

SUBSPECIES OF THE SPRUCE GROUSE

BY LEONARD J. UTTAL

AFTER studying a recently amassed series of Spruce Grouse, *Canachites canadensis*, I find that I am able to recognize four subspecies of this bird. One of these, *C. c. canadensis* (Linnaeus), is made to include *C. c. osgoodi* Bishop, a name which has been applied to birds from the interior of Alaska and the Canadian Northwest. Another, a well-marked form inhabiting the Gaspé Peninsula, New Brunswick, and Nova Scotia, is herewith described for the first time. While the total number of birds examined is 129, not including several hybrids or intermediates between *C. canadensis* and *C. franklini* (Douglas), the conclusions reached in this paper are based upon the 75 adult females examined, since the males in this species are undependable for racial differentiation except in *C. c. atratus* Grinnell and the new race. The subspecies of the Spruce Grouse are based upon differences in tone of coloration. The four forms may be characterized as follows:

CANACHITES CANADENSIS CANADENSIS (Linnaeus)

Tetrao canadensis Linnaeus, Syst. Nat., ed. 10, 1: 159, 1758. Based on The Black and Spotted Heath-cock, Edwards, Nat. Hist. Birds, pl. 71, female, and pl. 118, male. Type locality: Hudson Bay.

Canachites canadensis labradorius Bangs, Proc. New England Zool. Club, 1: 47, 1899. Rigoulette, Hamilton Inlet, Labrador.

Canachites canadensis osgoodi Bishop, Auk, 17: 114, 1900. Lake Marsh, Yukon Territory.

Range.—The interior of Alaska, south to central British Columbia, west-central Alberta, and east to the Labrador Peninsula.

Subspecific characters.—Female: in winter plumage above barred with black and pale ochraceous-buff to cream buff; tips of unworn back feathers neutral gray to gray-white. Below, barred with white, black, and pale cream buff, the last predominating on the upper breast. Tarsal feathers warm gray-brown. In general appearance a predominantly gray and black bird.

Male: above olive-gray to slate-gray barred with black; scapulars and upper dorsal feathers fuscous to rich brown, the color usually stronger on the former; upper tail-coverts tinged with brown; rectrices black, their tips pale chestnut. Below, throat black, the feathers more or less tipped with white; upper breast gray; breast black; belly black, the feathers tipped with white; flanks gray barred with black, the feathers each with a terminal white wedge; under tail-coverts mainly black and white. A white line runs from eye to eye around the black throat patch. Tarsal feathers warm gray-brown.

Specimens examined.—ALASKA, Chitina River, 1 ♀, 1 ♂. YUKON, Klondike Region, 1 ♂; Teslin Lake, 2 ♀, 2 ♂. MACKENZIE, (Fort) Simpson, 1 ♀; Lobstick Creek, Little Buffalo River, 1 ♀, 1 ♂. ALBERTA, Wood Buffalo Park, 2 ♀ ad., 1 ♀ juv., 2 ♂. MANITOBA, Duck Mountain, 1 ♀; Thicket Portage, 1 ♀; Winnipeg, 1 ♀. ONTARIO, Lac Seul, 2 ♀. QUEBEC, Charleton Island, James Bay, 1 ♀;

Ungava, Fort Chimo, 1 ♀; Saguenay Co., Natashkwan, 1 ♀; Eskimo Point (Havre St. Pierre), 1 ♀, 1 ♂; Bonne Espérance, 5 ♀, 2 ♂. LABRADOR, Red Bay, 5 ♀; Hamilton Inlet, 2 ♀, 2 ♂; Lance au Loup, 2 ♀, 1 ♂; Rigoulette, 1 ♀, 1 ♂; Nain Bay, 1 ♀.

Remarks.—After examining the type series of *Canachites canadensis labradorius* Bangs, through the courtesy of Mr. James L. Peters, of the Museum of Comparative Zoölogy, I follow Norton (Proc. Portland Soc. Nat. Hist., 2: 151, 1901) and others in considering *labradorius* a synonym of *canadensis*.

