tion, No. B-129). Dr. Oberholser states that the canyon is in the range of *fallax*, thus no other subspecies is believed to be in that region. However, Song Sparrows *lighter* in color than the Borell specimen have been frequently observed in the Canyon Bottom and have been known to breed there. It is very likely that this is the Desert Song Sparrow (*M. m. saltonis*), but specimens must be secured for complete identification.—RUSSELL K. GRATER, *National Park Service, Denver, Colo.*

The Canada Warbler Breeding Near Toledo, Ohio.—On July 10, 1937, at the eastern bank of a small valley in the "Oak Openings", Swanton Township, Lucas County, I found a male Canada Warbler (*Wilsonia canadensis*) feeding a fledgling a few days out of the nest. Because of the heavy foliage I was unable to collect the young bird and therefore did not take the parent. The fledgling was not seen again, but on July 18 I found the adult female.

This evidence of nesting was not entirely unexpected as I had found singing males in Lucas County on June 20, 1931, in Swanton Township; on June 24, 1931, in Springfield Township; and on June 16, 1935, at the same location in which the breeding bird was found. This last individual was seen and heard by several members of the Cleveland Bird Club who were with me at the time.

According to Dr. Lawrence E. Hicks this species is known to breed otherwise in Ohio only in Ashtabula County ("Distribution of Breeding Birds of Ohio", 1935).—LOUIS W. CAMPBELL, *Toledo, Ohio.*

Nesting of the Least Tern in Iowa.—Some question has been raised relative to the status of the Least Tern (*Sterna antillarum*) in Iowa. The fourth edition of the "A. O. U. Check-List" records it as breeding "...on islands in the Mississippi and Missouri river systems (formerly at least) to South Dakota and Iowa..." DuMont, in his "Birds of Iowa", says, "An uncommon summer resident...with reports of former breeding in Cerro Gordo and Pottawattamie Counties and probable nesting in Lee County....Youngworth (WILSON BULLETIN, XLII, pp. 102-103) recorded the breeding of this tern in the Sioux City region..." Youngworth saw young terns flying with adults but did not actually find the nests. Circumstances, however, led him to believe that the young were hatched near by.

With T. C. Stephens and W. W. Trusell I have been able to make some interesting observations on the breeding of the Least Tern in Woodbury County, Iowa, and Dakota County, Nebraska. During July and August, 1937, we found a total of fourteen nests, twenty-nine eggs, and two fledglings on the sandbars of the Missouri River. Eleven of the nests were in Dakota County, Nebraska, and three were in Woodbury County, Iowa. We took some thirty or forty photographs besides collecting two eggs and two adult terns.—BRUCE F. STILES, *Sioux City, Iowa.*

Whooping Cranes in Southwestern Missouri, 1937.—On October 19, 1937, Mrs. Fred A. Cahill of Branson, Taney County, Missouri, wrote to Mr. I. T. Bode, Director of Conservation, concerning a large bird which, with two young, had spent the summer along Roark Creek, a stream entering the western end of Lake Taneycomo. Mr. Bode sent me the letter, and subsequent correspondence with Mrs. Cahill has convinced me that her birds were an adult and two young Whooping Cranes. In view of the unusual nature of this record, it seems best in the following account to quote rather extensively from her letters.

A single large, pure white bird with black wing-tips was first seen in late May or early June; the exact date was not recorded. It was seen thereafter by

Mr. and Mrs. Cahill and several neighbors; the wing-spread was estimated at from five to seven feet. On one occasion, the bird "flew into the very top of a dead tree where I could see her perfectly, silhouetted against a green hill beyond. The head is not large—about in proportion of a swan's head to its body. The neck is long and is S-curved—very graceful—the beak is yellow and not much longer than the depth of the head. It flies with the neck extended straight out."

Its calls were of two kinds: (1) A very loud, "rhythmic and rather musical trumpeting—'Tooooo-t-to-toooo' (pause), then repeated with the last note on a descending scale." (2) A savage cry "like the fighting challenge of the grandfather of all fighting tom-cats. Their snarling cry is the one they make when stationary, and the continuous musical trumpeting seems to be their flying note. The snarling cry never changes position or direction and is not very frequently made. We could place the bird by that note; then when it flew we could follow it by the continuous rhythmical trumpeting, which was always from the hatchery west up the creek, anywhere from midnight to three or four o'clock in the morning."

The two young birds were not seen until "after the wheat had been cut", which according to our College of Agriculture was after July 20, 1937, in Taney County. They were first seen by Mr. Cahill one morning at daylight in a wheat-field; he reported that they were "about the size of a good big hen and able to fly". Thereafter they regularly accompanied the old bird on nightly trips to the state fish hatchery, "squawking and trying to imitate her cries".

