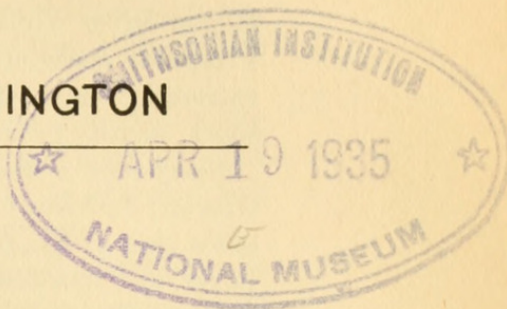


PROCEEDINGS  
OF THE  
BIOLOGICAL SOCIETY OF WASHINGTON



DESCRIPTIONS OF THREE NEW RACES OF BRUSH  
RABBIT FROM CALIFORNIA.

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During the course of a systematic study of the Leporidae of California, three heretofore unnamed geographic races of *Sylvilagus bachmani* have been recognized. These may now be named and described as follows:

***Sylvilagus bachmani tehamae*, new subspecies.**

*Type*.—Adult male, skin and skull; no 34971, Mus. Vert. Zool.; from Dale's, on Paine's Creek, 600 feet altitude, Tehama County, California; collected December 26, 1924, by J. Grinnell; orig. no. 6183.

*Geographic range*.—From the Rogue River Valley, Jackson County, Oregon, south through northern California, along the inner coast ranges, to southern Lake County, and along the western slope of the Sierra Nevada to Placer County; found in suitable territory on the floor of the Sacramento Valley at least as far south as Butte County.

*Diagnosis*.—Size: medium, with ears slightly larger and hind feet somewhat shorter than in *Sylvilagus b. ubericolor*. Color: slightly paler dorsally, and noticeably paler on sides, than in *ubericolor*; tips of ventral hairs white. Skull: rostrum very broad at base, tapering rather abruptly; postorbital notches well rounded; palatal bridge relatively long; auditory bullae small, although definitely larger than in *ubericolor*.

*Measurements*.—The average and extreme measurements in millimeters of six adults from Tehama and Shasta counties are as follows: Total length, 322.5 (305-340); tail vertebrae, 28.3 (22-33); hind foot, 73.2 (70-78); basilar length, 49.0 (48.3-50.0); zygomatic breadth, 31.9 (31.2-32.7); postorbital constriction, 10.8 (9.8-11.8); greatest length of nasals, 26.9 (26.3-27.8); greatest combined width of nasals, 13.3 (12.7-14.0); alveolar length of upper molar series, 11.9 (11.7-12.0); diameter of external auditory meatus, 4.0 (3.8-4.3); breadth of brain case measured from inner side of one external auditory meatus to that of its opposite, 22.0 (21.2-22.5); least length of palatal bridge, 5.9 (5.3-6.5).

*Remarks*.—The range of this race is tentatively extended north to the



Rogue River Valley on the basis of one adult specimen examined from Prospect, Jackson County, Oregon. The skin of this individual is in extremely worn pelage, but the skull is in perfect condition, showing the short, basally broad rostrum characteristic of *tehamae*.

*Specimens examined*.—A total of 58, from the following localities: Oregon: Jackson County: Prospect, 1. California: Shasta County: three miles west of Knob, 4400 feet altitude, 3 (coll. Calif. Acad. Sci.); McCloud River near Baird Station, 1; Stillwater, 4 (coll. U. S. Biol. Survey). Trinity County: Hayfork, 1; South Fork Mountain, 8; divide twelve miles north of North Yolla Bolly Mt., 4400 feet altitude, 1. Tehama County: 600 feet altitude, on Paine's Creek, 4; Lyman's, 3300 feet altitude, four miles northwest of Lyonsville, 3; Manton, 2300 feet altitude, 9; Mill Creek, two miles northeast of Tehama, 2; Tehama, 1 (coll. U. S. Biol. Survey). Butte County: fourteen miles south of seven miles west of Chico, 7. Yuba County: Rackerby, 2 (coll. Calif. Acad. Sci.). Placer County: Auburn, 3 (coll. U. S. Biol. Survey). Mendocino County: Lierly's Ranch, four miles south of Mt. Sanhedrin, 2; three miles south of Covelo, 2. Lake County: Castle Springs, 2700 feet altitude, 1 (coll. Calif. Acad. Sci.); Glenbrook, 1 (coll. Calif. Acad. Sci.). Colusa County: three miles west of Stonyford, 1. Yolo County: Rumsey, 1.

***Sylvilagus bachmani macrorhinus*, new subspecies.**

*Type*.—Adult female, skin and skull; no. 51679, Mus. Vert. Zool.; from Alpine Creek Ranch, three and one-half miles south of two and one-third miles east of Portola, 1700 feet altitude, San Mateo County, California; collected April 18, 1932, by E. Lowell Summer, Jr.; orig. no. 138.

*Geographic range*.—West-central California, from San Francisco south along the coast to north end of Monterey Bay and inland from southwestern Solano County south to Santa Clara County.

