GENERAL NOTES

A hybrid Scaled × Douglas Quail.—A cage-reared male hybrid between the Scaled Quail (*Callipepla squamata pallida*) and the Douglas Quail (*Lophortyx douglasii bensoni*) provides a previously unrecorded example of hybridism in the American Phasianidae. This brings to five the number of crosses recorded between the four species in the genera *Lophortyx* and *Callipepla*. The only possible combination not yet known (Gray, 1958. Bird Hybrids) is that of a Douglas × Gambel Quail (*Lophortyx gambelii*).

This bird was the result of the mating of a male Scaled Quail with a female Douglas Quail. The parents paired and remained paired despite the presence of birds of their own species in the same cage. Several similar hybrids have been raised in the past; all have apparently been sterile. The bird described here was approximately 1 year old at its death. It is a mounted specimen in Walker's possession (see Fig. 1).

The description which follows is based on direct comparison of the hybrid specimen with males of both parental species, unless otherwise noted. Females of the parental species and both sexes of the Gambel and California Quail (*L. californicus*) were at hand as the description was prepared.

The feathers of the forehead and crown have definite shaft stripes, as in *douglasii*, but the stripes are lighter and redder. The crest is longer than that of *squamata*, about as in *douglasii* but much darker, shading from olive basally to buff at the tip. The crest is fuller than normal for *douglasii*, approaching the condition found in *squamata*. The ear coverts are dark brown, plain as in *squamata* rather than streaked as in *douglasii*. The feathers of the neck are gray with a narrow shaft stripe and terminal edge of reddish-brown. In *douglasii* the shaft stripe expands terminally into a triangle, whereas it is barely present in *squamata*.

The basic color of the feathers of the upper back of the hybrid is close to that of *squamata*, considerably paler than in *douglasii*, but the terminal band is extremely narrow and faint. The central back, rump, and upper tail coverts are similar in both parents and in the hybrid. The light vermiculations at the tips of the tail coverts are not quite as bold as in *douglasii*.

The throat feathers of *C. squamata* are buffy, with faint reddish-brown shaft stripes; in *L. douglasii* the bold black shaft stripes expand to the width of the white feather subterminally. In the hybrid there are moderately wide, dark-brown shaft stripes on light gray feathers. The effect is quite different from either parent. The gray breast feathers of the hybrid are marked with narrow reddish-brown shaft stripes and terminal bands, similar to but not as bold as those of *squamata;* there are no terminal bands and few shaft stripes in *douglasii*.

The abdomen of the hybrid closely resembles that of a female California Quail, with dark shaft stripes, terminal bands, and central chevron marks on the feathers. This is not far from the condition of *squamata*, but is quite different from *douglasii*. The large spots characteristic of the vanes of the ventral feathers of *douglasii* show to some extent on the hybird, toward the flanks; in the central abdominal region the spots are so expanded as to cover most of the vane. The shape of the dark markings on the under tail coverts in the hybrid is the same as in *douglasii*, and the color is only slightly lighter.

Streaked flank feathers are characteristic of the Scaled, California, and Gambel Quail. The appearance of the shaft stripes of these three species is quite different from that of the spotted vanes of the Douglas Quail. In some of the latter, however, elongation of the spots into streaks gives a similar effect but with a different mechanism. The

streaked flanks of the hybrid result from pale shaft stripes as found in *squamata*, not from elongated vane spots as in *douglasii*.

The wing feathers are plain and solid in color, as in *squamata*, lacking the vane markings and vermiculations found in *douglasii* but with a dark reddish-brown cast reminiscent of that species. The primaries are darker than in *squamata*, about as in *douglasii*. The inner secondaries are white-edged on the inner vane, as in both parents,

