



3-7-1997

Elevational records for mammals in the White Mountains of California

Keith Geluso

University of Nevada, Reno

Candace S. O'Connor

University of Nevada, Reno

Jack P. Hayes

White Mountain Research Station, Bishop, California

Follow this and additional works at: <https://scholarsarchive.byu.edu/gbn>

Recommended Citation

Geluso, Keith; O'Connor, Candace S.; and Hayes, Jack P. (1997) "Elevational records for mammals in the White Mountains of California," *Great Basin Naturalist*: Vol. 57 : No. 1 , Article 12.

Available at: <https://scholarsarchive.byu.edu/gbn/vol57/iss1/12>

This Note is brought to you for free and open access by the Western North American Naturalist Publications at BYU ScholarsArchive. It has been accepted for inclusion in Great Basin Naturalist by an authorized editor of BYU ScholarsArchive. For more information, please contact scholarsarchive@byu.edu, ellen_amatangelo@byu.edu.

ELEVATIONAL RECORDS FOR MAMMALS IN THE WHITE MOUNTAINS OF CALIFORNIA

Keith Geluso¹, Candace S. O'Connor¹, Sean G. Sullivan², and Jack P. Hayes¹

Key words: high altitude, *Lemmyscus curtatus*, *Mustela erminea*, *Perognathus parvus*, *Peromyscus truei*.

The White Mountains of California and Nevada lie in the rain shadow of the Sierra Nevada and are very arid. This aridity leads to vegetational zones in the White Mountains occurring at higher elevations than are usual when compared to other mountain ranges in North America (Bole 1938). Consequently, many mammals are found at particularly high elevations (Dunmire 1961, Carey and Wehausen 1991). For example, the chisel-toothed kangaroo rat (*Dipodomys microps*), which typically lives between 1070 and 2130 m, was caught at 3170 m in the Whites (Bole 1938).

During the summers and autumns of 1985–1987 and 1995–1996, we trapped mammals near the Barcroft Laboratory of the White Mountain Research Station. Our trapping resulted in the establishment of 4 high-elevational records for mammals.

We captured 1 piñon mouse (*Peromyscus truei*) at 3660 m, 1 at 3710 m, 1 at 3780 m, and 1 at 4330 m. The previous elevational record was at 3350 m on Mt. Charleston in southern Nevada (Burt 1934), where the mouse was caught among bristlecone pines (*Pinus longaeva*). We trapped 3 of the mice in an alpine fell-field intermixed with large boulder piles. We trapped the 4th mouse 15 m below the summit of White Mountain Peak among rocks on a steep, unconsolidated talus slope. Vegetation near our 3 lower capture sites was mostly dwarf sage (*Artemisia arbuscula*), wax currant (*Ribes cereum*), small forbs, and grasses; vegetation near the summit was exceedingly sparse. The nearest trees were several kilometers from our capture sites.

A male Great Basin pocket mouse (*Perognathus parvus*) was captured at 3690 m in an alpine fell-field. The previous elevational record

was at 3048 m on Mount Grant in Nevada (Hall 1946), where 4 individuals were caught on sagebrush-covered slopes on the southwest side of the mountain. Vegetation near our capture site consisted of small forbs and grasses. No sagebrush or trees were present in the surrounding area.

We also caught 2 sagebrush voles (*Lemmyscus curtatus*), 1 at 3930 m and the other at 4270 m. The lower individual was captured in an alpine fell-field, the other on a talus slope with sparse vegetation near White Mountain Peak. Our lowest capture is 490 m higher than the previous record (Dunmire 1961). Dunmire's specimen also was caught in the White Mountains about 10 km from our record. *L. curtatus* is commonly associated with sagebrush, but both our specimens were captured among mixed alpine forbs and grasses.

One ermine (*Mustela erminea*) was captured at 3810 m along a rock outcrop within an alpine fell-field. This capture represents the 2nd highest published record in North America and the highest in the White Mountains. The highest North American capture of *M. erminea* was at 3960 m in Colorado (Armstrong 1972). However, in southern areas of the former Soviet Union this boreal species ranges up to 4000 m (Novikov 1962).

ACKNOWLEDGMENTS

We thank S. Houghton, D. Cann, T. Blanset, S. Jessup, and B. Geluso for their assistance in trapping. This research was supported by National Science Foundation grant IBN 9410693 to JPH. Photographs of the *P. truei*, *P. parvus*, and *M. erminea* can be requested from JPH.

¹Department of Biology, University of Nevada, Reno, NV 89557.

²White Mountain Research Station, Bishop, CA 93514.

LITERATURE CITED

- ARMSTRONG, D. M. 1972. Distribution of mammals in Colorado. Monograph of the Museum of Natural History, University of Kansas 3: 1-415.
- BOLE, B. P. 1938. Some altitude records for mammals in the Inyo-White Mountains of California. *Journal of Mammalogy* 19: 245-246.
- BURT, W. H. 1934. The mammals of southern Nevada. *Transactions of the San Diego Society of Natural History* 7: 375-427.
- CAREY, H. V., AND J. D. WEHAUSEN. 1991. Mammals. Pages 437-460 in C. A. Hall, Jr., editor, *Natural history of the White-Inyo Range, eastern California*. University of California Press, Berkeley. 536 pp.
- DUNMIRE, W. W. 1961. Breeding season of three rodents on White Mountain, California. *Journal of Mammalogy* 42: 489-493.
- HALL, E. R. 1946. *Mammals of Nevada*. University of California Press, Berkeley. 710 pp.
- NOVIKOV, G. A. 1962. Carnivorous mammals of the fauna of the USSR. Israel Program for Scientific Translations Ltd., Jerusalem. 284 pp.

Received 30 December 1995

Accepted 11 May 1996