

A HYBRID BETWEEN THE SPRUCE GROUSE AND THE BLUE GROUSE

By M. JOLLIE

A hybrid between the Spruce Grouse (*Canachites canadensis franklini*) and the Blue Grouse (*Dendragapus obscurus richardsonii*) was taken on November 12, 1950, at a road cut along Mannering Creek one and one-half miles south of Emida Summit, or about six miles south-southwest of Emida, Benewah County, Idaho. The area is covered by a heavy forest of white pine, Douglas fir, red cedar and other conifers and lies at about 3200 feet. In this area the Ruffed Grouse is common but neither the Spruce Grouse or the Blue Grouse has been seen by the writer, nor has either been reported by Johnston (Condor, 54, 1949:140-149) who censused a nearby area. Both parent species of the hybrid probably occur on the higher ridges where more suitable habitat is to be found.

Hybrids between species of gallinaceous birds are rare in the wild but common in captivity. Although many crosses in grouse are known, this particular combination has not yet been reported (Cockrum, Wilson Bull., 64, 1952:140-159). In the description of this hybrid I prefer to consider the Franklin Grouse as a subspecies of the Spruce Grouse since these two forms are only superficially separable and even in the most conservative view must be considered as parts of a single superspecies.

The specimen (fig. 1) is a male which has completed its postjuvinal molt. Extensive material for comparison is lacking, but single examples of males of both parent species in the immature and adult plumages are available. Other specimens of the Blue Grouse, of both sexes and all ages but without data on weight, are included in the comparative material.

Table 1 gives some impression of the comparative sizes of the parent species and the hybrid, although the range of variation is not given. Generally speaking the hybrid is about midway in size between the Spruce Grouse and the Blue Grouse. The bill is large, however, equalling that of the Blue Grouse. The number of tail feathers (18) is exactly intermediate between that of the Spruce Grouse (16) and the Blue Grouse (20).

Table 1

Measurements of Spruce Grouse, Blue Grouse, and a Hybrid Between the Two

| | Hybrid | Spruce Grouse | | Blue Grouse | |
|----------------|----------|---------------|----------|-------------|-----------|
| | | Immature | Adult | Immature | Adult |
| Weight | 850 gms. | 525 gms. | 500 gms. | 1075 gms. | 1310 gms. |
| Length of wing | 222 mm. | 188 mm. | 188 mm. | 237 mm. | 245 mm. |
| Length of tail | 140 mm. | 145 mm. | 140 mm. | 165 mm. | 185 mm. |

The coloration and markings of the plumage are more like the Spruce Grouse than the Blue Grouse but the general dilution of color suggests the effect of the latter species. The feathers of the narial region are black like those of the Spruce Grouse. The top of the head is gray, about midway in tone between the two species but lacking most of the brown wash of either; a similar gray is observed in some adult females of the Blue Grouse. The bases of the feathers of the crown are black as in the Spruce Grouse. The skin over the eye is crimson in the Spruce Grouse, yellow in the Blue Grouse and orange in the hybrid.

The back is like that of the Spruce Grouse; the primaries, however, show mottling

