

Identification and restriction of the type locality of the Manzano Mountains cottontail, *Sylvilagus cognatus* Nelson, 1907 (Mammalia: Lagomorpha: Leporidae)

Jennifer K. Frey, Robert D. Fisher, and Luis A. Ruedas

(JKF, LAR) Department of Biology and Museum of Southwestern Biology, University of New Mexico, Albuquerque, New Mexico 87131, U.S.A.; (RDF) Biological Resources Division, U.S. Geological Survey, National Museum of Natural History, Washington, D.C. 20560, U.S.A.

Abstract.—The locality from which the holotype of *Sylvilagus cognatus* Nelson, 1907 was collected is identified and restricted.

Nelson (1907:82) reported the type locality of *Sylvilagus cognatus* (currently regarded as *S. floridanus cognatus*) as “10,000 feet altitude, near summit of Manzano Mountains, New Mexico”. Poole & Schantz (1942) subsequently reported the type locality as “Tajique, near summit of Manzano Mountains, altitude 10,000 feet, Valencia Co., N. Mex.” The reference to Tajique as the specific locality where the holotype was collected has caused some question (Frey 1996). Tajique is a town at 2043 m on the eastern base of the Manzano Mountains located in the Tajique land grant, Tarrant Co., New Mexico. In the southwestern U.S., cottontail taxa often are associated with distinctive vegetative communities. Accordingly, precise and accurate locations for type localities are important both to systematic and ecological studies of southwestern cottontails.

Nelson (1907) reported the holotype of *Sylvilagus cognatus* as collected by A. Rea in February 1905 and deposited in the Biological Survey Collection, USNM, as No. 136569; no additional specimens were mentioned. The USNM has three additional specimens of this taxon labeled as topotypes, also collected by A. Rea. Rea was not an employee of the Biological Survey of the museum and there are no field notes associated with these specimens. At that time, specimens received from non-employ-

ees were catalogued first into an intermediate catalogue (the “X catalogue”) before formal cataloguing in the USNM catalogue. The four specimens of *cognatus* were X-catalogued on three separate occasions; therefore, they either were received at different times or processed at different times: first a single entry, later another, and finally two together, including the holotype (see Table 1). All four were catalogued as being from “Tajique, Manzano Mountains”. The first entry, but not the later ones, has had added to it, in a different hand, “10,000 ft.” These four specimens were then entered into the USNM catalogue at two different times, a single specimen first, and then later a series of three. Again all were entered in this catalogue as being from “Tajique, Manzano Mountains”. The first entry has no elevation; the series of three, which includes the holotype, all have “10,000 ft.” as part of the locality. Finally, all four specimen labels, which probably were produced at USNM rather than in the field, bear “10,000 ft.” as part of the locality (variances with respect to locality among catalogues and specimen tags are summarized in Table 1). It thus would seem that Poole & Schantz (1942) included Tajique as part of the locality because it appears on all the labels and in both of the catalogues. Nelson (1907) may not have included Tajique in the original description because he had rea-

Table 1.—Data recorded on the specimen tags, in the intermediate "X catalogue," and in the museum catalogue of the Division of Mammals, U.S. National Museum for the holotype and three topotypes of *Sylvilagus cognatus*.

Source	Date	Locality	Remarks
X No. 4999	17 Jan 1905	New Mexico: Tajique	10,000 ft. (Manzano Mts.) topotype
USNM 135755	17 Jan 1905	New Mexico: Tajique	
skin tag	17 Jan 1905	New Mexico: Tajique	Manzano Mts. 10,000 ft.
X No. 5190	7 Feb 1905	New Mexico: Manzano Mts.	(Tajique) topotype
USNM 136567	7 Feb 1905	New Mexico: Manzano Mts.	Tajique (10,000 ft.)
skin tag	7 Feb 1905	New Mexico: Manzano Mts.	Tajique (10,000 ft.)
X No. 5330	Feb 1905	New Mexico: Tajique, Manzano Mts.	Topotype ^a
USNM 136568	Feb 1905	New Mexico: Manzano Mts.	Tajique (10,000 ft.)
skin tag	Feb 1905	New Mexico: Manzano Mts.	Tajique (10,000 ft.)
X No. 5331	Feb 1905	New Mexico: Tajique, Manzano Mts.	Type ^a
USNM 136569	Feb 1905	New Mexico: Manzano Mts.	Tajique (10,000 ft.)
skin tag	Feb 1905	New Mexico: Manzano Mts.	Tajique (10,000 ft.)

