31
12:30 - 1:00	2,595	251	10.34
1:00 - 1:30	2,302	241	9.55
1:30 - 2:00	3,419	225	15.20
2:00 - 2:30	1,924	210	9.16
2:30 - 3:00	4,156	192	21.65
3:00 - 3:30	3,264	163	20.02
3:30 - 4:00	1,470	142	10.35
4:00 - 4:30	3,135	103	30.44
4:30 - 5:00	1,068	61	17.51
After 5:00	411	29	14.17