

FIRST SPECIMEN RECORDS FOR RUFFED GROUSE IN COLORADO

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ABSTRACT.—We report the first specimen records for Ruffed Grouse (*Bonasa umbellus*) collected in Colorado, provide the location, describe the habitat, and briefly discuss the rarity of this species within the state. Three Ruffed Grouse were collected, an adult male in September 1988 and a juvenile male and adult female in September 1990, on Hoy Mountain, Moffat County, Colorado, within 0.6 km of Utah. The habitat is primarily open Douglas-fir (*Pseudotsuga menziesii*) forest with scattered clumps of quaking aspen (*Populus tremuloides*) and Utah serviceberry (*Amelanchier utahensis*). Habitats to the north, east, and south are primarily dominated by sagebrush (*Artemesia* spp.) steppe and piñon-juniper (*Pinus* spp.–*Juniperus* spp.) woodland. We hypothesize that natural expansion of Ruffed Grouse further east, north, and south is prohibited by unsuitable habitat exacerbated by the limited flight range capability of the species.

Key words: *Bonasa umbellus*, *Colorado*, *habitat*, *Ruffed Grouse*.

Ruffed Grouse were reported from Colorado by Cooke (1898) and Sclater (1912). Cooke (1898) mentioned that a single bird had been collected from a small flock south of Denver in December 1894 and that others were seen on 3 January 1898 near Sweetwater Lake, Garfield County. Although the AOU Check-list (1957) included northwestern Colorado in the range of Ruffed Grouse, more specific references (Aldrich and Duvall 1955, Aldrich 1963) did not. Bailey and Niedrach (1965:254) were unable to locate specimens from the state but suggested that “it is probable that a few dwell in the rough country adjacent to the Utah line.” Reported sightings exist for La Plata County (1947; Reddall 1976), Larimer County (1899; Cooke 1900), and Montrose County (1948; Bailey and Niedrach 1965). More recently (1971), one was reported from Routt County (Martin et al. 1974). However, Hoffman and Braun (1978) concluded that all reported Colorado observations were of Blue Grouse (*Dendragapus obscurus*) or Sharp-tailed Grouse (*Tympanuchus phasianellus*).

SPECIMENS

On 24 October 1988 a hunter shot an unusual grouse on Hoy Mountain, Moffat County, Colorado, while hunting Blue Grouse. This specimen was donated to the Colorado Division of

Wildlife where we identified it as an adult male (gonadal inspection) Ruffed Grouse. This specimen was subsequently deposited in the Denver Museum of Nature and Science (DMNH #39566) as a study skin (Fig. 1). We examined the Hoy Mountain area on 6–7 November 1988 and found Blue Grouse but no Ruffed Grouse. RWH and TER returned to Hoy Mountain and searched specifically for Ruffed Grouse on 26 and 27 September 1990. Four Ruffed Grouse were observed along with many Blue Grouse. Two of the Ruffed Grouse were collected and deposited in the Denver Museum of Nature and Science (DMNH #41920, an adult female prepared as a study skin, and DMNH #42054, a juvenile male prepared as a skeleton). These 3 specimens are the first documented Ruffed Grouse collected in Colorado and confirm breeding. All 3 individuals are gray phase and probably represent *B. u. incana*, which is known from adjacent areas in Utah (Bailey and Niedrach 1965, Hayward et al. 1976, Behle 1981). The specific collection location is in T9N, R104W, S25 (40°42'N, 109°02'W) on land managed by the Bureau of Land Management on Hoy Mountain, Moffat County, Colorado, within 0.6 km of the Utah line (Daggett County). No Ruffed Grouse were observed on adjacent Wild Mountain, and none has been encountered during extensive research and hunter-check station activity nor in wing collections

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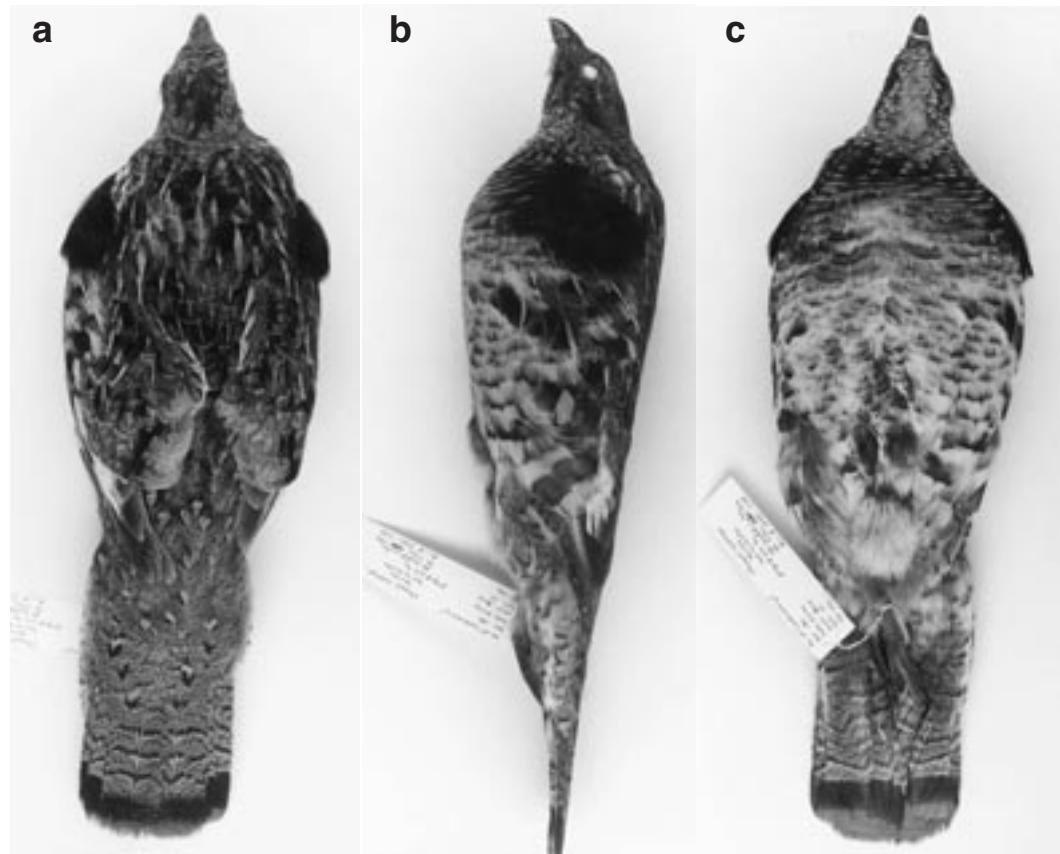


