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Description of a New Pocket Gopher from the Oquirrh Mountains, Utah

By STEPHEN D. DURRANT

Continued studies of the pocket gophers of the *talpoides* group from Utah have disclosed the existence of an hitherto undescribed race indigenous to the Oquirrh Mountains, which are located in Utah, Tooele and Salt Lake Counties.

I am indebted to Dr. H. H. T. Jackson and Major E. A. Goldman of the U. S. Biological Survey, and to Dr. J. Sedley Stanford of the Utah State Agricultural College at Logan, Utah, for the loan of comparative material.

This new race most closely resembles *Thomomys talpoides moorei*, but differs from it quite markedly both as to color and cranial features. The new form may be known as:

Thomomys talpoides oquirrhensis, Durrant, subsp. nov.

Type.—Male, adult, skin and skull; No. 2605 Museum of Zoology, University of Utah; Settlement Creek, Oquirrh Mountains, 6500 feet, Tooele County, Utah; collected by S. D. Durrant; original No. 1461.

Range.—Apparently limited to the Oquirrh Mountains.

Diagnosis.—Size: medium (see measurements); ear long; tail short. Color: Upper parts near Buckthorn Brown, mixed with black, grading to Pinkish Buff on lower parts; (capitalized color terms according to Ridgway, *Color Standards and Color Nomenclature*, Washington, D. C., 1912); inguinal region more deeply pink colored; feet white; nose grayish black; postauricular patches medium in size and black in color; chin and throat with varying amounts of white; tail dark brownish above for basal two thirds, distal third white; under surface of tail usually light, but in some specimens of the same color as upper surface. Front claws long and slender. Skull: Long and slender, but relatively wide at mastoidal region; nasals long and rounded posteriorly; rostrum long and narrow; zygomatic arches weak and not wide spreading, tending to be slightly bowed out posteriorly, but in the main to roughly parallel the sides of the skull; outer margin of zygomatic arch slightly concave; viewed laterally zygomatic arch dips deeply ventrad; dorsal surface of skull smooth, with weakly defined parietal crests; parietal crests nearly parallel, but bowing slightly in, in the parietal region, and

flaring widely posteriorly to pass lateral to the interparietal; extension of premaxillæ posterior to nasals very short; auditory bullæ large, truncate anteriorly and markedly inflated ventrally, appearing nearly to form a ventral rounded ridge and projecting well ventrad to the basisphenoid; pterygoid hamulæ long and weak; interpterygoid space widely V-shaped; palatal pits deep; upper incisors short and fairly robust; paraoccipital processes weak and smooth.

Measurements.—Average and extreme measurements of 4 adult males and 7 adult females from the type locality are, respectively, as follows: Total length, 209 mm. (216-197), 203 (215-193); length of tail, 58 (60-55), 56 (59-52), length of hind foot, 28 (29-28), 27 (28-25); length of ear from notch, 6.3 (7-6), 5.4 (7-5); basilar length of Hensel, 32.2 (32.8-31.9), 30.2 (31.5-28.5); greatest length of nasals, 13.9 (14.3-13.7), 12.9 (13.3-12.2); zygomatic breadth, 21.9 (22.8-21.4), 20.4 (21.0-19.5); mastoidal breadth, 19.0 (19.5-18.5), 18.2 (19.1-17.5); least interorbital breadth, 6.9 (7.1-6.7), 6.8 (7.2-6.6); alveolar length of upper molar series, 7.6 (7.9-7.2), 7.5 (8.0-6.7); extension of premaxillæ posterior to nasals, 0.9 (1.0-0.6), 0.8 (1.0-0.5); length of rostrum, 15.8 (16.2-15.5), 14.8 (15.5-14.2); greatest breadth of rostrum (anterior to zygomata), 7.7 (7.9-7.5), 7.2 (7.5-6.9); width of upper incisors at cutting edge, 4.1 (4.3-4.0), 4.0 (4.2-3.6).

Comparisons.—Compared with near topotypes of *Thomomys talpoides uinta*, *Thomomys talpoides oquirrhensis* differs as follows: Color darker throughout; postauricular patches larger in extent and darker in color; ears longer, more pigmented inside, and pinna more pointed; external ear opening smaller. Skull: Nasals longer, rounder posteriorly rather than deeply emarginate, and less flaring distally; zygomatic arches weaker and markedly less wide spreading; lacrimal processes smaller; pterygoid hamulæ weaker, and interpterygoid space generally more narrowly V-shaped; basisphenoid narrower; rostrum longer and wider; extension of premaxillæ posterior to nasals markedly less; upper incisors shorter and wider.

