

PROCEEDINGS
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BIOLOGICAL SOCIETY OF WASHINGTON

SOME UNRECORDED COLORADO MAMMALS.

BY MERRITT CARY.

Fifteen species of mammals collected in the course of explorations conducted by the Biological Survey in Colorado have not been hitherto recorded from that State, and authentic evidence of the occurrence of two additional species has also been obtained for the first time. Most of these additions to the Colorado mammal list were made in the field seasons of 1905-06, during which a detailed survey was made of the region north of Grand River, extending from the plains at the eastern base of the foothills in Jefferson, Boulder, and Larimer counties, westward to the Utah line. The additions are briefly recorded in the present paper, together with notes on the ranges of three other little-known Colorado mammals, pending a complete report when a thorough survey of the distribution areas of the State shall have been completed.

For the privilege of publishing the following records, all but two of which are based on specimens in the collection of the Biological Survey, my thanks are due Dr. C. Hart Merriam.

Sciurus aberti mimus Merriam.

Vernon Bailey reports this handsome squirrel as common in the eastern foothills of the San Juan Mountains, 10 miles west of Antonito, Conejos County, where it inhabits the yellow pine forests.

Eutamias dorsalis utahensis Merriam.

Early in September, 1906, fifteen specimens of this beautiful gray chipmunk were collected in the dense cedar and piñon breaks near Douglas Spring, at the north base of the Escalante Hills, in western Routt County. A few were taken among the yellow pines as high as 7,000 feet, but they were most abundant on the north slopes of the Escalantes, at about 6,400 feet.

This chipmunk was described from Ogden, Utah, and has not been taken previously much east of Provo, in that State. It is largely an Upper

Sonoran form, and probably ranges continuously across northeastern Utah along the southern foothills of the Uinta Mountains, entering Colorado in the region of the Yampa Plateau, south of Bear River. I was surprised to find it absent from the piñon-covered ridges on either side of the lower White River Valley.

Eutamias minimus (Bachman).

Chipmunks from the sage plains of the lower Snake River Valley and Browns Park, in western Routt County, agree perfectly with typical specimens of *E. minimus* from Green River, Wyoming. Three males and one female were collected in 1906, at the following localities: Snake River (15 miles northeast of Sunny Peak), August 24; Snake River (south of Sunny Peak), August 28; Ladore (Browns Park), September 3. Towards the mountains on the south and east, *minimus* grades into the dark form *consobrinus*, specimens from Lay, Axial Basin, and Lily being intermediate in coloration.

Eutamias minimus consobrinus (Allen).

This is the small, dark chipmunk so abundant on all the higher plateaus and mountains west of the Front Range, and north of Grand River. It is chiefly an inhabitant of the Canadian and Transition zones, and in the eastern part of its range is the only chipmunk present over a large area. On some of the western plateaus, however, *E. consobrinus* ranges down a short distance into the cedar and piñon belt of the Upper Sonoran zone, and there commingles with the large Hopi chipmunk (*E. hopiensis*).

E. consobrinus is represented by a large series in breeding and fresh post-breeding pelages, and a few in the early winter coat. Specimens were secured at the following localities: Middle Park (Coulter, Sulphur Springs, Mount Whiteley); North Park (Arapahoe Pass, Canadian Creek, Pearl); Slater (20 miles southeast); White River Plateau (25 miles southeast of Meeker); Meeker; Rangely; Gypsum; and Baxter Pass (Book Plateau).

Four chipmunks in the National Museum, collected by Capt. Bowman at old Fort Massachusetts (near the present site of Garland), have been recorded as *E. consobrinus*.* These are faded flat skins which were made up with the skulls inside. The skulls have been removed and cleaned through the courtesy of Dr. M. W. Lyon, Jr., and are found to be larger and more robust than skulls of typical *consobrinus*. A comparison with the skull of the type of *Eutamias amoenus operarius* from Gold Hill, Boulder County, proves that the Fort Massachusetts chipmunks are properly referable to that species.

Eutamias amoenus operarius Merriam.

Eutamias amoenus operarius Merriam, Proc. Biol. Soc. Wash., XVIII, p. 164, June 29, 1905. Type from Gold Hill, Boulder County, Colorado.

