

to extend inland up the valley of the Skeena River as far as Hazelton. The migration route appears to adhere closely to the coast. In California there occur not uncommonly certain dark-colored immatures, south-bound, that are regarded as migrating *rubiginosa*. This may be correct, but at the same time there are at hand comparable immatures from southeastern Alaska that are not so markedly different from the same stage in *brewsteri*. Plumage changes in *Dendroica aestiva* due to season and age are not clear, and subspecific terms when based on other than adult males should be used with caution, at least as regards the three forms here commented upon.

*California Academy of Sciences, San Francisco, April 19, 1935.*

## A NEW RACE OF RUFFED GROUSE FROM VANCOUVER ISLAND

By H. B. CONOVER

A few months ago I received a shipment of eight specimens of Ruffed Grouse from Vancouver Island. They were first labeled as *Bonasa umbellus sabini*, but later, on comparing them with mainland specimens from the coastal regions of British Columbia, Washington and Oregon, the island birds were found to be very different.

*Bonasa umbellus sabini* was described by David Douglas in 1829 (Trans. Linnaean Soc., 16, p. 137). The type locality is given as "Coast of northwest America between the 40° and 49° parallels from Cape Mendocino to Vancouver Island." On page 62 of the "Journal Kept by David Douglas 1823-1827" (published under the direction of the Royal Horticultural Society, 1914), Douglas in a condensed account of his journal in his own handwriting speaks of spending the time from November 15, 1825, to March 20, 1826, at Fort Vancouver on the Columbia River. He also states (p. 153) that during that time he collected *Tetrao sabini* and *Tetrao richardsoni*, two pairs of the former being preserved, one male of which was destroyed by rats. I therefore suggest as a restricted type locality for *Bonasa umbellus sabini* (Douglas) the vicinity of Vancouver, Washington.

As Douglas did not visit Vancouver Island, at least not prior to 1829, according to his journals, the name *sabini* cannot be used for birds from that locality.

The new form may be known as

### *Bonasa umbellus brunnescens*, new subspecies

*Type*.—From Comox, Comox District, Vancouver Island, British Columbia; no. 11,543, adult male, in the Conover Collection, Field Museum of Natural History. Collected October 28, 1934, by H. M. Laing.

*Characters*.—Differs from *B. u. sabini* in the much browner (less reddish) upper surface except the tail. In the red phase *brunnescens* has the tail dull ochraceous umber instead of ferruginous as in *sabini*, and the black cross-barring beneath is not followed by a light ochraceous bar. In the gray phase, the tail is gray with no reddish coloration and it also lacks the double cross-barring of *sabini*.

Differs from both *B. u. umbelloides* and *B. u. yukonensis* in the much darker (browner) upper surface and by having the under surface much more buffy and more heavily barred with brown.

Differs from *B. u. togata* as follows: in the red phase the upper surface is much darker (browner, less reddish); the tail is dull ochraceous umber, less reddish, and lacks the lighter cross-bars beneath the black ones; in the gray phase the upper surface is darker, and the tail is less heavily barred with black; in both phases the under surface is much more heavily barred with brown, but the cross-bars are paler, and the light tip to the tail is much narrower.

Differs from *B. u. thayeri* (red phase) in the darker (brownier) upper surface, in the lack of lighter cross-bars underneath the black ones on the tail, and in the much narrower light tail tip; (gray phase) in the darker upper surface, in having the gray tail much less heavily barred with brownish black, and in the much narrower light tail tip. Underparts in both phases are buffier and more heavily barred with brown. Some *thayeri* approach *brunnescens* in this heavier barring.

Differs from *B. u. umbellus* in the darker (less reddish) upper surface. In the red phase the coloration of the tail approaches that of *umbellus* but is darker, and the light band just above the broad black one near the tip is buffy, not light gray. Also, the black cross-barring on the tail is not bordered below by a distinctly lighter red one as in *umbellus*. In the gray phase the tail is pure gray and also lacks the double cross-barring. On the under surface, *brunnescens* is much buffier and is banded much more heavily with pale brown.

*Description.*—Type, red phase: Above dark ochraceous brown finely mottled with dark gray. Top of head barred with black; mantle blotched with black, each feather with a reddish buff shaft streak; feathers of ruff blackish brown, glossed at tips with metallic green; scapulars brownish black with broad, pale buff shaft streaks on distal webs; wing coverts brown mottled with black and with narrow, pale buff shaft streaks; rump and upper tail coverts with indistinct median cordate spots of buffy white. Tail dull ochraceous umber, narrowly barred with black, crossed terminally with a narrow band of buffy ash, then a much broader one of black, and lastly another narrow one of buffy ash. Primaries and secondaries brown; outer webs of former blotched with light buff, and outer webs of latter mottled with ochraceous brown. Throat and foreneck buff, followed by a band of pale brown. Rest of underparts ochraceous with broad transverse bars of pale brown, edged above by narrow, dark brown line. Abdomen heavily barred with dark brown. Under tail coverts bright ochraceous umber, each feather with wide white spot at tip, edged above by narrow, dark brown line. Toes dull bluish olive gray. Iris brown. Upper mandible dark gray, lower mandible pale gray. Wing (flat) 190 mm., tail 144, culmen 16, tarsus 45, middle toe (with claw) 51.

Gray phase: Upper parts more heavily mottled with gray, giving a darker appearance; tail light gray. Under tail coverts white, edged with ochraceous and barred with dark brown.

*Range.*—Vancouver Island and small islands adjacent.