"After the young birds could fly, we heard the mother bird fly west, evidently from the fish hatchery, where we could hear her give her savage, snarling cry.... When she flew upstream she kept up her rhythmic trumpeting, seemingly almost in time to her wing-beats, there was such regularity about it. The young birds were some distance upstream, because loud as her note is the sound would fade away in the distance and be lost. Then in fifteen minutes or so it would come faintly within hearing again and increase in volume as she approached, and with her the young squawkers. She evidently parked them in a hideaway somewhere upstream and took them each night to the hatchery to feed.... But in the early fall (September) she and the young birds deserted their hideaway seemingly, and made headquarters somewhere on the (White) river farther away, though still where we could hear all three trumpeting and whooping every evening."

The adult and at least one young bird were still about on November 25, and the adult was last heard at 6:15 A. M., December 2.

Such an occurrence as this calls for some theorizing. If the young birds were hatched on their Canadian range (egg-dates May 9 to June 2, according to Bent, 1926, pp. 220-224), they must have migrated south before the middle of July. In view of their size when first seen, this is highly unlikely; also, the old bird was seen and heard for over a month before there was any evidence of the presence of young. If, however, the birds were hatched at or near their summer location, much still remains to be explained. Why only one adult? Why did nesting take place here at all?

The following theory, some points in which were first suggested by Mrs. Cahill, is presented as the only one that appears to the writer to fit the facts: Mating occurred during the spring migration; one of the adults was wounded, stopping the northward journey; nesting began and the wounded parent died, leaving the other (probably the female) to incubate the eggs and rear the young.

There are no extensive marshes in this part of the Ozarks, but the streams are subject to floods and frequently change their courses, leaving temporary and local overflow marshes in one of which a nest-site may have been found.

Word of this unusual occurrence was not received until November, when it was impossible for the writer to make the 225-mile trip to investigate it. Consequently no search for the abandoned nest was undertaken, and under the circumstances it is entirely unlikely that the birds will return next year. Meanwhile the known facts constitute a valuable record, and one can only be thankful that these birds escaped the perennial warfare of state fish hatchery employees against fish-eating birds.—RUDOLF BENNITT, *Professor of Zoology, University of Missouri, Columbia, Mo.*

The English Sparrow and Highway Mortality.—On an automobile journey from Albany, New York, to Iowa City, Iowa, and return, August 28-31 and September 7-10, 1937, a round-trip distance of 2117 miles, the writers again tabulated the vertebrate casualties on the highways due to passing motor cars. The data here presented pertain only to our observations on highway mortality with reference to birds in general and the English Sparrow in particular.

On the entire trip we identified a total of 613 English Sparrow (*Passer domesticus*) carcasses on the highways, an average of .289 casualties per mile for this species. For each state or province in which we traveled the recorded number of English Sparrow casualties ranged as follows: Iowa, 55 for 117 miles; Michigan, 110 for 309 miles; Illinois, 125 for 359 miles; Ontario, 170 for 521 miles; Indiana, 57 for 205 miles; New York, 96 for 606 miles.

In addition to the 613 English Sparrows, we recorded the freshly killed carcasses of 22 native birds representing 13 species, 76 domestic fowls, 1 Ring-necked Pheasant, 1 domestic pigeon, and 277 undetermined birds. It is our opinion that a large proportion of the latter were really English Sparrows. For each state or province in which we traveled the number of avian casualties ranged as follows: Iowa, 79; Indiana, 80; New York, 148; Michigan, 154; Illinois, 216; Ontario, 312.

The total number of avian highway casualties recorded was then, 989, an average of .467 per mile. For the five states and the single Canadian province the average avian casualty rate per mile was: Iowa, .675; Illinois, .601; Ontario, .598; Michigan, .498; Indiana, .390; New York, .244.

Several reasonable conclusions may be drawn from these earlier observations presented by the senior writer (WILSON BULLETIN, XLVIII, 1936, 276-283) on this subject.

1. In spite of the apparently excessive highway mortality rate among English Sparrows, at least in the territory covered by our records, their actual number of casualties here recorded exceeds by more than five times those cited by us for this bird on any previous trip through practically the same region. Our figures show an average of one dead sparrow for each 3.4 miles traveled on tris trip.

2. So far as the section of the country traversed on this journey as well as on our previously recorded ones is concerned, our counts of highway casualties indicate that the greatest density of English Sparrow population lies in the agricultural sections of the Mid-west and southern Ontario. Of the five states and the single Canadian province mentioned in the present account, New York State ranks last in English Sparrow population on the basis of highway mortality counts.

3. Our observations lead us to believe that the heaviest highway toll among English Sparrows is taken not from the individuals feeding on or near the roads