

absolutely sure that the second set of eggs was placed there by them. However, this is thought to have been the case.

During the second incubation period the weather conditions in this vicinity (Provo, Utah) seemed almost like winter. The temperature dropped far below the freezing point and the snowfall was heavy. The lateness of this spring makes these records all the more interesting and exceptional. Two other pairs of nesting sparrows were observed in March. When one considers that in this locality juveniles are observed as late as October, it shows that the fecundity of this importation is most amazing.

From W. B. Barrows' bulletin "The English Sparrow in North America," we learn that eight pairs were first introduced to the Brooklyn Institute from England. These did not thrive, and in 1852 two hundred dollars were raised to re-introduce the species. After this, numerous other importations were made into the eastern United States and Canada. In 1867, a colony was established at Galveston, Texas. In 1869, the city government of Philadelphia made the largest single importation, when it secured one thousand birds for the city. That same year twenty pairs were released at Cleveland, Ohio. During the next few years additional European specimens were liberated at San Francisco, Halifax, and at various places in Ohio, Michigan, Wisconsin, and Iowa.

Barrows shows that in 1873 or 1874, a colony of thirty was imported from England and liberated at Salt Lake City, Utah. Three years earlier than this, however, Dr. J. A. Allen<sup>1</sup>, who made collections in the Salt Lake Valley from September 1 to October 8, 1871, records that the English Sparrow had recently been introduced and was apparently flourishing at Ogden. By 1886 this species was fairly common through most of central and northern Utah. Today it is found in every town and hamlet in the state. While it is normally a bird of the cities, it has become so numerous that it is often found far removed from human habitations. The writer has found it in the heart of the thirsty, sun-baked Escalante Desert, twenty miles from the nearest farm house. It is fairly common throughout the sparsely settled Monument Valley area of southeastern Utah, where no human dwellings except a few Navajo "hogans" are to be found.

The bird is a pest chiefly because it is too prolific. Its gregarious nature, along with its ability to adapt to almost any type of environment, makes it a competitor and enemy to most of the other birds of a community. As a result it is driving away many of our best birds. It is a nuisance and an enemy to most agriculture. However, it has rendered valuable service in Utah in helping to hold the alfalfa weevil in check.—CLARENCE COTTAM, *Provo, Utah*.

**Nesting of the Sparrow Hawk.**—In April, 1925, a pair of Sparrow Hawks (*Cerchneis sparveria sparveria*) were noticed trying to enter traps containing birds captured for banding. The clamor of Blue Jays indicated the nest of the hawks to be in a pin-oak tree, twenty inches in diameter, located about 300 feet east of the banding station and about 100 feet from the south shore of Lake Erie. On examining this tree the nest was found twenty feet up behind a strip of tin that had evidently been put in place several years before to prevent further decay of the trunk. The entrance was at an opening, about ten feet above the

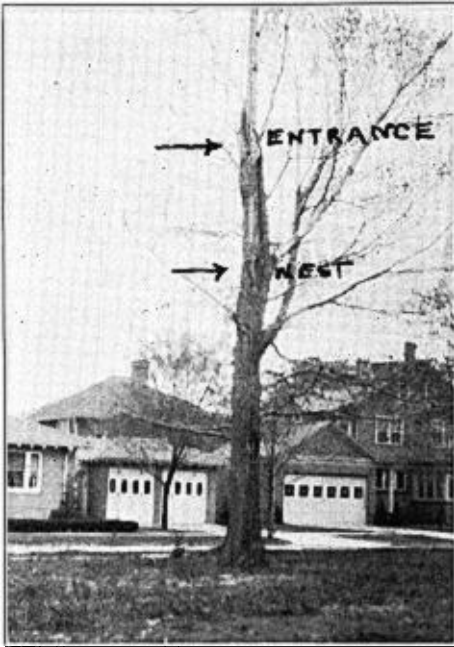
<sup>1</sup>See "Notes of an Ornithological Reconnaissance of Portion of Kansas, Colorado, Wyoming, and Utah"—Bulletin of the Museum of Comparative Zoology, Harvard College, Cambridge, Massachusetts, Vol. 3, No. 6, pages 165 to 173.

nest. As it was possible to move the tin to one side and replace it without disturbing the nest, daily observations were made until the young hawks left their home.

