

A Record of Hybrid Bobwhite X Scaled Quail

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During the hatching season of 1954, wild-trapped scaled quail, (*Callipepla squamata pallida*), were added to the brood stock of the Oklahoma State Game Farm. After pairings were made, it was found that 8 scaled quail hens were without mates. These were paired with bobwhite (*Colinus virginianus virginianus*) cocks. One pair produced 29 eggs, of which 10 were fertile and 9 hatched. Five of the F₁ hybrids, 3 cocks and 2 hens, were raised to maturity. Four years after hatching, one cock and 2 hens still survive. The two other cocks were killed by the remaining one during the second year of life. Personnel of the Texas Game and Fish Department verified verbally that hybridization recently occurred in the wild between bobwhite and scaled quail near Wheeler, Texas.

At maturity the weights of F₁ hybrids were: hens, 180 grams; cocks, 180 grams, 200 grams, 199 grams. One of the cocks later weighed 222 grams.

Calls uttered by the F₁ hybrids were unusual in sound and volume, but their meanings could be interpreted to some extent. The calls seemed to be about equally inherited from both parents. Volume and tone strongly resembled the scaled quail while the syllables of covey and mating calls resembled bobwhite. At sexual maturity a distinct bobwhite call was uttered persistently and regularly by the cocks. It was not a clear ringing "bobwhite," but the syllables were those of the bobwhite. Covey calls of the cock and hens were similar, but there was some differentiation in the tone quality. Any whistled imitation call drew ready response in covey calls from the F₁ birds. Excitement elicited a nervous low chattering note. Immediately following egg laying the hens frequently uttered an unusual call similar to the covey call.

Unfortunately too few birds were available for extensive color comparisons, but the outstanding feature in the cocks was the throat pattern. One cock had a solid white throat, another had light buffy brown, while a third had a dark throat of near-chocolate color. In other feather colors and patterns the cocks were similar to one another. The hens were almost exactly alike in color pattern and resembled the cocks, except that the throat on one bird was a dirty white with small streaks of dark lines similar to the scaled quail hen, and the other had a lighter-colored throat and richer color on the head. The description given by McCabe (1954) fits the color pattern of our birds very well with the exception of the variation in the throat coloring of the cocks. Our hens were almost identical to his description of Wisconsin hens. The one cock which he examined was very similar to our cock with a light throat.

When maturity was reached, F₁ matings and back-crosses to both parents of the F₁ generation were attempted. The results of all matings were negative. From pairing of the F₁ cock and hen, 170 eggs were produced but all failed to develop. No actual matings were observed, but the actions of the pair indicated that copulation had taken place. The eggs, though small as compared to bobwhite or scaled quail eggs, were very uniform in size (ave., 25 mm x 20 mm) and typical quail eggs in shape, being fairly sharp-pointed on the small end and rather domed on the larger end. The color was solid white, but close examination revealed very faint, fine, buff fleckings, similar to the specks on scaled quail eggs.

All matings were conducted inside the hatchery building under illumination from 7.5 watt bulbs. Excelsior pads were provided for nest mate-

rial. The F_1 pair worked diligently at nest construction and attempted to form an overhead cover. For this the material was not very suitable, but laying proceeded regularly after the first egg was laid on January 21, 1955. Matings were not observed; however, the urge was evidenced by the hen fluffing her feathers and squatting in front of the cock. The cock was observed to strut and fluff his body feathers, and make advances toward the hen during the laying period. Prior to egg-laying the cock repeatedly issued a coarse "bobwhite," but the calling ceased when laying began. The two cocks which were killed before being paired had developed testes of 9 and 8, and 8 and 6 mm. in length respectively on the left and right sides, which compare favorably with a sexually mature bobwhite. It is assumed that the F_1 birds did not have proper chromosome matching, and were, therefore, sterile.

Scaled quail cocks were mated without success to bobwhite hens in outside laying coops. Only a few infertile eggs were laid by the bobwhite hens, indicating that the birds were not compatible. Scaled quail produced well in identical adjacent coops.

In the back-cross of F_1 hybrids to the parent bobwhite, the same F_1 hybrid cock was paired with a bobwhite hen. When the hen was introduced to the compartment housing the cock, vigorous courting display by the cock was noted. After some period together, copulation was observed on 2 occasions. None of the 23 eggs subsequently laid were fertile. The cock became dissatisfied with the hen and killed her.

A bobwhite cock was mated to one of the F_1 hens, but no eggs were produced and no courtship was observed. A pairing of the F_1 hen to a scaled cock likewise produced no results.

One game breeder has indicated that a back-cross of *Colinus X Callipepla* hybrids to either parent is fertile, but our experiment does not confirm this.

LITERATURE CITED

- McCabe, Robert A. 1954. Hybridization Between the Bobwhite and Scaled Quail. *The Auk*, Vol. 71.