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Great Salt Lake, Utah

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A New Gopher From Antelope Island, Great Salt Lake, Utah

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The present paper presents the results of a study of a series of specimens taken around the Great Salt Lake and on Antelope Island in this lake, the series forming part of the collection of the University of Utah. The form from Antelope Island differs sufficiently from the described subspecies of *Thomomys bottae* to merit separation and it is accordingly described below as *Thomomys bottae nesophilus*. Through the kindness of Dr. E. Raymond Hall the writer was able to make comparisons at the Museum of Vertebrate Zoology at Berkeley. My thanks are given to Dr. Hall for his courtesy and aid.

Thomomys bottae nesophilus subsp. nov.

Type.— Male adult, skin and skull, No. 1136, Department of Zoology, University of Utah; Antelope Island, Great Salt Lake, Davis County, Utah; April 20, 1935; collected by S. D. Durrant; original No. 761.

Range.— Known only from type locality.

Diagnosis.— Size: medium; claws on fore feet very long. Color: upper parts, near cinnamon buff, lighter below; sides, nearly pinkish buff with considerable gray; pectoral and inguinal regions, cinnamon; nose, grayish black; post auricular patches, black. (Color terms according to Ridgeway, Color Standards and Nomenclature, 1912.) Skull: interparietal wedge-shaped; tympanic bullae small; dorsal surface of lamdoidal prominence, 3 mm. wide, rather than developed as a crest; zygomatic arch strongly rectangular, with jugal straight, nearly convex, rather than concave towards the skull.

Measurements.— Average and extreme measurements of four adult males from type locality are as follows: Total length, 230 mm. (220-242); tail vertebrae, 69 (60-75); hind foot, 32 (30-33); ear from notch, 5.5 (5-6); claws on third toe of front foot, 9.3 (9.0-9.9). Skull: basilar length, 35.3 mm. (33.6-36.5); greatest length of nasals, 14.4 (14.1-14.8); zygomatic breadth, 25.5 (24.9-26.2); mastoid breadth,



Fig. 1, left; *Thomomys bottae aurieventris*; adult male, dorsal view, No. 1498; Department of Zoology, University of Utah; Kelton, Utah, September 27, 1929.

Fig. 1, center; *Thomomys bottae nesophilus*; adult male, No. 1136, Department of Zoology, University of Utah; Antelope Island, Great Salt Lake, Utah; April 20, 1935.

Fig. 1, right; *Thomomys bottae albicaudatus*; adult male, No. 1039, Department of Zoology, University of Utah; Salt Lake City, Utah; April 24, 1934.



Fig. 2. Same sequence as for Fig. 1, ventral views.

Note in *Thomomys bottae nesophilus* the triangle-shaped interparietal, the greatly widened crest of occipital bone, the small tympanic bullae, and the convex zygomatic arch.

20.4 (19.8-21.1); least interorbital breadth, 6.8 (6.5-7.1); alveolar length of upper molar series, 8.4 (8.2-8.7); extension of premaxillae posterior to nasals, 2.5 (2.1-2.9); length of rostrum, 17.1 (16.4-18.4); breadth of rostrum, 8.2 (7.6-8.6). Only one female specimen from type locality was studied. The measurements are: Total length, 210 mm.; tail vertebrae, 65; hind foot, 31; ear from notch, 5. Skull: basilar length, 31.2 mm.; greatest length of nasals, 12.3; zygomatic breadth, 23.2; mastoid breadth, 19.3; least interorbital breadth, 6.9; alveolar length of upper molar series, 8.2; extension of premaxillae posterior to nasals, 2.2; length of rostrum, 15.2; breadth of rostrum, 7.3.

Comparison.— Among named races of *Thomomys bottae*, the races *aureiventris* and *albicaudatus* most closely resemble *nesophilus*, which differs from both in markedly longer claws on front feet; triangular as opposed to quadrate-shaped interparietal bone, and markedly smaller tympanic bullae. The lamdoidal prominence is slightly wider than in specimens of *albicaudatus* from the University of Utah campus in Salt Lake City, but very markedly wider than in topotypes of that race, and wider even than in topotypes of *aureiventris*. Similarly the color is intermediate though nearer that of topotypes of *albicaudatus*. The color of specimens from Salt Lake City is nearer that of topotypes of *albicaudatus* but still intermediate towards *aureiventris*.

Material.— Five skins and skulls from type locality.

Remarks.— Undoubtedly the old Lake Bonneville and the subsequent Great Salt Lake have played quite a role in gopher distribution. More work is necessary before the determination of isolation as a factor in the formation of mammalian subspecies can be determined in this relatively non-migratory form. The age of these lakes is well known and further work may bring out some interesting data in this field of philosophical zoology.