On April 26, when the nest was found, it contained four typical eggs, rufous and blotched, agreeing well in color with the nest materials of reddish brown oak leaves and bark. One egg was added the next day, making a total of five. Hatching of the five eggs occurred on May 25, indicating an incubation period of twenty-eight to twenty-nine days. Two of the nestlings were missing on June third. The three remaining left the nest on June 25, bearing bands 293691-2-3. They were fed by the old birds for a week after having left the nest, staying on one branch of a nearby dead tree while one of their parents, usually

the male, perched above them to ward off repeated and determined attacks of a pair of Kingbirds that were nesting in a small tree adjoining. When forced to obtain their own food the young hawks were observed hunting mayflies, following Robins that had learned that these insects could be found by jarring small branches and twigs.

In the nest were found remains of English Sparrows, Blue Jays, Flickers, and other birds. The tree had apparently been used for many years by hawks, Screech Owls, and Fox Squirrels, as evidences of these were included in a mass of accumulated rubbish several feet in depth under the hawk's nest. It became necessary to prevent the interference of the hawks with banding operations, so they have not again used this



nesting site; but a pair, perhaps the same, have nested a half mile east of this location during the last three years.

Attempts were made to trap these Sparrow Hawks for banding, using decoy English Sparrows attached to the support of a drop trap, but were unsuccessful, the sparrows "freezing" on the approach of the hawks. On one occasion a hawk and a house cat were observed on each side of the trap, each apparently aware of the other, but both were intent only for a possible movement of the sparrows. Their instinct for pursuing and capturing moving prey only doubtless insures the practical result of fresh food for the young.

The nest has been made secure against the winter gales and is now (January, 1929) occupied as a winter home by a fox squirrel, which has made a nest, about a foot in diameter, of oak leaves and twigs. There are comparatively few

records of a complete nesting of the Sparrow Hawk, as most of the previous interest has been in collecting the eggs rather than in observing the life history.

The incubation period noted above together with that noted by Warren ("Birds of Pennsylvania," 1890, p. 141—21-24 days), by Althea R. Sherman (*Auk*, xxx, 1913, p. 406—29-30 days), and by Forbush ("Birds of Massachusetts," 1927, p. 178—21 days or 29-30 days), indicates variation which may be due to repeated or protracted absence from the nest of the parent birds. For instance, in the nesting described above the birds left the nest when a ladder was placed against the tree, and would not return for fifteen minutes or more after the intruder had gone.

That delay in development from partial chilling of the eggs may be possible, is indicated by the observations of Alfred R. Lee on the eggs of the domestic fowl (see *Farmers' Bulletin*, No. 1363, p. 4). Kendeigh and Baldwin (*Amer. Nat.*, lxii, 1928, p. 276) state that a young House Wren just out of the shell, and abandoned by its parents, survived three days. This may indicate that an egg about to hatch could endure a lengthening of the incubation period due to enforced absence of the parent.

Just what effect prolonged cooling might have on development seems to be unknown, and an interesting problem for experimental study is here suggested. With the facts on the temperatures of birds now being collected by Mr. Baldwin, it should be possible to set up an artificial incubator for the eggs of wild birds, and to ascertain the effects of varying temperatures.—E. C. HOFFMAN, *Lakewood, Ohio*.

**Ten Minutes with a Kingbird.**—The rapidity with which birds of the fly-catcher family catch and devour winged insects is remarkable. On July 16, 1926, the writer had the opportunity to observe an adult Kingbird (*Tyrannus tyrannus*) following his trade. The bird's perch was a cross beam on a telephone pole near the house. Both long and short sallies were made from here, with the bird always returning to eat the prey and often to wipe the sides of its beak on the edges of the beam. The smaller insects were eaten in a hurry but some of the larger ones required more exertion. This observation started at 6:30 P. M. and ended at 6:40 P. M., and in that time the bird made eighty-two successful catches, with returns each time.—WILLIAM YOUNCWORTH, *Sioux City, Iowa*.