^a Remarkd for both entries "Skulls may be mismatched; received without tags."

son to believe that these specimens were not actually from Tajique. In his revision of the North American rabbits, Nelson (1909) reported five specimens from the Manzano Mountains and repeated the type locality in the synonymy as it was reported in the original 1907 description. However, he later remarked that "The topotypes of the present form from Tajique *ranch* [italics ours], at 10,000 feet altitude, near the highest part of the Manzano Mountains, vary [. . .], but a specimen from a short distance away and lower down on the east slope of the extreme south end of the range is larger . . . and agrees with those from Tajique" (Nelson 1909:192). We could not find "Tajique Ranch" on any map or gazetteer.

We were unable to find any correspondence concerning the actual place of capture of the rabbits in the Smithsonian Institution archives. However, Rea did send some miscellaneous bones to the Smithsonian Institution that he had uncovered in a cave on (or near) his ranch and they were cataloged as being from "Manzano Mts." or "Tajique, Manzano Mts." Further, in 1904 Rea sent a snake (*Pituophus*) to the Smithsonian Institution that subsequently was cataloged as being from "Tajique, ab.

10,000 alt". In a letter from A. K. Fisher to L. Stejneger in regards to this snake from Rea "captured near Tajique at about 10,000 ft. altitude," Fisher, discussing the unusual capture, quotes from Rea "speaking generally of rattlesnakes they are not found up here . . . suppose the climate is not warm enough for them. Rea's mailing address was given as "Tajique, Valencia Co., New Mexico." Torrance Co. was created from portions of Valencia and other counties on 16 March 1903 with additional portions of Valencia Co. (including most of the Manzano Mountains) added to Torrance Co. on 2 February 1905 (Coan 1965). Thus, it may be assumed that everything sent to the Smithsonian Institution by Rea was given the locality of Tajique because that was his mailing address rather than where the specimens were collected.

James H. Gaut, an employee of the Biological Survey, worked in the Manzano Mountains for three months during the fall and early winter of 1903 (Bailey 1928). Gaut's field notes (Smithsonian Institution Archives Record Unit 7176) describe camps made "near Tajique, altitude 7800 feet." Bailey (1928), in describing localities visited by Gaut describes Tajique, as "A

town [italics ours] on the eastern slope of the Manzano Mountains, 30 miles southeast of Albuquerque; 7500 feet." This corresponds with the present town of Tajique and suggests that during the early 1900's Tajique commonly referred to the town. Interestingly, Gaut's field notes also describe a camp "at an elevation of 10,500 feet at Mr. A. Rea's ranch on the summit of the mountain due west of Tajique." The collector of the holotype and owner of this ranch probably are one and the same. Further, Gaut certainly knew the difference between Tajique and Rea Ranch. He cataloged a *Mus-tela* and several *Peromyscus* as being from "Summit of Ridge, Rea's Ranch, 10,000 ft." as opposed to others from "East slope near Tajique, 8400 ft."

A map of the Cibola National Forest in the Manzano Mountains (USDAFS, 1938) labels a "house, cabin, or other building" symbol as "Rea." We believe this refers to the ranch owned by A. Rea from which the type specimen of *S. cognatus* was collected and herein restrict the type locality of *S. cognatus* to the vicinity of Rea Ranch. It is located 1.9 km N and 13.4 km W of Tajique (T6N, R5E, NE1/4 of NW 1/4 Sec. 9, N34°45'05.39", W106°25'18.04") on the northeast side of Bosque Peak, at 2880 m (= 9450 ft.) elevation. Bosque Peak is the highest peak of the north end of the Manzano Mountains; the relatively flat top of the peak covers approximately 2.5 km². Vegetation in the vicinity of the restricted type locality (vegetative communities follow Dick-Peddie, 1993) includes Upper Montane Coniferous Forest (i.e., mixed coniferous forest) characterized by Douglas-fir (*Pseudotsuga menziesii*) and white fir (*Abies concolor*), small patches of Subalpine Coniferous Forest characterized by Engelmann spruce (*Picea engelmannii*) and corkbark fir (*Abies lasiocarpa* var. *arizoni-*

ca), Subalpine-Montane Grassland, and Montane Scrub on dry, steep western slopes. The vegetative community in the vicinity of Rea Ranch is consistent with the observation that *Sylvilagus floridanus* is typically associated with montane forests in New Mexico. In contrast, Tajique, at a lower elevation, is a transition between Colorado Piñon (*Pinus edulis*)-One-seed Juniper (*Juniperus monosperma*) Woodland, One-seed Juniper Savanna, and Plains-Mesa Grassland.

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