Comparisons of *Thomomys t. oquirrhensis* with the type and type series of *Thomomys t. gracilis*, which is the adjacent form to the northwest, show the following differences: Color uniformly darker on dorsal surface, and about same color on ventral surface; postauricular patches smaller in extent and less deeply colored; ears longer. Size: Larger; tail longer. Skull: Smoother; brain case more inflated; nasals longer and rounded posteriorly as opposed to truncate; skull averaging slightly wider in zygomatic and mastoidal measurements; interorbital breadth greater; extension of premaxillæ posterior to nasals less;

rostrum longer but wider; auditory bullæ smaller but more inflated ventrally; basisphenoid narrower; pterygoid hamulæ weaker and interpterygoid space more widely V-shaped; glenoid fossa wider; zygomatic arches weaker and straighter; upper incisors wider and longer.

Thomomys t. oquirrhensis differs from topotypes of *Thomomys t. levis* as follows: Color, upper parts uniformly darker, with more of the rich brown in evidence and less admixture of black, (this peculiarity really causes *levis* to look darker, but examination of the terminal bands of the hair shows *oquirrhensis* to be actually darker in color, Buckthorn Brown as opposed to Sayal Brown); under parts deeper buff; postauricular patches smaller, and lighter in color. Skull: Flatter, less convex dorsally; brain case more inflated and wider in mastoidal region; zygomatic arches similar in size, but in *oquirrhensis* the squamosal process dips deeply ventrad, so that viewed laterally the zygomatic arch extends further ventrad; postero-lateral border of squamosal plate directed in a caudo-dorsal cephalo-ventral plane rather than nearly horizontal with frontal plane, thereby forming a definite space between itself and external auditory meatus, whereas in *levis* they lie in close proximity to each other and even form an indentation of the squamosal plate to accomodate the meatus; interparietal larger; nasals shorter and wider especially at posterior margin; posterior margin of nasals not as rounded; premaxillæ heavier; lacrimal processes larger; pterygoid hamulæ weaker and longer, and interpterygoid space more widely V-shaped; palatal pits deeper; upper incisors heavier.

Among named races of *Thomomys talpoides*, *Thomomys t. oquirrhensis* most closely resembles *Thomomys t. moorei*, but in comparison with the type series differs in the following manner: Color, upper parts darker; under parts darker, due to greater mixture of black, while the terminal bands of hair are actually lighter; postauricular patches larger and darker in color; ears longer and darker in color; tail shorter. Skull: Smoother, approximately of same size; zygomatic arches weaker, less wide spreading, but *moorei* shows the same peculiarities of the arch as *oquirrhensis* as set forth under the comparison with *levis*; nasals wider posteriorly, rounded posteriorly as opposed to emarginate, and less flaring distally; extension of premaxillæ posterior to nasals markedly less; mastoidal breadth less; pterygoid hamulæ weaker; interpterygoid space widely V-shaped as opposed to moderately lyre-shaped; rostrum same length but wider; upper incisors wider.

Remarks.—In connection with this study I have had occasion to examine a great many specimens of the *talpoides* group of *Thomomys*, from a series of localities extending the whole length of the Wasatch

Mountains. The gophers of the Wasatch Mountains from Mount Nebo north to Mount Timpanogos are referable to *Thomomys talpoides moorei*. Those in the northern part of the Wasatch range in the region of Cache County, Utah, and southern Idaho are referable for the present to *Thomomys talpoides uinta*.

The author is in full agreement with Goldman (1939:231-244) in which the *talpoides-fossor-quadratus* group was relegated to the single species *Thomomys talpoides*. Goldman (1938:336) remarked on the close resemblance between the forms that were previously named *Thomomys fossor moorei* and *Thomomys quadratus uinta*. These forms were restudied by the author in light of the large series at hand from the Wasatch Mountains and this work further substantiates the correctness of Major E. A. Goldman's conclusions, that of reducing them to subspecies of *Thomomys talpoides*. In addition, the gophers from South Fork of Ogden River, 18 miles east of Ogden, Weber County, Utah, and from one mile, and 7-8 miles east of Avon, Cache County, Utah, are intergrades between forms previously named *Thomomys f. moorei* and *Thomomys q. uinta* as shown by ear, color and cranial characters. This intergradation further bears out the validity of reducing them to subspecies of the species *Thomomys talpoides*.

To the list of subspecies of *Thomomys talpoides* found in Goldman (1939:234) should be added: *Thomomys talpoides gracilis*, Pine Canyon, 6600 feet, 17 miles northwest of Kelton, Box Elder County, Utah, and the form described as new in this paper.

In view of this work and that of Major E. A. Goldman, the gophers of Utah consist of only two species, each with many apparently valid races. They are *Thomomys bottae*, largely inhabiting the lowlands, and *Thomomys talpoides*, inhabitants of the mountains and high valleys.

Specimens Examined.—Total number 41, localities as follows: *Salt Lake County*: Rose Canyon, Oquirrh Mountains, 5650 feet, 27. *Tooele County*: Settlement Creek, Oquirrh Mountains, 6500 feet, 14.