Two females from Teslin Lake, Yukon Territory, fifty miles from the type locality of *C. c. osgoodi* Bishop, are inseparable from true *canadensis*. This is also true of five other females from *osgoodi* territory ranging from the Chitina River in Alaska through Yukon and Mackenzie to Wood Buffalo Park, Alberta. Most of the birds from the uncontested range of *canadensis* which I have seen are fully as pale as *osgoodi* is supposed to be. Under these circumstances I agree with Mr. P. A. Taverner, of the National Museum of Canada, who sent me these specimens, in not recognizing the validity of *osgoodi*.

Five females from Bonne Espérance, Saguenay County, Quebec, supposedly typical *canadensis* territory, are closer to *C. c. canace* (Linnaeus), of southern Canada and the northern United States, than they are to *canadensis*. Bonne Espérance, however, is far removed from the known range of *canace*. Furthermore, birds from Natashkwan and Eskimo Point, west along the north shore of the Gulf of St. Lawrence, are distinctly *canadensis* as are birds from the Red Bay district to the east. These birds do not resemble the new race from Gaspé across the Gulf. Because these birds come from but one isolated locality, naming them is no solution to the problem. Unless further collecting in this region indicates that there is a distinct area inhabited by these *canace*-like birds it is best to regard these birds as local individual variants of *canadensis*.

CANACHITES CANADENSIS ATRATUS Grinnell

Canachites canadensis atratus Grinnell, Univ. California Publ. Zool., 5: 380, 1910. Type locality: Cedar Bay, Hawkins Island, Prince William Sound, Alaska.

Range.—Coast region of southern Alaska, from Bristol Bay to Cook Inlet and Prince William Sound.

Subspecific characters.—Female: differs from *canadensis* chiefly in having the grays strongly suffused with olive. Ochraceous-buff markings lighter, more nearly a cream color. Blacks everywhere deeper in tone and more extensive in area. Below, black bars heavier, tending to run completely across each feather rather than being interrupted by the encroachment of the white portions along the rachis as in the other forms. Tarsal feathers more olivaceous.

Male: differs from *canadensis* in having the entire plumage suffused with olive.

Black instead of brown predominates in the upper tail-coverts. Blacks everywhere more strongly developed, the bars more solid and clean-cut.

Specimens examined.—ALASKA, Kenai Peninsula, 2 ♀, 3 ♂; Kelly River, 1 ♀; Homer, 9 ♀, 5 ♂; Point Graham, 2 ♀, 1 ♂; Seldovia, 3 ♀.

Remarks.—The males of this, the best-defined race of the Spruce Grouse, are quite recognizable in most cases.

CANACHITES CANADENSIS CANACE (Linnaeus)

Tetrao Canace Linnaeus, Syst. Nat., ed. 12, 1: 275, 1766. Based on Le Gelinote de Canada, *Bonasa canadensis*, Brisson, Orn., 1: 203. Type locality.—As here restricted, the City of Quebec, P. Q.

Range.—Southern Manitoba, southern Ontario, southern Quebec east to the west end of the Gaspé Peninsula and Maine, south to northern Minnesota, northern Wisconsin, northern Michigan, the Adirondacks of New York, and northern New England.

Subspecific characters.—Female: similar to *canadensis*, but darker throughout, the ochraceous buffs more nearly pure buff, the grays more slaty (bluer); white areas reduced; black bars somewhat more solid.

Male: indistinguishable from *canadensis*.

Specimens examined.—ONTARIO, Port Arthur, 2 ♀. QUEBEC, Kamarooska Co., Ste. Athanase, 2 ♂ ad., 1 ♂ imm.; Charlevoix Co., St. Urbain de Charlevoix, 1 ♀; Saguenay Co., Thunder River, 1 ♀, 1 ♂; Lake St. John, 1 ♀; Gaspé Co., Table Top Mt. (3,600 ft.), 1 ♀. MINNESOTA, Beltrami Co., 2 ♀; St. Louis Co., Winton, 1 ♂; Aitkin Co., Aitkin, 1 ♂. MAINE, Oxford Co., Lake Umbagog, 1 ♀; Upton, 1 ♀; Penobscot Co., La Grange, 2 ♀; So. Twin Lake, 1 ♂.