This chipmunk is most abundant in the boreal zones on the eastern slope of the Front Range, but is found as low as 6,500 feet at several localities in the eastern foothills. It ranges far above timber line, and across

* Allen, Bull. Am. Mus. Nat. Hist., III, p. 113, 1891.

the Front and Medicine Bow ranges to Coulter (Middle Park), and Canadian Creek (North Park), where its range meets and slightly overlaps that of *consobrinus*, of the western Colorado mountains. In color, *operarius* is not unlike *consobrinus*, but it may be readily distinguished by its more robust skull. Five skulls of adult male topotypes of *operarius* measure: Occipito-nasal length, 32; basilar length, 24.6; zygomatic breadth, 18. Four skulls of adult male *consobrinus* from Canadian Creek, North Park, measure: Occipito-nasal length, 31; basilar length, 23.5; zygomatic breadth, 17.2.

Specimens of *operarius* are in the Biological Survey collection from the following localities: Gold Hill, Estes Park, Longs Peak, Boulder (5 miles west), Nederland, Golden, Idaho Springs, Fort Garland, Antonito, Lake City, Silverton, Mount Kelso, Elkhorn, Livermore, Berthouds Pass, Canadian Creek and Coulter.* Specimens taken in the vicinity of Colorado Springs, and at Crested Butte, have been identified for E. R. Warren of Colorado Springs.

Citellus tridecemlineatus parvus (Allen).

This small spermophile is generally distributed over the desert areas of western Routt and Rio Blanco counties. It was noted on Snake River, 30 miles northeast of Sunny Peak, August 22, 1906, and specimens were secured at Escalante, August 31, and Rangely, September 13 and 17. It was reported common in Lily Park, at the confluence of Snake and Bear rivers; in Browns Park, near the Utah line; and on the Iron Springs Divide, between Snake and Bear rivers. In 1905, two immature specimens were collected in the Axial Basin, Routt County, August 8, and an adult male at Mud Springs, on the White River Plateau, 30 miles southeast of Meeker, August 18. The altitude of Mud Springs is 9,000 feet. J. Alden Loring collected three of these spermophiles at Fort Garland in July, 1892, while more recently, August 30 and 31, 1904, J. H. Gaut secured two more at Antonito, Conejos County.

Onychomys breviceaudus Merriam.

This short-tailed grasshopper mouse is common on the sage plains of North Park, and in the region between Snake and Bear rivers, in western Routt County. It is represented by a series of eight July and August specimens, taken at the following localities: Canadian Creek, east of Walden, North Park; Snake River, south of Sunny Peak, Routt County; Bear River, south of Lay.

A specimen collected by W. W. Granger at the forks of Snake River, near Honnold, Routt County, September 1, 1895, is recorded by Allen. †

Neotoma desertorum Merriam.

This desert wood rat apparently enters Colorado from the Utah deserts only in the extreme lower White River Valley. Four specimens were collected five miles west of Rangely, September 15 and 16, 1906. It was

* Both *operarius* and *consobrinus* have been collected at Coulter and Canadian Creek.

† Bull. Am. Mus. Nat. Hist., VIII, p. 253, 1896.

not at all common, but a considerable number of nests were found on the cactus-covered bench, or table, on the south side of White River, at 5,300 feet.

Reithrodontomys megalotis (Baird).

A series of twenty-six harvest mice from Grand Junction are referable to this species. All but one were collected by A. H. Howell, early in November, 1895, and are in early winter pelage. The other specimen, secured by E. A. Preble, August 25 of the same year, is in the bright, fulvous summer coat.

Microtus (Lagurus) pauperrimus (Cooper).

Several ill-defined runways, and other evidences of a small species of *Microtus* — presumably a *Lagurus* — were detected on the sage plains in the eastern part of North Park in July, 1905. During the same month, three specimens were trapped in the sand hills at the west base of the Medicine Bow Mountains, east of Walden. In August and September, 1906, fourteen specimens of this species were collected at the following localities: Canadian Creek, east of Walden, North Park; eight miles south of Lily, Routt County; four miles east of Toponas, Egeria Park. The bleached anterior portion of a skull was found in a wood rat's nest near Douglas Spring, at the north base of the Escalante Hills. The species may have a general range over the sage plains of northwestern Colorado, but thus far has been found only in widely separated colonies between 6,000 and 8,500 feet altitude.