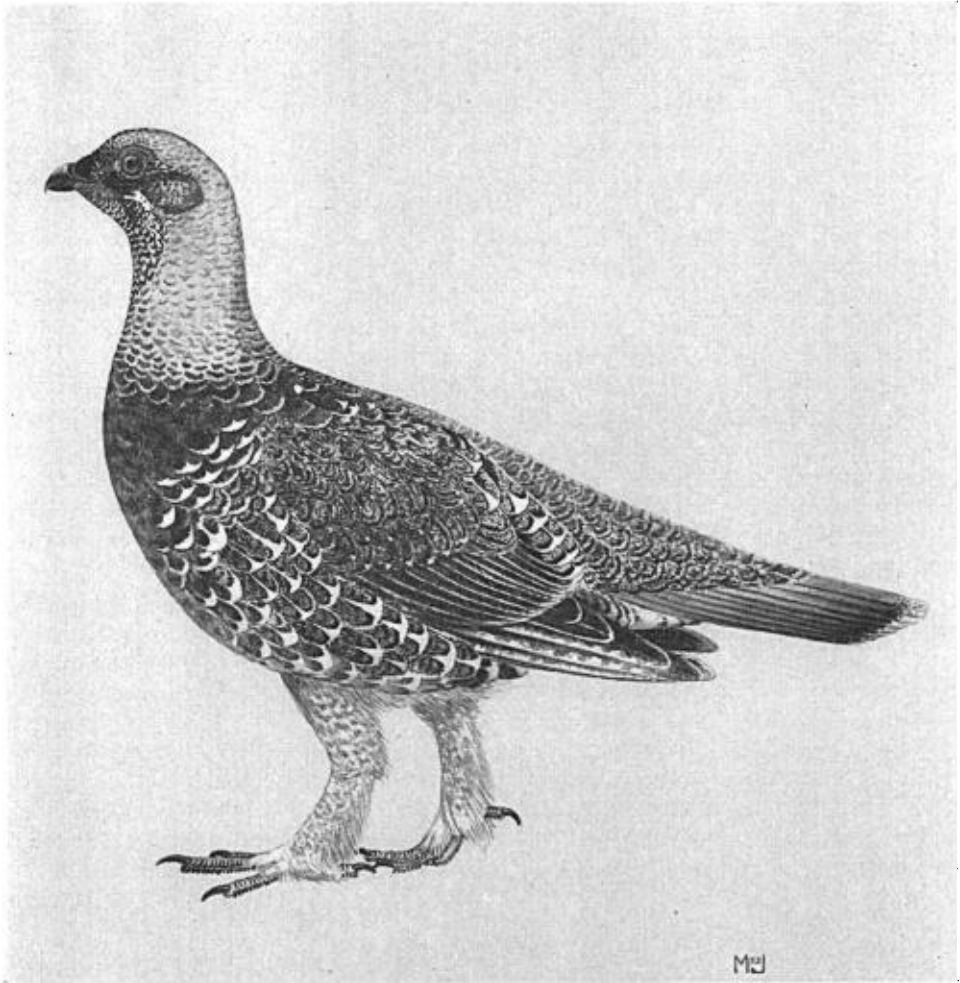


Fig. 1. Male hybrid between Spruce Grouse and Blue Grouse taken in Idaho. Drawing by M. Jollie.

along the outer margins, as does the Blue Grouse. The rump is like the Spruce Grouse in tone but lacks the heavy cross-barring; it has much finer, irregular barring but does not resemble the Blue Grouse in this feature. The tail is midway in tone; the feathers are rounded at the tip like those of the Blue Grouse and they have a terminal gray band which ranges from 10 mm. wide on the center feathers to 5 mm. on the outer feathers. This terminal band is of interest because it is lacking in both the parent forms although such a band does occur in the typical Spruce Grouse and in some subspecies of the Blue Grouse.

The throat is darker than that of the Blue Grouse but shows the intermixture of the white bases of the feathers more than does that of the Spruce Grouse. The rest of the underside is closer to that of the Spruce Grouse than to the Blue Grouse. The feathers at the side of the neck, just in front of the wing, do not show the white bases so characteristic of the male Blue Grouse. The male Blue Grouse has a bare patch of skin on the

side of the neck which covers a vocal sac; this patch of skin is surrounded by these white based feathers. The Spruce Grouse lacks vocal sacs. Unfortunately, in preparing the hybrid specimen no note was made of the presence or absence of the vocal sacs.

The black shoulder band of the Spruce Grouse which connects with the black (chae-tura drab or black) chest is well marked in the hybrid. The belly tone is about midway between the parent species with the result that the white tips of the feathers are not as sharply marked as in the Spruce Grouse. Like the Spruce Grouse the feathers of the sides are drab with black irregular barring; they have a white tip with a white shaft streak. The feathers of the flank, shank, and undertail regions are also like those of the Spruce Grouse.

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