*Diagnosis*.—Size: slightly smaller than *Sylvilagus b. ubericolor*, but ears longer. Color: intermediate between *ubericolor* and *bachmani*. Skull: large, rostrum long and narrow in comparison with *bachmani* from coastal San Luis Obispo County; postorbital notches slit-like instead of oval-shaped as in *ubericolor*; anterior palatine foramina moderately constricted posteriorly; auditory bullae of medium size.

*Measurements*.—The average and extreme measurements of nine adult topotypes are as follows: total length, 346.1 (319–372); tail vertebrae, 40.8 (36–45) (average of eight); hind foot, 72.9 (70.8–77.2); ear from crown, 74.8 (70–78); ear from notch, 64.1 (61–66); basilar length, 50.9 (49.5–52.4); zygomatic breadth, 31.9 (31.0–33.3); postorbital constriction, 10.4 (9.0–11.7); greatest length of nasals, 27.9 (26.2–29.6); greatest combined width of nasals, 12.4 (11.7–13.1); alveolar length of upper molar series, 12.9 (12.4–13.4); diameter of external auditory meatus, 5.0 (4.7–5.4); breadth of brain case measured from inner side of one external auditory meatus to that of its opposite, 22.2 (21.2–23.5); least length of palatal bridge, 5.3 (5.0–6.2).

*Remarks*.—Material at hand from the north and south sides of San Francisco Bay, representing the races *ubericolor* and *macrorhinus*, indicates



that in respect to at least two of the cranial characters studied, namely, the shape of the postorbital notch and the size of the auditory bullae, these two subspecies do not overlap.

Two specimens examined from southwestern Solano County, while from north of the bay, come from near the delta region and show no close relationship to *ubericolor*. These individuals are as gray as *riparius*, but in cranial characters they more nearly agree with *macrorhinus*.

*Specimens examined*.—A total of 105 from the following localities in California: Solano County: ten miles southwest of Suisun, 2 (coll. Ralph Ellis, Jr.). Contra Costa County: near Walnut Creek, 2; west side of Mt. Diablo, 5; Pacheco, 1; near Moraga, 1. Alameda County: near Berkeley, 23; Oakland, 1. San Francisco County: San Francisco, 3 (coll. Calif. Acad. Sci.). San Mateo County: Menlo Park, 7; Alpine Creek Ranch, 1700 feet, 48. Santa Clara County: Stevens Creek, 3; San Jose, 1; Black Mountain, 4. Santa Cruz County: near Santa Cruz, 4.

***Sylvilagus bachmani riparius*, new subspecies.**

*Type*.—Adult female, skin and skull; no. 57348, Mus. Vert. Zool.; from west side of the San Joaquin River, 2 miles northeast of Vernalis, in Stanislaus County, California; collected November 11, 1931, by Robert T. Orr; orig. no. 448.

*Geographic range*.—Known only from the vicinity of the type locality, on the west side of the San Joaquin River in northern Stanislaus and southern San Joaquin counties.

*Diagnosis*.—A moderately pale, gray-sided brush rabbit, resembling *Sylvilagus b. virgulti* of the Salinas Valley externally, but with slightly darker color dorsally. Skull: similar to that of *virgulti* in size but with zygomatica more broadly expanded; rostrum of medium size but differing from all other forms of *bachmani* in that it bulges laterally; nasals lacking much of the anterior constriction seen in *macrorhinus* and *virgulti*; anterior palatine foramina almost entirely lacking posterior constriction; post-orbital notches slit-like; auditory bullae of medium size, larger than in *macrorhinus*.

*Measurements*.—The average and extreme measurements of four adult topotypes are as follows: Total length, 328.0 (307–347); tail vertebrae, 38.8 (36–41); hind foot, 76.5 (75–78); ear from notch, 69.5 (68–73); basilar length (3 averaged), 48.8 (47.9–50.0); zygomatic breadth (3 averaged), 31.4 (31.3–31.5); postorbital constriction, 9.9 (9.1–10.5); greatest length of nasals, 27.9 (27.0–29.3); greatest combined width of nasals, 12.2 (12.0–12.6); alveolar length of upper molar series, 12.4 (12.2–12.5); diameter of external auditory meatus (3 averaged), 5.0 (4.8–5.2); breadth of brain case measured from inner side of one external auditory meatus to that of its opposite (3 averaged), 21.7 (21.1–22.3); least length of palatal bridge, 4.9 (4.6–5.1).

*Remarks*.—The presence of *Sylvilagus bachmani* on the floor of the San Joaquin Valley has not, as far as known, previously been recorded. In the spring of 1931 the writer obtained his first individual of this species in



northern Stanislaus County. On subsequent visits to the same locality four additional specimens were obtained.

*Specimens examined.*—A total of five, from the west side of the San Joaquin River near Vernalis, in Stanislaus County, California.

It is appropriate here to express appreciation to officials of the United States Bureau of Biological Survey and of the California Academy of Sciences, and to Mr. Ralph Ellis, Jr., for the use of material having an important bearing upon this work, and, likewise, to Mr. E. Lowell Summer, Jr., of the California Fish and Game Commission, who contributed a large series of brush rabbits from San Mateo County, California.

*December 20, 1934.*



Orr, R T. 1935. "Descriptions of three new races of brush rabbit from California." *Proceedings of the Biological Society of Washington* 48, 27–30.

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