

A PRELIMINARY REPORT ON TRAPPING AND MARKING¹ BOBWHITE QUAIL

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During the past few years several graduate students and undergraduate students have studied the habits and distribution of the bobwhite in Payne County. Under the guidance of Dr. F. M. Baumgartner and Dr. W. P. Taylor, quail have been studied rather intensively around Stillwater and on the Lake Carl Blackwell Area. However, little is known about the movements of individual birds and coveys. We chose to study the distribution and movement of bobwhite quail on a small area, a farm approximately 160 acres in size.

The plot of land chosen for study seems to be an ideal habitat for quail. Due to the full cooperation of its owner, Mr. C. R. Carberry, this farm has been made available to the Zoology Department for experimentation purposes and habitat improvements that have increased the quail population to almost maximum carrying capacity. The farm is also being improved by a complete soil conservation program. For a period of several years the farm lay idle, giving the natural vegetation a chance to develop considerably. The borders of the fields and pastures now offer good cover as well as an increase in staple quail foods. The two ravines that traverse the quarter section seem to offer ideal habitat conditions. One food patch has been planted to grain sorghum and many areas have a bountiful supply of ragweed, pigweed, common sunflower, Korean lespedeza, and other important quail foods.

In order to study the distribution and movement of the bobwhite on this particular area, we decided to trap, band and tag, and then release the birds. Through the Oklahoma Cooperative Wildlife Research Unit we were able to obtain two traps that had been in use last year.

After walking over the area several times, we finally found a covey of 10 bobwhite near the old farm house situated on the eastern boundary of the farm. A few vegetables had been planted in a small garden plot, which had later grown up to a thick stand of sunflowers, offering cover as well as a choice feeding ground to our covey.

The traps used for catching quail were of very simple design. They consisted of one-inch mesh chicken wire, folded to form a three foot by three foot box, one foot high. A small cone, eight inches long, was inserted in one end, with wire feelers projecting downward from the end of the cone, to discourage the escape of captured birds.

Both traps were placed in this small garden plot. Scratch feed, consisting of corn, wheat, and kaffir corn was used for bait. The traps were well concealed with sunflower stalks and grass.

On October 8, we banded the first quail. An aluminum band, number 308, was placed around its right leg, and a yellow flash tag was fastened to its neck, with the aid of a surgical clip. The flash tag, three inches of bright yellow plastic material, was plainly visible as the bird flew to a distance of one hundred and fifty yards.

In the weeks that followed, nine birds of the first covey were caught. It was interesting to note that our catches came, not on the pleasant sunny days, but on the wet, cold mornings. The first covey was caught in small groups of three or four, usually with a fifty percent repeat catch. Six catches were made in all at the first location and still the covey seemed to stay intact. Very seldom upon release did the birds fly in the same direction, but they managed to recovey again. Several sight records have been made of this banded covey.

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Quail sign was found in the ravine due west from the vegetable garden, so traps were moved to this location. Another trap was installed, and these three were spread out in desirable spots along the ravine. One was placed at the edge of the grain sorghum plot, just east of the ravine.

November 20th was the date of the first catch of birds from covey number two. Five out of approximately 15 birds were caught. These birds were banded and tagged as before, white flash tags being used instead of yellow. Five days later, November 25, the last catch was made. Three birds were caught, only one of which was a new bird.

Even though it is a little early to evaluate the results of the study, we have already learned many things not known at the start. The limited number of banded birds — 26 in all — has not offered too great an opportunity for extensive field observations. However, with the help of Dr. Baumgartner and P. L. McNeil, a graduate student at A. and M. working with quail, we have drawn a few conclusions from the work done so far.

The most important observation made is the fact that the birds don't range far from their feeding grounds. The first covey, tagged with yellow, has been seen several times, never more than a quarter-mile from the garden plot. The size of the covey remained constant, indicating that predation has not effected the covey. It was feared that the bright color at the neck of the bird might increase losses from natural enemies. So far we have no evidence to prove this to be true. Perhaps later in the year, when snow is on the ground, we may find that tagging does have an undesirable effect.

We have found that quail cannot stand a good soaking along with a ruffling of feathers without ill effects. Four quail that were released on a very rainy day were unable to fly. Because of their movement in the trap, the water had worked into the feathers to such an extent that the birds were unable to get off the ground, even after several desperate attempts. Carelessness on our part caused a casualty to one of these birds. We left the scene to release four birds in the other trap, and enroute stepped on one of the water-soaked quail. He died almost instantly. Repeats and sight records indicate that the other seven survived the ordeal and rejoined the covey.

One bird from covey number one has joined another covey. On November 22, one bird with a yellow tag was shot from a covey bearing yellow tags on the extreme eastern boundry of the area. A short time later another bird bearing a yellow tag was shot from an unmarked covey several hundred yards to the west of the first covey. This has been the only indication of birds leaving one covey to join another.

In the weeks to come, as the weather grows colder, and food becomes scarcer, we hope to finish banding the three known coveys on the Carberry farm. As the temperature drops and the snow begins to cover the ground, our problem should become more and more interesting. Perhaps then we shall be able to compile more enlightening data on the distribution and habits of our most important game bird, the bobwhite.