Fig. 1. First specimen of Ruffed Grouse collected in Colorado: (a) dorsal view, (b) lateral view, and (c) ventral view.

from Cold Spring Mountain to the north, Blue Mountain to the south, or anywhere else in Moffat County or Colorado.

HABITAT

Hoy Mountain lies at an elevation of 2190–2600 m, the highest point being the boundary with Utah. That portion in Colorado slopes to the east-northeast and has a small, wet drainage. The plant community at the base of the mountain is sagebrush (*Artemisia* spp.) steppe; a band of curlleaf mountain mahogany (*Cercocarpus ledifolius*) occurs at a slightly higher elevation. This habitat mixture changes with increasing elevation to scattered clumps of quaking aspen (*Populus tremuloides*), and Utah serviceberry (*Amelanchier utahensis*) in moist sites. Douglas-fir (*Pseudotsuga menziesii*) is the dominant conifer at higher elevations. Scattered piñon pine (*Pinus* spp.) and juniper (*Juniperus* spp.) trees occupy drier sites. Nar-

rowleaf cottonwood (*Populus angustifolia*) trees occur along the wet drainage in conjunction with willows (*Salix* spp.), Woods rose (*Rosa woodsii*), raspberry (*Rubus* spp.), and a mixture of grasses, sedges, and forbs. The area is rocky and quite steep with intermittent small drainages. Vegetational changes occur rapidly with elevation.

DISCUSSION

Twomey (1942) reported collection of 3 Ruffed Grouse near Paradise Park in Uintah County, Utah (~70 km west of Hoy Mountain), and observations of Ruffed Grouse near Green Lake in Daggett County, Utah (~56 km northwest of Hoy Mountain). Specimen records from Utah also are available from Duchesne County (Bailey and Niedrach 1965) and Summit County (immediately west of Daggett County) and along the Uinta Mountains to the northwest (Behle 1981). Thus, Ruffed Grouse

occur in suitable habitat in Utah west, south, and north of Hoy Mountain. It is likely the small numbers of Ruffed Grouse within Colorado are part of the northeast Utah population. We find it interesting that Bailey and Niedrach (1965:254) speculated accurately that "it is probable that a few [Ruffed Grouse] dwell in the rough country adjacent to the Utah line." The Hoy Mountain collection site is mostly inaccessible by vehicle from Colorado, and limited access exists through Utah, explaining, in part, the lack of knowledge of the avifauna in this remote area of Colorado.

Habitats where the Ruffed Grouse were collected on Hoy Mountain appear similar, but richer floristically, to habitats commonly used by Blue Grouse in Colorado (Hoffman and Braun 1978). The habitats in which the Ruffed Grouse were observed and collected were small and discontinuous within the overall landscape. We speculate the abundance of Utah serviceberry as well as the presence of aspen provided important winter forage for Ruffed Grouse in this area. However, both species are abundant in many areas in Colorado. Areas immediately east, north, and south of Hoy Mountain are not suitable for Ruffed Grouse as they are dominated by sagebrush and piñon-juniper.

Thus, occupied Ruffed Grouse habitat in Colorado appears limited to the Hoy Mountain area. This area lies within the loop of the Green River that flows southeast from Daggett County, Utah, into Moffat County, Colorado, and curves to the southwest into Uintah County, Utah, south of Hoy Mountain. Other potentially suitable habitat for Ruffed Grouse in Colorado lies north (Cold Spring Mountain, ~25 km) and south (Blue Mountain, ~25 km) of the Green River. However, Ruffed Grouse are known to have limited flight capability over unsuitable habitat (Palmer 1962, Moran and Palmer 1963). We conclude that expanses of unsuitable habitat have prevented Ruffed Grouse from expanding their range further into Colorado.

ACKNOWLEDGMENTS

We thank R.D. Hernbrode for bringing the initial specimen to our attention, landowners

in the Hoy Mountain area for allowing access through their private lands, and W.G. Alther and C.R. Preston of the Denver Museum of Nature and Science for specimen preparation and care. We thank 2 reviewers for helping improve the manuscript. This is a contribution from Colorado Federal Aid in Wildlife Restoration Projects W-152-R and W-167-R.

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Received 3 July 2001

Accepted 17 January 2002