

ten birds were observed but were generally inactive. The morning was calm, clear and warm and early enough in the season for a more active booming display.

Reports have been received of a resident flock of Prairie Chickens 4 miles north and 1 mile west of LeRoy, Minnesota. These birds were reported booming in this area in the spring of 1939. Another resident flock has been reported in an undrained area 2 miles south and 1 mile east of Grand Meadow, Minnesota. Although several visits were made to the areas by the writer, the reports have not been verified by actual observations.

Analysis of available information indicate that the Prairie Chicken in south-eastern Minnesota is slowly declining in numbers and that their existence is largely dependent on the maintenance of large undisturbed breeding grounds in the undrained prairie lands. It is doubtful whether the Prairie Chicken have even maintained their populations during the past three years. A shift in farming from cultivated crops to grass crops may retard this decline.

General observations on these Prairie Chicken while booming, flushing or cruising indicate the birds are unusually timid, probably the result of direct disturbance or the harmful changes in their environment by man. The flushing distance was usually more than 100 yards and the flight limit beyond the human vision.—URBAN C. NELSON, *Soil Conservation Service, Chillicothe, Missouri.*

Food of the Short-eared Owl During Migration Through Pennsylvania.—Since July 1, 1938, the food habits of all raptors on the 1,675-acre Ring-necked Pheasant (*Phasianus colchicus torquatus*) study area in Lower Macungie Township, Lehigh County, Pennsylvania, have been investigated by the Pennsylvania Cooperative Wildlife Research Unit for the purpose of determining the effects of birds of prey upon the pheasant population. The Short-eared Owl (*Asio flammeus flammeus*) rarely breeds in Pennsylvania, but it is often observed during migrations. At least four times during the course of the pheasant investigation, groups of migrating Short-eared Owls hunted and rested on the study area for several days at a time.

The owls usually roosted in weedy grain stubble fields during both spring and fall migrations. Seventy-two pellets, from at least 14 different owls, were collected from roosting sites on the study area. Eighteen pellets were collected in November 1938; 42, in March and April 1939; and 12, in September 1939.

The analysis of the bony contents of the pellets yielded the following items of prey: meadow mice (*Microtus pennsylvanicus*), 98; deer mice (*Peromyscus* sp.), 26; house mice (*Mus musculus*), 3; short-tailed shrew (*Blarina brevicauda*), 2; Flicker (*Colaptes auratus*), 1; unidentified small birds, 3; and frogs (*Rana* sp.), 4.

Although the data were meager, there was no significant variation between spring and fall food habits. During both migrations mice appeared to be the staple food, while other items of prey were merely incidental.—PIERCE E. RANDALL, *Department of Zoology and Entomology, The Pennsylvania State College.*

Unusual Behavior in the Chimney Swift.—Birds, as well as many other animals, have been observed to behave very differently in large groups than when alone. Under the influence of the social situation they may lose their accustomed fear and caution as is well shown by the following incident. In the late afternoon of Sept. 1, 1936 in Waldoboro, Maine, I observed Chimney Swifts (*Chaetura pelagica*) circling overhead in large numbers. They flew lower and lower until one side of their circle was barely skimming the ground. A tennis backstop of chicken-wire now stood directly in their path and into this they crashed blindly. At first they tried to pass between the meshes with their wings flapping. They would neither turn around nor fly over the obstruction. They seemed imbued with a mob psychology, a feeling that they must follow their companions regardless

of consequences. After a few seconds struggle each bird learned to fold its wings and passed through the meshes of the backstop, but not before I was able to pick numerous specimens from the wire. Once grasped, the swifts lay quietly in my hand, and when released while lying on their backs made no attempt to escape. When turned on their bellies, however, they immediately flew away.

Our presence in the edge of their circle did not seem to frighten the swifts in the least. In fact I was startled to feel one of the birds brush through my hair, while my companion was twice struck in the legs and once on the head by the birds. Even when taking into account the fact that the onset of the migration season had strongly stimulated the gregarious instinct of the swift, it is surprising to find so excellent a flier actually colliding with human beings in the daytime.—**HARVEY B. LOVELL**, *Biology Department, University of Louisville, Louisville, Kentucky.*

Sex Ratio and Weights of Crows Wintering in Oklahoma.—These notes on the sex ratio and weights of Crows were recorded near Binger, Oklahoma where employees of the Game and Fish Commission had bombed a large roost on the night of December 6, 1938. An estimated 18,000 crows were killed. Measurements of Crows wintering in Oklahoma show that both *Corvus brachyrhynchos brachyrhynchos* and *C. b. hesperis* are present but the latter is dominant.

On the morning following the bombing the writers collected 100 birds from each of 10 areas. These areas were selected at points throughout the roost in order that all parts should be represented in the total collection of 1000 crows. There was no hand picking of specimens, for in each chosen area we collected every bird, excepting only a few that were mangled.

Of the 1,000 birds sexed, 526 (52.6 per cent) were males and 474 (47.4 per cent) were females. Since the number of males in each group of 100 birds varied from 41 to 65 and the females from 35 to 59, it is evident that such a number is not great enough to determine sex ratio accurately, even in such a heterogeneous group as the occupants of a Crow roost. We believe that fully 1,000 birds are necessary.

The average weight of the 526 males was 1.05 pounds and that of the 474 females was 0.93 pound. These weights were carefully taken with a Chattillon's milk scales, but because of a certain loss of blood they are somewhat less than the live weights of the same birds would have been. However, the loss of weight by bleeding was apparently no greater among these bombed Crows than it would be among birds collected with a gun.

The following table shows the number of males and females and the total weight of the birds of each sex in each group of 100 Crows:

Group number	Number of males	Weight in pounds of males	Number of females	Weight in pounds of females
1	41	43.15	59	55.10
2	50	52.85	50	46.15
3	65	67.90	35	32.35
4	54	56.10	46	42.25
5	52	54.55	48	44.25
6	54	57.80	46	42.50
7	55	57.50	45	41.85
8	50	53.00	50	47.45
9	53	55.50	47	43.20
10	52	55.15	48	44.90
Totals	526	553.50	474	440.00
Average weight		1.05		0.93

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