Remarks.—Following a precedent established by Oberholser (Proc. Biol. Soc. Washington, 28: 49, 52, 1914) I hereby propose to establish the city of Quebec as the type locality of *Tetrao Canace* Linnaeus *ex* Brisson. Near topotypes of *canace*, lent to me by Dr. G. A. Langelier of that city, and *canace* from Minnesota, southern Ontario, and northern New England, differ from birds from the Gaspé Peninsula, New Brunswick, and Nova Scotia, previously assigned to *canace*. The latter are consistently browner. It is evident that these birds are in need of a name and I propose that they be known as:

***Canachites canadensis torridus*¹ subsp. nov.**

Holotype.—Adult female, American Museum of Natural History, no. 174919; molting about head and neck; Kejimikujik (Kedgemakoogie on label) Lake, known also as Fairy Lake, on the boundary between Annapolis and Queens Counties, Nova Scotia; September, 1921; collected by C. A. Sheldon.

Allotype.—Adult male, Louis Agassiz Fuertes Memorial Collection of Cornell University, no. 1236; fresh fall plumage; Harmony, five miles east of Truro, Colchester County, Nova Scotia; October 10, 1909; collected by Leonard C. Sanford.

Range.—The Gaspé Peninsula, New Brunswick, and Nova Scotia; possibly eastern Maine.

¹ *torridus*, "scorched"; applied to describe the extreme brownness of the females.

Subspecific characters.—Brownest of the races of *C. canadensis*.

Female: similar to *canace*, but the brown areas everywhere intensified and black areas deeper-toned; tips of unworn back feathers gray suffused with brown, tannish in general appearance rather than neutral gray as in *canace*; tarsal feathers more richly colored and more heavily barred.

Male: plumage much more suffused with brown than in *canace*, especially the upper wing-coverts, upper dorsals, scapulars, and flank feathers. Rump warmer (more brownish, less slaty) than in *canace*. General color of the upper tail-coverts strongly brown. Rectrices more solidly black, the chestnut tips darker in tone and reduced in area, especially on the central two or three pairs.

Specimens examined.—NOVA SCOTIA, Victoria Co., Baddeck, 1 ♀, 2 ♂ ad., 1 ♂ juv.; Cape North, 1 ♂ imm.; Frizzleton, 1 ♂ ad., 1 ♂ imm.; "Edge of Flat Barren," 2 ♀; Richmond Co., Framboise, 2 ♂; Halifax Co., Halifax, 1 ♀ juv., 1 ♂ juv.; Colchester Co., Truro, 1 ♀; Harmony, 1 ♂ (allotype); Annapolis-Queens Co. boundary, Kejimikujik Lake, 1 ♀ (holotype); locality indefinite, 1 ♀ (albinistic), 2 ♀, 1 ♂. NEW BRUNSWICK, Victoria Co., Trousers Lake, 1 ♀, 1 ♂; Gloucester Co., Bathurst, 1 ♀, 1 ♂; Carlton Co., Kilmarnock, 5 mi. s. of Woodstock, 1 ♀; Northumberland Co., N. Branch Renous River, 1 ♀; Gulquac River, 1 ♂; locality indefinite, 1 ♂. QUEBEC, Gaspé Co., Ste. Anne River, 1 ♀, 1 ♀ juv.; Berry Mountain Road, 2 ♀; Federal Mine, 1 ♀, 1 ♂. MAINE, Washington Co., Calais, 1 ♂; locality indefinite, 1 ♀.

Remarks.—The males of this race have constant differentiating characters which make them easily recognizable. This is especially evident when one views a series of males laid upon their sides, wing up, in which case the brown of the wing-coverts stands out strongly.

Two specimens from Maine are assignable to this race. The determination of the status of this form in that State rests upon the examination of many more individuals. Birds from western Maine are decidedly *canace*.

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Laboratory of Ornithology
Cornell University
Ithaca, New York