Doctor Allen has recorded the species from Kinney Ranch, Sweetwater County, Wyoming, * within 30 miles of the Colorado line.

Thomomys clusius ocis Merriam.

This is the pocket gopher of the sage plains of western Routt and Rio Blanco counties. It is represented in the Biological Survey collection by eight August and September specimens, from the following localities: Bear River, south of Lay, Routt County; Snake River, 15 miles northeast of Sunny Peak; Ladore, Browns Park; Elk Springs, 8 miles south of Lily; and Lily. Part of a weathered skull was found at Douglas Spring. The high escarpment of the Book Plateau probably forms the southern boundary of the dispersion of this species.

Thomomys aureus pervagus Merriam.

Eight specimens from Antonito, and two from Conejos River, in the southern part of the San Luis Valley, collected in September, 1904, accord well with this form, the type locality of which is Espanola, Santa Fe County, New Mexico. The altitude of Antonito is a little over 8,000 feet.

Thomomys fulvus (Woodhouse).

A specimen of this species from Fisher Peak, southeast of Trinidad, Las Animas County, was collected by A. H. Howell, September 15, 1903, at an elevation of 8,000 feet.

* Bull. Am. Mus. Nat. Hist., VIII, p. 248, 1896.

Perodipus longipes (Merriam).

The Moki kangaroo rat is tolerably common in the desert part of the lower Grand Valley, from the Utah line east at least to Grand Junction. A fine male was collected three miles northwest of Fruita, Mesa County, September 27, 1906. Four immature specimens from Grand Junction are also in the Biological Survey collection.

Perognathus apache Merriam.

A pocket mouse collected on the sandy desert three miles northwest of Fruita, Mesa County, September 28, 1906, is referable to this species. Another specimen, taken at Balzac, west of Rifle, Garfield County, October 4, 1906, is much larger, but of similar coloration, and its affinities are clearly with *apache*.

(?) Perognathus callistus Osgood.

Numerous signs of a small or medium sized pocket mouse were noted in bunches of prickly pear (*Opuntia polyacantha*), in the valley of Snake River, a few miles southeast of Sunny Peak, in August, 1906. Specimens were not secured, owing to the extreme abundance of white-footed mice. The Snake River pocket mice are tentatively recorded as *P. callistus* because of their proximity to the type locality, Kinney Ranch, Sweetwater County, Wyoming, which is only 40 miles to the northwest. No other evidences of pocket mice were observed north of the Grand River Valley.

Spilogale gracilis saxatilis Merriam.

The little spotted skunk is generally reported from the warm desert valleys entering Colorado from the west. Sunny Peak, Routt County, seems to be the eastern limit of its dispersion in the Snake River Valley; while it is common at Rangely, on White River; and in Lily Park, at the confluence of the Snake and Bear rivers. In the Grand Valley the spotted skunk probably occurs as far east as Glenwood Springs, since Mr. Fred Baker, a taxidermist of that place, reports that he has recently handled several skins taken between Newcastle and Glenwood Springs.

A male specimen from Grand Junction (collection Biological Survey, November 3, 1895, A. H. Howell), and one from Coventry, Montrose County, taken in 1906 (collection E. R. Warren), have been recorded recently as *saxatilis*.*

Myotis californicus (Aud. and Bach.).

In his recently published list of Colorado mammals,† E. R. Warren includes this species on supposition, without citing actual records of capture. A specimen in the Biological Survey collection from the southern end of the San Luis Valley shows that this bat reaches extreme southern Colorado. It is an adult male, and was taken 7 miles east of Antonito, Conejos County, September 1, 1904, at 8,000 feet.

* N. Am. Fauna No. 26, p. 24, 1906.

† Mamm. Colo., 1906.

Myotis californicus ciliolabrum (Merriam).

Two female bats collected at the old L 7 ranch on Snake River, a few miles southeast of Sunny Peak, Routt County, August 28 and 29, 1906, are referable to this pale form of *M. californicus*. They were caught in the deserted ranch buildings after nightfall.

Myotis yumanensis (H. Allen).

This pale, southwestern species is represented by two females from Snake River, south of Sunny Peak, Routt County, August 28, 1906; and a male taken near Lily, at the confluence of the Snake and Bear rivers, September 9, 1906.