*Remarks.*—Of the three specimens from Saturna Island, one male (red phase) is typical of *brunnescens*; another male (gray phase) is fairly so, but a female (intermediate phase) is more reddish, tending toward the mainland birds.

Specimens from British Columbia, south of 51°, do not appear to be exactly typical of any race. East of the Fraser River they are closest to *umbelloides* but have a sheen like gun metal on the upper parts which makes them darker gray, compared with Alberta birds. Three specimens from farther north, in the Cariboo District, however, are typical. Strange to say, three birds from just south of the international boundary in eastern Washington (Loomis, Sullivan Lake, Curlew) do not have the dark coloration of the southern British Columbian birds.

To the west of the Fraser River, on the mainland, the birds are closest to *sabini* but are in general darker (mahogany red) than specimens from northern Oregon and southern Washington. Ruffed grouse from northwestern Washington, about Puget Sound and the international boundary, also have a tendency to be darker than true *sabini*. There is much variation in this region, gray-tailed birds being fairly common.

During this investigation something over two hundred and forty specimens were examined. I am indebted to the following for the loan of material: Biological Survey, Carnegie Museum, Chicago Academy of Sciences, Museum of Comparative Zoology, Field Museum, University of Michigan, University of Toronto, United States National Museum, and Mr. James H. Fleming.

#### SPECIMENS EXAMINED

*B. u. umbellus.*—Pennsylvania 14 (Bryn Mawr, Moscow, Tioga County, Lycoming, Driftwood, Clinton County, McKean County, Cameron County); Tennessee 1 (Mount Leconte); North Carolina 2 (Weaverville); New York 2 (Long Island); Connecticut

3 (East Hartford, Windham County); Massachusetts 5 (Barnstable County, Dedham, Wakefield, Concord); Indiana 1 (Rose Lawn); Illinois 3 (Warsaw, Evanston, Kane County); Michigan 13 (Ann Arbor, Jackson County, Washtenaw County, Kalamazoo, Darry County, Livingston County, Oakland County); Wisconsin 1 (Beaver Dam); Ontario 17 (St. Clair Flats, Niagara Falls, Liewry, Norfolk County, Middlesex, Brant County, Wentworth County, Toronto, York County, Simcoe County).

*B. u. togata*.—Maine 3 (Penobscot County, Aroostook County); Wisconsin 6 (Phillips, Woodruff, Drummond, Solon Springs); Michigan 2 (Iron County); Minnesota 1 (Cook County); Quebec 5 (St. Louise, Atalante, Levis); Ontario 12 (Arden, Muskoka, Thunder Bay County, Coppermine Point, Lake Nipigon).

*B. u. thayeri*.—Nova Scotia 7 (Digby, Dartmouth, Halifax); New Brunswick 1 (St. Stephens).

*B. u. umbelloides*.—North Dakota 4 (Grafton); Utah 3 (Weber County, Elder County); Manitoba 2 (Carman); Saskatchewan 1 (Prince Albert); Alberta 6 (Hay Lake, Edmonton, Fawcett); Washington 15 (Danville, Curlew, Blue Mountains, Calispel Lake, Sullivan Lake, Tunk Mountains, Oroville, Mazama, Gifford, Colville, Loomis, Entiat, Mount Stewart); British Columbia 21 (Similkameen River, Okanagan Landing, Okanagan, Vernon, Coldstream, Lumby, Mabel Lake, Kootenai Range, Cottonwood, Willow River, Cariboo, Fort St. James).

*B. u. yukonensis*.—Yukon Territory 3 (Teslin River, Lake La Barge); Alaska 1 (Russian Mission).

*B. u. sabini*.—Oregon 25 (Scio, Cascade Mountains, Logan, Fort Steilacoom, Parkdale, Willamette Valley, Portland, Beaverton, Blaine, Tillamook); Washington 25 (White Salmon, Shoalwater Bay, Mount Rainier, Cedarville, Kirkland, Nisqually River, Darrington, Olympic Mountains, Puget Sound, Rockport, Bellingham, Whatcom County, Glacier, Whidby Island, Clallam Bay, Neah Bay); British Columbia 17 (Howe Sound, New Westminster, Lund, Vancouver, Port Simpson, Upper Pitt River, Agassiz, Sumas, Chilliwack).

*B. u. brunescens*.—Vancouver Island 8 (Comox); Saturna Island 3.

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## A NEW SPECIES OF EAGLE FROM A QUATERNARY CAVE DEPOSIT IN EASTERN NEVADA

WITH ONE ILLUSTRATION

By HILDEGARDE HOWARD

Through the courtesy of the Southwest Museum and the California Institute of Technology, I have been privileged to study the bird remains from Smith Creek Cave, a limestone cave near Baker, Nevada. A general account of the excavations during July and August, 1934, has been written by M. R. Harrington (Masterkey, 8, 1934, pp. 165-169), leader of the expedition during which the field work was done, and does not need to be repeated here.

This cave deposit, like the many others of its kind which have come to light within the last few years, is questionably Pleistocene. The Pleistocene horse is present and, among the birds, two species described originally from the Pleistocene of Rancho La Brea. These are *Vultur clarki* (Miller) which has never before been recorded outside of California, and *Coragyps occidentalis* (Miller), known also from Conkling Cavern in New Mexico. It has been remarked before that the presence of *Coragyps* in any great numbers, contrasted with an absence or scant representation of *Cathartes*, is indicative of the Pleistocene. However, in this case, though