

lation of the district and the hypothesis of intergradation disappears. It is easy to believe that the fluctuations in type are due to the subspecies being still in a formative process. But it is not possible to imagine that *couesi* and *bryanti* could maintain their separate status in the same area.

San Diego, California, June 28, 1923.

DESCRIPTION OF A NEW GROUSE FROM SOUTHERN CALIFORNIA

By DONALD R. DICKEY and A. J. VAN ROSSEM

GROUSE have long been known to occur on Mount Pinos¹, in Kern and Ventura counties, California, but only recently have specimens become available for study. Comparison of the series secured during the last few years indicates a geographic variation of *Dendragapus obscurus* in the southwestern part of its range that is deemed worthy of subspecific recognition. The form may be known as follows:

Dendragapus obscurus howardi, new subspecies

Mount Pinos Grouse

Type.—Male adult; no. K 238, collection of Donald R. Dickey; Mount Pinos, Kern County, California; altitude 7500 feet; May 28, 1922; collected by A. J. van Rossem; original no. 6931.

Diagnosis.—Nearest to *Dendragapus obscurus sierrae*, but differing from that form in paler dorsal coloration, and in coarser and more conspicuous vermiculation and barring. Underparts darker, a brownish suffusion replacing the clearer gray of *sierrae*. The white median shafting and terminal pattern of the feathers of flanks and sides reduced in area and entirely lacking on anterior part of body, whereas in *sierrae* traces of this pattern extend forward to the shoulders. Wing slightly longer; tail decidedly longer and much more graduated, with terminal band averaging wider. Culmen, tarsus, and middle toe averaging slightly longer and decidedly heavier. Comparison has been based chiefly upon males, and only adult birds have been used in which the narrow-feathered and excessively graduated tail of the first winter has been fully replaced by the broad feathers of maturity. So far as observed, differentiation in the characters of the female parallels that of the male.

MEASUREMENTS

MALES

	Wing			Tail			Tail * graduation			Culmen from base			Tarsus			Middle toe without claw		
	Min.	Max.	Av.	Min.	Max.	Av.	Min.	Max.	Av.	Min.	Max.	Av.	Min.	Max.	Av.	Min.	Max.	Av.
<i>D. o. howardi</i>	232.	246.	239.	176.	210.	189.	15.0	43.3	32.7	27.0	31.0	29.0	41.0	47.3	43.8	42.0	47.5	44.0
<i>D. o. sierrae</i>	221.	243.	234.	158.	185.	170.	5.5	35.0	21.3	26.8	31.0	29.0	40.5	45.5	43.0	40.5	46.3	43.3
	FEMALES																	
<i>D. o. howardi</i>	209.	222.	216.	147.	159.	153.	15.5	26.5	20.6	27.0	30.8	28.8	38.0	41.3	39.9	37.3	41.4	39.4
<i>D. o. sierrae</i>	202.	225.	213.	125.	152.	137.	4.0	20.5	13.9	25.5	28.7	27.1	37.0	40.5	39.1	37.4	41.5	39.2

* Measurement from tip of shortest lateral rectrix to projected transverse line through tip of longest rectrix, with feathers of tail in normal 'closed' relation.

¹Pac. Coast Avif., no. 11, 1915, p. 60; Bureau of Biological Survey, MS; etc.

Range.—The Silver Fir association from Mount Pinos, California, east through the Tehachapi Range, and north in the main Sierra Nevada to about the 31st parallel of latitude.

Specimens examined.—Specimens of *D. o. howardi* have been examined from the following California localities: Mount Pinos, 8; Tehachapi Peak, 1; Olancho Peak, 1; Renshaw Meadow, Tulare County, 1; Sequoia National Park, 1; Mount Whitney, 1; Fresno County, near Tulare County line, 5; Kearsarge Pass, 3; Bishop Creek, Inyo County, 1. Total 22.

Specimens of *D. o. sierrae* have been examined from the following localities: Oregon: Warner Mountains, 1; Fort Klamath, 6. California: Fandango Mountain, Modoc County, 2; Warner Mountains, Modoc County, 5; Sugar Hill, Modoc County, 1; Mount Shasta, 1; 8 miles south of Bald Mountain, Shasta County, 1; Baird Station, Shasta County, 1; 30 miles northeast of Weaver-ville, Trinity County, 1; Fort Crook, 2; Mount Lassen, 1; Susanville, 1; Lake City, 1; Sierra City, 2; Emigrant Gap, Placer County, 1; Blue Canyon, Placer County, 1; Bryan Cabin, Eldorado County, 1; Phillips, Eldorado County, 1; 1 mile west of Round Lake, Eldorado County, 4; Round Meadow, Eldorado County, 3; Blood's, Calaveras County, 1; Deer Creek, Madera County, 1. Total 39.

Remarks.—Throughout the range of *Dendragapus obscurus* in California there is a gradual geographic variation which particularly affects the length and graduation of the tail. These characters increase steadily from north to south. Birds from Mount Pinos express in ultra-typical form this lengthening of the tail itself, as well as the greater ratio between the length of the lateral and median rectrices, a truly striking character which the writers have termed 'graduation' in the above description. In this same region, the variation in color and pattern from typical *sierrae* is also most pronounced. Here, too, even the field characteristics of the species seem to have undergone modification, for the birds of Mount Pinos display a sagacity in eluding capture that is utterly beyond anything observed by the authors in birds from the central or northern Sierra Nevada. One 'hooting' site, in a Jeffrey Pine, was carefully watched on several different occasions during a period of two years, before the bird was located and secured. By contrast, the species in like season in the Sierras is often lacking in suspicion to the point of actual stupidity.

The bird is named in recognition of the many years of enthusiastic ornithological work done by Mr. O. W. Howard in southern California and Arizona, and more particularly in appreciation of the very definite assistance which his knowledge of the Mount Pinos region enabled him to render us.

Acknowledgments.—Material has been assembled from the U. S. National Museum, U. S. Bureau of Biological Survey, University of California Museum of Vertebrate Zoology, Museum of Comparative Zoology of Harvard University, and from the collections of Mr. L. M. Huey, Mr. O. W. Howard, and Major Allan Brooks. Our hearty thanks are due Dr. C. W. Richmond, Dr. H. C. Oberholser, Dr. J. Grinnell, Mr. H. S. Swarth, and Mr. Outram Bangs, of the above institutions, for their courteous coöperation in placing the material under their charge at our disposal for purposes of comparison. The senior author has also to thank the scientific staff of the American Museum of Natural History for the privilege of examining the type of *D. o. sierrae*.

Pasadena, California, July 2, 1923.