

occurred in smaller numbers than in past years but persisted later than previously. The Yellow-bellied Sapsucker worked on the trunk of a plane tree on a level with my eyes, not more than five feet away.

It is interesting to note that the Starlings were more numerous than ever and have stayed through the winter, coming in from the edge of the city every evening to roost on the cornices and string courses of buildings around the Square. Some observers have estimated that there are at least 15,000 Starlings roosting within a block of the Square, yet it is seldom that one is seen during the day.—WILLIAM H. WATTERSON, *Cleveland, Ohio*.

The Former Occurrence of the Mississippi Kite in Ohio.—In a considerable quantity of bones of birds from archeological excavations in Jackson County, Ohio, submitted to the National Museum for identification by the Ohio State Museum, I found two humeri of the Mississippi Kite (*Ictinia mississippiensis*), a species that has not been reported from Ohio previously, so far as I am aware. The bones in question were secured in Canter's caves, located about five miles northwest of the town of Jackson, in Jackson County, Ohio.¹ The caves in question are two rock shelters called Echo and Indian caves, respectively, located on the east side of Little Salt Creek, in a conglomerate many feet above the present stream level. The kite bones were associated with numerous other bird remains and quantities of human artifacts accompanied by several human skeletons.

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The bird bones are in good condition and well preserved, all tendons and other tissues having disappeared. Their age is indefinite but probably dates back several hundred years. In the report cited in the accompanying footnote it is stated (p. 32) that "it seems indubitable that for the most part the occupants of the rock shelters of southern Ohio, in so far examined, were the Algonquian tribesmen of pre-Columbian and proto-historic times."

Nineteen species of birds were identified from the remains from Canter's Caves, including in addition to the Mississippi Kite bones of the Mallard, Blue-winged Teal, Ring-necked Duck, Lesser Scaup Duck, Wood Duck, Swallow-tailed Kite, Duck Hawk, Ruffed Grouse, Prairie Chicken, Bobwhite, Turkey, Passenger Pigeon, Barred Owl, Pileated Woodpecker, Flicker, Raven, Crow, and Grackle (*Quiscalus*).

One humerus of the Mississippi Kite has been presented to the U. S. National Museum, the other being retained by the Ohio State Museum.—ALEXANDER WETMORE, *U. S. National Museum, Washington, D. C.*

A Large Flock of Bank Swallows Near Toledo, Ohio.—Most of my readers are familiar with the great gatherings of swallows in late summer. Sometimes these conventions are of Bank Swallows, sometimes of Tree Swallows, or, too rarely in these days, of Barn Swallows.

Because of their proximity to the lake marshes, Toledo and its suburbs extending to the east play host to varying numbers of swallows each year. Up to 1931 the greatest flock I had ever witnessed was a flight of about 10,000 Bank Swallows (*Riparia riparia*) seen on July 15, 1928. This year, probably as the result of the drying up of all inland ponds, Bank Swallows were unusually common. The greatest number appeared on August 8, 1931, when the Little Cedar Point marsh, about ten miles or so east of Toledo, was visited by a huge flock of Bank Swallows, the number of which I estimated to be more than 250,000.

¹For an account of these sites see Shetrone, H. C., *Ohio Arch. Hist. Quart.*,

Even as I write this I seem to see thousands of eyebrows lifted in doubt, and I seem to hear scornful sniffs from every side. Two hundred and fifty thousand! Who counted them? Here was the situation: Along the west side of the Little Cedar Point property, between the marsh and Maumee Bay, a stone road bordered by large trees leads up to the clubhouse. Millions of gnats which had bred in the swamp rested on these trees during the day and swarmed forth in great clouds at dusk. These myriads of insects attracted Bank Swallows to such an extent that they formed a group about one mile long, measured by the speedometer, and 1,000 feet in width. The density of most of this constantly moving mass was almost unbelievable. The scene resembled nothing more than a highly magnified section of the swarms of gnats upon which the birds fed. Mingled with the Bank Swallows were a few hundred Tree Swallows and Barn Swallows, Starlings, and a flock of Common and Black Terns.

The mathematics of the case is quite simple: Allowing each swallow twenty square feet, without making any allowance for the additional number resulting from figuring the third dimension also involved, 5,000 times 1,000 equals 5,000,000 gives the very conservative estimate of 250,000. Actually there may have been nearly a million.

This congregation marked the climax of the flight, although large flocks were seen both before and after that date, roosting on telephone wires along the roadside. This habit of roosting makes estimating numbers a very easy task for the observer. The count for the entire season is: July 12—100; July 18—200; July 26—3,000; August 2—8,000; August 8—250,000; August 15—30,000; August 23—50,000; August 30—500; September 7—50; and September 13—8.—Louis W. CAMPBELL, *Toledo, Ohio.*

ORNITHOLOGICAL LITERATURE

FLORIDA BIRD LIFE. By Arthur H. Howell. Published by the Florida Department of Game and Fresh Water Fish, in cooperation with the Bureau of Biological Survey, United States Department of Agriculture. 1932. Pp. i-xxiv+1-579. Pls. 1-58 (37 in color). Figs. 1-72 (mostly maps). Price, \$6.00 (to be ordered from the Department of Game and Fresh Water Fish, Tallahassee, Fla.).

The new year in ornithological literature opened with the distribution in January of Howell's "Florida Bird Life". This is another large, single volume, somewhat comparable with Bailey's "Birds of New Mexico", and also prepared through the cooperation of the United States Biological Survey. To make the comparison go further, this volume is also published through the generosity of a patron, Marcia Brady Tucker, of New York. The latter fact should be emphasized in order to express our gratitude and also as an example to others who may be philanthropically inclined toward science.

The text of this new work opens with a very full historical account of Florida ornithology. It seems to us that this is one of the most important parts of a work of this kind. There is also a section listing all of the birds which have been described from specimens taken in Florida, of which there are 82—a considerable number. The history of bird protection in the state makes a separate chapter written by Mr. Robert W. Williams. A chapter each on physiographic regions and life zones then brings us to the catalogue proper. The latter treats