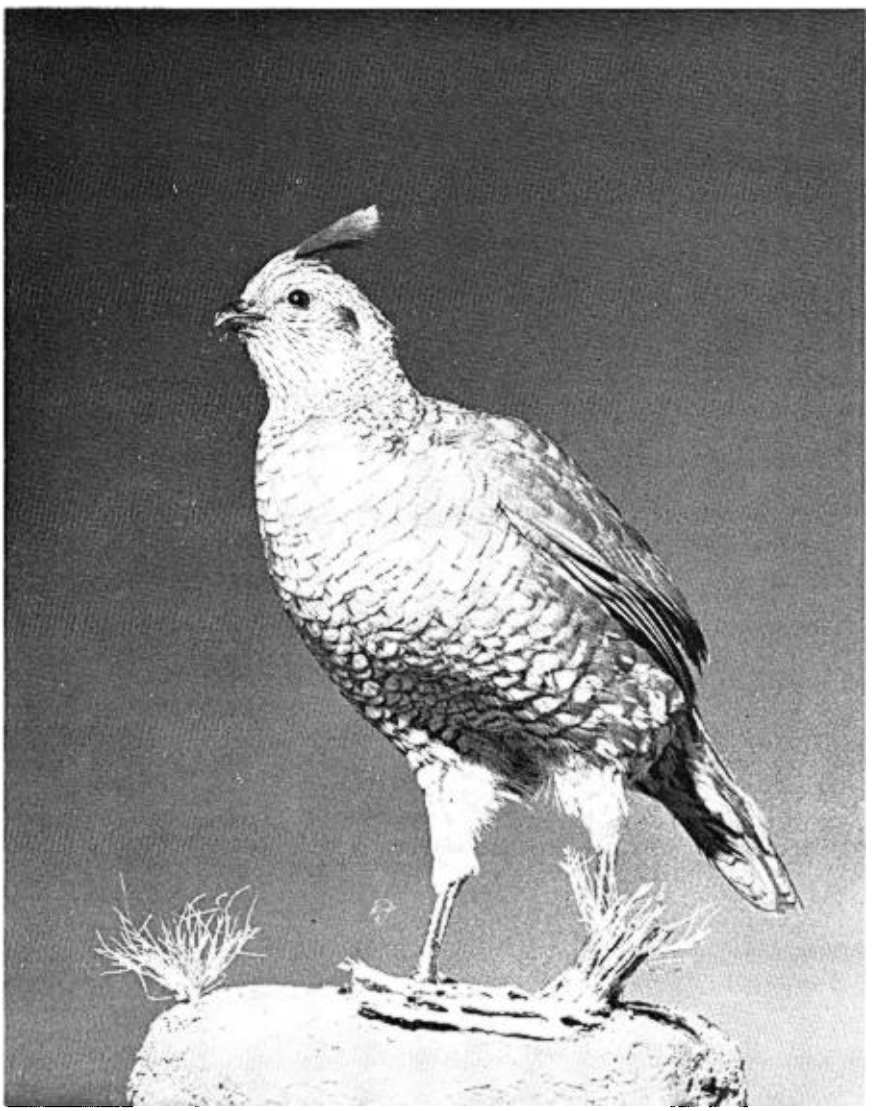

FIG. 1. Male hybrid Scaled × Douglas Quail. Photo by Ron Garrison, San Diego Zoo.

but lack the edging of the outer vane found in *douglasii*; the color of these feathers is intermediate, but there are vermiculations as in *douglasii*.

Ridgway and Friedmann (1946. *U. S. Nat. Mus. Bull.* 50, Pt. 10) give average wing lengths of 118.8 and 111.3 mm for male Scaled and Douglas Quail, respectively. The frayed wing of the hybrid measures 116.8 mm. It is not possible to take other measurements accurately from the mounted specimen.

Members of the genus *Lophortyx* have 12 rectrices, whereas *Callipepla* has 14 (Ridgway and Friedmann, op. cit., 264, 275). The hybrid has 14 rectrices.

The overall aspect of this hybrid Scaled × Douglas Quail is not particularly like either parental form. The length of the crest gives the bird a *Lophortyx*-like appearance. From a dorsal view, excluding the head and neck, the hybrid looks rather like a female Scaled or Gambel Quail. Ventrally, except for the breast, the resemblance is to a female California Quail.

Although young quail are generally not proficient in calling, efforts to that end by this bird resulted in the call of the Douglas Quail. There was no sign of the typical Scaled Quail action of throwing back the head when calling.

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RICHARD C. BANKS, *Natural History Museum, San Diego, California,* AND LEWIS WAYNE WALKER, *Arizona-Sonora Desert Museum, Tucson, Arizona, 6 April 1964.*

Aggressive behavior of hen pheasant while protecting chicks.—Young Ring-necked Pheasants were captured on 5, 6, and 7 July 1963, in Lucas County, Ohio. On every occasion of capture the chicks cheeped loudly and the hen would circle me at a distance of 40 to 100 feet. The cheeping of the chicks stimulated a clucking from the hen although she remained concealed.

On 13 July 1963, I had occasion to see an adult hen pheasant with several chicks. When alarmed, the adult bird ran under some nearby bushes and gave a loud squawking call. The young birds at first cheeped loudly and scattered, but upon hearing the hen give this signal they immediately crouched and remained quiet for about a minute. The hen ceased squawking and the chicks soon started to move about as if searching for her, cheeping loudly. Two of the chicks were captured and promptly began struggling and cheeping in a louder, more drawn-out manner. The hen pheasant then flew directly at me and braked herself to land about 4 feet away, squawking throughout the performance. She then circled me, making short rushes and retreats. Her feathers were ruffled, especially along the capital and spinal tracts, and she continued to make clucking and squawking sounds.

After the pheasant had continued her demonstration of charging and retreating for perhaps 3 minutes, I made a quick movement as if to capture her. She flew approximately 40 feet into a thicket but continued squawking.

The chicks were released and observation from nearby revealed that within 5 minutes the hen returned to the spot where she had left her chicks and all of them apparently were soon together with her.

The aggressive behavior of this hen pheasant might well be very effective in obtaining at least temporary release of a chick captured by a predator. The initial element of surprise at seeing a large ball of feathers hurtling straight toward the head coupled with the loud squawking would perhaps cause the retreat of a less determined predator. Thus, the mock attack might be adaptive in providing survival of more chicks.—
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