

COMMENTS ON TWO HYBRID GROUSE AND ON THE
OCCURRENCE OF TYMPANUCHUS AMERICANUS
AMERICANUS IN THE PROVINCE OF ALBERTA.

BY WILLIAM ROWAN.

Plates XVII-XVIII.

ON October 3, 1925, Mr. H. J. Smale of Edmonton, a member of the Northern Alberta Game and Fish Protective League, very kindly brought me a very fine hybrid *T. americanus* + *Pedioecetes phasianellus* in the flesh. The bird, a female, was shot a short distance out of the city of Edmonton. This is only the second example of this cross known to me from the Province of Alberta. The other, also a female, shot in October, 1918, at Gough Lake in the Sullivan Lake country in the southern half of the Province, was procured and mounted by Mr. Ashley Hine, now of the Field Museum of Chicago and finally found its way to the Banff Museum. It is in perfect condition except that the right half of the tail is missing. I am indebted to Mr. Sansom, curator of the Museum, for kindly loaning me the specimen.

In view of the interest attaching to hybrids in general, and their theoretical importance in connection with some aspects of taxonomy, it seemed to me well worth while to publish a description of these two birds, particularly as they differ considerably from each other. My own specimen resembles the Pinnated Grouse more closely than the Sharp-tail, while the reverse is the case with the Banff bird.

They have one remarkable feature in common—the general scheme of the tail. Of the nine pairs of rectrices in each case, the middle pair is considerably longer than the rest, which are evenly graduated and resemble those of the normal Pinnated in size and arrangement. This is more marked in the Gough Lake bird than in the Edmonton one, which is the subject of Plate XVII. The pattern on these central feathers is, however, more typical of the rectrices of the female Pinnated than of the Sharp-tail. (See Plate XVIII.)

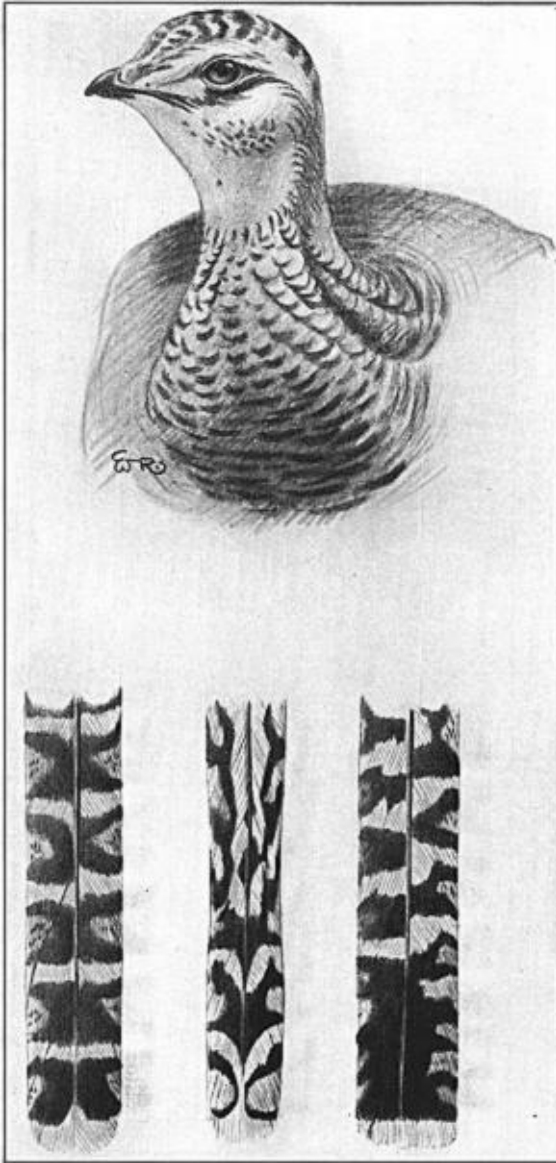
The chief characters of the birds are as follows:

A.—*Female, Edmonton, Alta, Oct. 3, 1925.*

Feathers on crown longer and blacker than those of either species; hind-neck, mantle, back, rump and upper tail-coverts similar to *T. americanus*; secondaries more or less similar to but lighter than *T. americanus*; wing coverts more closely resembling *P. phasianellus* but with the characteristic roundish white spots tending to broaden into bars. With the exception of the central rectrices and light barring, towards their bases, on the dark contiguous pair, the remainder are unmarked save for a terminal bar of whitish. (See Plate XVIII.) They would thus resemble those of the male *T. americanus* except that they are very much paler, being a pearly gray and retain the end bar of the female, though this is not well defined. The central pair exceed their neighbors in length by 1 cm. Pinnates are present and well developed, resembling in general those of the typical female *T. americanus*—length 3.7 cm. Chin, cheek, throat and ear-coverts richer than those of any specimens of either species in my possession. Breast intermediate between the two species, with heavy open V-shaped markings, heavier than in *P. phasianellus* and enlarging to bars on the flanks. Under tail-coverts similar to *T. americanus*. Culmen 1.8 cm. Middle toe and claw 5.4 cm. Wing 22.5 cm. Tail 9.8 cm.

