

(*Pica pica*) which it dropped after flying about a hundred feet. Most of the viscera and pectoral muscles had been eaten.

When I returned to the site three hours later the uneaten portion of the magpie still lay in the snow where the hawk had dropped it.

Bent (1946. *U. S. Natl. Mus. Bull.* 191: 151-152) indicates that magpies are seldom used for food by other birds. Starvation may have caused this Marsh Hawk to eat the magpie. Below-freezing weather continued from the middle of December, throughout January, and into February. At the time of my observation, an average of 16 inches of snow covered most of the ground.—MERLIN L. KILLPACK, *Biology Dept., Union High School, Roosevelt, Utah.*

Ruffed Grouse nest predation by blacksnakes.¹—During the nesting seasons of 1949 and 1950 I observed two instances of Ruffed Grouse (*Bonasa umbellus*) nest predation by the Pilot Blacksnake (*Elaphe obsoleta*) on the Beaver Creek Wildlife Management Area in McCreary and Pulaski Counties, Kentucky. The instances were:



Blacksnake eating egg of Ruffed Grouse. Photographed on the Beaver Creek Wildlife Management Area in McCreary County, Kentucky, May 17, 1949, by Harold E. Alexander.

1. On May 17, 1949, as H. E. Wallace, H. E. Alexander, J. O. Moynahan and I were checking grouse nests under observation, we found a blacksnake in a nest about five miles northeast of Greenwood in McCreary County. In the nest were four eggs, one of which was also in the mouth of the snake (see photograph). When we had last visited that nest, three days before (May 14), we had flushed the hen from four eggs. Presumably the clutch had been complete at that time, since no more eggs had been added by May 17. Observations recorded in my field note-book on May 17 were as follows:

- 3:56 p.m. We approached nest on foot from the nearby jeep road. A blacksnake in the nest apparently is attempting to swallow an egg.
3:59 Snake has firm grasp on butt end of the egg with edges of mouth.

¹ This paper is a contribution from Federal Aid Project 18-R, Kentucky Division of Game and Fish.

- 4:01 Egg completely within snake's mouth.
- 4:02 Egg at a position just back of the head.
- 4:05 A cracking noise heard, apparently caused by breaking of the egg. Egg not crushed, however, since it still forms a bulge in the body.
- 4:06 Egg moving back much faster.
- 4:08 Egg has reached a position 6 inches behind the head and still moving fast. Snake attempting to take another egg.
- 4:12 Egg about 15 inches behind snake's head. Snake attempting to obtain grasp on second egg. It seems that pains are taken in selecting the large end of the egg. In approaching the egg, snake had turned its head in opposite direction from that in which first egg was consumed. In this operation the egg was shifted slightly. Snake shows no fear of us as we stand within a few feet of the nest.

We caught the snake before it had swallowed the second egg. On killing it and opening the alimentary tract, we found the shell of the first egg cracked and the yolk running out. The estimated total length of the snake was 54 inches. We did not see nor hear the hen grouse while making these observations.

At 8:30 a.m. on May 18 we visited the nest again, flushing the hen from her clutch of three eggs, all of which seemed to be in perfect condition. We continued to visit the nest almost daily until May 31, on which date we found it empty.

2. On May 14, 1950, at 7:25 a.m., I visited a nest four miles east of Alpine, Pulaski County, finding it empty. I had first visited this nest on April 14, on which date it had held three eggs. On April 26 the ninth and last egg of the clutch had been laid. The nine eggs had been incubated about 17 days when I last saw them on May 13. On the 14th the nest was warm and dry, in contrast to the surrounding leaves which were wet from a recent shower. I decided that it had been unoccupied only a short time. While I was critically examining the leaves of the nest's bowl a grouse flushed about 30 feet away. For half an hour I could hear the bird calling intermittently in the distance. It did not return to the nest. At 8:15 I found and captured a black-snake 21 feet from the nest. On cutting open the intestinal tract, I found the entire clutch of nine grouse eggs, each cracked, and each containing a large embryo. The snake was 60½ inches long.—FREDERICK C. HARDY, 133 North Central, Somerset, Kentucky.

Abnormal throat-color in male Bob-white Quail.—In three male Bob-white Quail (*Colinus virginianus*) which I have had occasion to examine recently, the white throat-patch was boldly divided by a median black area or stripe. In one individual, a bird shot near Alva, Woods County, Oklahoma by Arnold Purviance of Mooreland, a black stripe about a quarter of an inch wide extended from the chin almost to the end of the throat-patch. The rest of the plumage of the head and body was, so far as I could see, normal. Wallace Hughes made a sketch of the head of this bird. A black and white reproduction of this sketch appeared on the back cover of the February, 1949, issue of *Oklahoma Game and Fish News*.

The two other abnormally colored specimens were among six male birds shot from one covey in eastern Cleveland County, Oklahoma, in December, 1949, by Earl Johnson of Norman. In these birds the black median area was a quarter of an inch wide, about as in the Woods County specimen discussed above. The heads of the two specimens were mounted and placed in the University of Oklahoma Museum in Norman.

Stoddard (1931. "The Bobwhite Quail. Its Habits, Preservation and Increase", p. 88 and plate 18) states that this color variation occurs very rarely. I have not found any other reference to Bob-whites with partly black throats.—GLENN JONES, 1115 W. Garver, Norman, Oklahoma.

Egg-laying, incubation, and fledging periods of the Spotted Sandpiper.—Witherby *et al.* (1940. "Handbook of British Birds", 4: 303) stated that the period of incubation for the