

THE 1976, 1977, AND 1978 AUTUMN HAWK COUNTS AT BAKE OVEN KNOB, PENNSYLVANIA

DONALD S. HEINTZELMAN AND ROBERT MACCLAY

This paper presents the results of the 1976, 1977, and 1978 autumn counts of migrating diurnal birds of prey observed passing Bake Oven Knob, Lehigh County, Pennsylvania. These counts are part of a long range program of monitoring diurnal raptor migrations at this site (Heintzelman, 1975; Heintzelman and MacClay, 1975, 1977).

THE 1976 SEASON

Field studies in 1976 began on 16 August and continued through 13 December; 91 days of observation were achieved. The season's count of 16,800 diurnal raptors was about average for the site. The table provides the species totals for the season.

Age ratios of migrant eagles continued to be of interest to us. Of 34 Golden Eagles observed, 23 (67.6%) were adult and 11 (32.4%) were subadult or immature. In contrast, of 16 Bald Eagles observed 13 (81.2%) were adult and 3 (18.8%) were immature.

THE 1977 SEASON

In 1977 field studies began on 20 August and continued through 2 December; 59 days of observation were achieved. The season's count of 24,214 diurnal raptors was the highest recorded up to that date for Bake Oven Knob. The table provides the species totals for the season.

Exceptionally large flights of Sharp-shinned Hawks account for the high 1977 hawk count. On 2 October, for example, 1,148 Sharp-shins were counted within a five hour period between late morning and late afternoon (rain occurred earlier in the morning). Brisk northwest winds prevailed. On 3 October another 1,022 Sharp-shins were counted as brisk northwest winds prevailed again. Scattered rain showers developed during most of the morning, but the Sharp-shins flew through the rain. On 4 October 670 Sharp-shins passed, on 5 October 427 were seen, and excellent Sharp-shinned Hawk flights continued for several additional days.

Bald Eagles in 1977 numbered 13 of which 6 (46.1%) were adult and 7 (53.9%) were immature. Of the 24 Golden Eagles counted, 14 (58.3%) were adult and 10 (41.7%) were subadult or immature.

THE 1978 SEASON

Our 1978 field studies began on 21 August and continued through 25 November; 68 days of observation were achieved. The season's count of 25,527 diurnal raptors is the highest reported to date from Bake Oven Knob. The table provides the season's species totals.

High counts of Sharp-shinned Hawks and Broad-winged Hawks are responsible, in large measure, for this year's record species total. However, un-

favorable weather conditions during late October and November resulted in fewer than normal Red-tailed Hawks being seen.

A light color phase Swainson's Hawk, seen on 18 September 1978 by Robert and Anne MacClay and others, was the second record for the species at Bake Oven Knob.

Of 34 Golden Eagles counted, 20 (58.8%) were adult and 14 (41.2%) were subadult or immature. Of 20 Bald Eagles counted, 14 (70%) were adult and 6 (30%) were immature.

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- 629 Green Street
 Allentown, Pennsylvania 18102
 and
 625 Schuylkill Street
 Cressona, Pennsylvania 17929

AUTUMN HAWK COUNTS BAKE OVEN KNOB, PENNSYLVANIA

Species	1976	1977	1978
Turkey Vulture	241	161	205
Northern Goshawk	64	48	96
Sharp-shinned Hawk	4,225	8,873	6,524
Cooper's Hawk	70	139	143
Red-tailed Hawk	2,336	2,920	1,798
Red-shouldered Hawk	148	266	213
Broad-winged Hawk	8,535	10,655	15,599
Swainson's Hawk	0	0	1
Rough-legged Hawk	21	13	10
Golden Eagle	34	24	34
Bald Eagle	16	13	20
Northern Harrier	195	323	165
Osprey	334	260	323
Peregrine Falcon	8	4	6
Merlin	9	12	17
American Kestrel	275	232	212
Unidentified Hawks	289	271	161
Totals	16,800	24,214	25,527
Number Observation Days	91	59	68