B.—*Female, Gough Lake, Alta, Oct. 26, 1918.*

Crown, hind-neck, mantle and back as in *T. americanus*; rump, and upper tail-coverts intermediate between the two species; secondaries and wing-coverts as in hybrid A; central rectrices a trifle longer and narrower than in A with pattern somewhat similar. They are 1.3 cm. longer than their neighbors and, with the exception of these, slightly darker than the rest which resemble *T. americanus* female and are similar in color and pattern. Pinnates completely absent. Chin, cheek, throat and ear-coverts like *P. phasianellus*; upper breast not as heavily marked as in A but the half closed V-markings of *P. phasianellus* replaced by heavy open Vs, though smaller and somewhat more abundant than in A. Rest of ventral surface as in A, except that the V-markings are consistently smaller and more numerous and the flanks are less heavily barred; under tail-coverts even more heavily



From pencil drawing by W. Rowan

ABOVE.—HYBRID GROUSE (B)

BELOW.—LEFT RECTRIX OF CENTRAL PAIR.
1. FROM HYBRID "B". 10 × 1.4 cm.

2. FROM FEMALE SHARP-TAIL. 11 × 1.1 cm.
3. FROM HYBRID "A". 9.8 × 1.5 cm.

marked than in typical *T. americanus*. Culmen 1.8 cm. Middle toe and claw 5.0 cm. Wing 21.6 cm. Tail 10.0 cm.

The ovary of the Edmonton bird appeared to be normal in all respects for the time of year, but it was not fresh enough for critical cytological examination. It would be extremely interesting to know if these hybrids, occurring thus in the wild state, are fertile.

The skeleton was unfortunately not preserved.

While there are only two records of this cross in Alberta as far as we have been able to ascertain, it would appear to be comparatively frequent in Manitoba, and no doubt also occurs in Saskatchewan,¹ in both of which Provinces the Pinnated Grouse is far more numerous than it is here. I have seen two different examples in Manitoba and have heard of others on good authority. Unfortunately these are not now available.

It seems not to be generally known that *Tympanuchus americanus* is an Alberta game bird. This may, in part at least, be due to the distribution accredited to the species in the 'Check-list'—southern Manitoba and southeastern Saskatchewan. How long the species has been represented in this Province it is difficult to estimate, but some of the old-timers remember it as far back as the late nineties. Even today there are many sportsmen who are totally unaware of its existence and can not tell it when they see it. Not only has the species been established for many years, but it moreover attains its northernmost distribution in Alberta, occurring 100 miles north of Edmonton, at Lac Labish.

The distribution of the Pinnated Grouse within the Province is very curious and its habits seem to be peculiar. Except during the late fall and winter it appears to be entirely confined to the immediate vicinity of the larger lakes where it generally nests less than a quarter of a mile and often only a few yards from the water's edge. The nest is merely a grass-lined hollow, usually well concealed in coarse herbage, often on quite soggy ground. The largest clutch I have personally found numbered 14. The bird shows great variation in size and color. A specimen from Lac Labish, now in the Parliament collection, is much more

¹ Since the above was written, I have been informed by Mr. F. Bradshaw, Game Commissioner of Saskatchewan, that two of these hybrids are known to have been killed in the Province, but the present whereabouts of the specimens is doubtful.

richly colored than any others I have seen. Beaverhill Lake birds are smaller and darker than those from Sullivan Lake.

The distribution is patchy. The colonies are isolated, and as stated above, practically confined to lakes. I have never heard the characteristic booming nor seen the equally characteristic display, except on the water's edge. At Beaverhill Lake the performing grounds are almost invariably on sandbanks or mud-bars running right into the water. It may be this fact, the bird's devotion to lakes, that largely accounts for the prevailing ignorance as to its occurrence. Chicken shooters do not go to the lakes. These are the resorts of duck and goose shooters who on the whole rather despise the chicken hunter and his quarry, and unless a stray chicken happens to offer a good sporting target as it hurtles by unexpectedly, they leave Grouse severely alone.

Another fact that may partially account for the situation is that the Pinnated Grouse is really numerically scarce. It is here, moreover, subject to exactly the same cycles as the Sharp-tail, and in years of scarcity it is excessively rare. It is only in the years of plenty that the bird might reasonably be expected to fall to the gun. In addition to its naturally small numbers, it is wavier and wilder by far than the Sharp-tail.

With regard to the subspecies represented by the parents of these two hybrids little need be said, for they can only be assumed. Our local "chicken" is *Pediocetes phasianellus campestris*, while presumably, all our Pinnated Grouse belong to the type race, *americanus*. *P. p. phasianellus* presumably comes south to Lac Labish where it would meet with the Pinnated. In years such as the present, following on a cyclic peak and preceding a minimum, due in the next year or two, our Grouse apparently undertake considerable migratory movements, and it is just as likely that the Edmonton bird may have come down from Labish as that it should have come from elsewhere. The Pinnated Grouse does not normally occur in this neighborhood at all. As to the other specimen, from Gough Lake, it should also theoretically be represented by *americanus* + *campestris*.

Both these hybrids appear to be larger (and mine was appreciably heavier) than normal females of either of the parent species.

*Dept. of Zoology, University of Alberta,
Edmonton, Canada.*