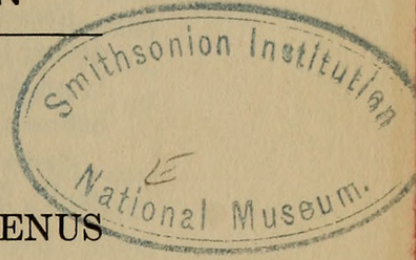


PROCEEDINGS
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THREE NEW KANGAROO RATS OF THE GENUS
DIPODOMYS.

BY E. A. GOLDMAN.

One of the results of a visit by the hunter-naturalist, Charles Sheldon, to the coastal region of central Sonora, in 1922, was the discovery of a new form of *Dipodomys deserti*. The species had been collected on the international boundary, but there seems to be no previously published record of its occurrence in Mexico east of the Colorado River and Gulf of California. The new subspecies and two new races of *Dipodomys spectabilis* are described as follows:

Dipodomys deserti sonoriensis, subsp. nov.

Sonora Kangaroo Rat.

Type from La Libertad Ranch, 30 miles east of Sierra Seri, Sonora, Mexico. No. 242306, ♂ adult, U. S. National Museum (Biological Survey collection), collected by Charles Sheldon, January 3, 1922.

General characters.—Closely allied to *Dipodomys deserti deserti*, but general color of upperparts decidedly darker, more heavily overlaid with black, the buffy element of a vinaceous instead of ochraceous tone. Skull differing in detail, especially the weaker development of the maxillary arches and jugals.

Color.—*Type*: Upperparts in general light vinaceous-buff, rather heavily overlaid or mixed with black, especially on rump; nose, area at base of vibrissae, and orbital rings distinctly blackish; under parts, fore limbs, hip stripes, hind feet above, and sides of tail white as usual in the species; tail blackish above (tip missing in type), a narrow dusky median line below.

Skull.—Closely resembling that of *D. d. deserti*, but maxillary arches weaker; lachrymals larger, their extension along posterior border of maxillary arches equalling about one-half the distance to outer angle (extension distinctly less than one-half this distance in *D. d. deserti*); jugals more slender; squamosal (as viewed from above) less broadly articulating with parietal; mastoid bullae more fully inflated along line of contact with parietals.

Measurements.—*Skull of type* (no external measurements available):

Greatest length (median line), 45; greatest breadth (between outer sides of audital bullae), 31.5; breadth across maxillary arches, 24.7; greatest length of lachrymal, 4.4; maxillary toothrow, 5.5.

Remarks.—Specimens from parts of southwestern Arizona are somewhat darker in color of upper parts than typical *Dipodomys deserti*, and apparently grade toward the form here described. *D. d. sonoriensis* probably has an extensive range over the sandy plains of northwestern Sonora.

Specimens examined.—Two (the type, skin and skull, and an additional skull), from the type locality.

***Dipodomys spectabilis baileyi*, subsp. nov.**

Bailey's Kangaroo Rat.

Type from 40 miles west of Roswell, New Mexico. No. 97185, ♂ adult, U. S. National Museum (Biological Survey collection), collected by Vernon Bailey, June 13, 1899. Original number 6961.

General characters.—Closely allied to *Dipodomys spectabilis spectabilis*, but decidedly larger; color usually slightly paler; skull larger, more massive and differing in detail, especially the greater expansion of zygomatic arches; tail extensively tipped with white as in *D. s. spectabilis*.

Color.—*Type* (rather worn pelage); upper parts in general near pinkish buff, purest on cheeks, shoulders, and sides, becoming light buffy on head, moderately mixed with black especially over top of head and back; under parts, postauricular spots, fore limbs, hind feet above, usual hip stripes, and tail at extreme base all around pure white; tail beyond extreme base blackish inconspicuously mixed with gray above and below to near white tip where it becomes pure black all around, the sides white to subterminal area mentioned; hind legs above ankles blackish all around (interrupted in most specimens by a white line along inner side); soles of hind feet brownish black.

Skull.—Similar to that of *D. s. spectabilis*, but larger, more massive, rostrum relatively shorter, maxillary arches heavier, the upper surface projecting farther forward beyond frontals (as viewed from above); mastoid bullae relatively as well as actually larger; incisors relatively heavier.

Measurements.—*Type*: Total length, 385; tail vertebrae, 283, hind foot, 58. Average and extremes of two adults from region of type locality: 381 (380–382); 280 (279–281); 58 (58–58).

Skull.—*Type*: Greatest length on median line, 45.6; greatest breadth (between outer sides of audital bullae), 30.6; breadth across maxillary arches, 26.8; least width of supraoccipital (near interparietal), 1.7; maxillary toothrow, 6.6.

Specimens from numerous localities from northwestern New Mexico to western Texas are referable to *D. s. baileyi*. This form intergrades in southwestern New Mexico with typical *D. s. spectabilis*.

***Dipodomys spectabilis zygomatiscus*, subsp. nov.**

Chihuahua Kangaroo Rat.

Type from Parral, southern Chihuahua, Mexico. No. 96432, ♂ adult, U. S. National Museum (Biological Survey collection), collected by E. A. Goldman, September 17, 1898. Original number 13030.

General characters.—Closely resembling *Dipodomys spectabilis spectabilis*, but color of upperparts slightly darker, the buffy element more heavily mixed with black; skull broader posteriorly across mastoid and audital bullae; outer sides of zygomata divergent posteriorly (sides nearly parallel in *spectabilis*). Similar to *D. s. cratodon*, but differing in cranial details, especially the smaller incisors, lesser inflation of mastoid bullae, and posterior divergence of zygomata.

Color.—*Type* (fresh pelage): Upper parts in general near light ochraceous-buff, palest on head, rather heavily overlaid or mixed with black, especially over top of head, back and rump; black facial areas conspicuous; under parts, fore limbs and hip stripes pure white as usual in the species; lower part of hind legs (above ankles) black, interrupted by a white line along inner side; hind feet white above, dusky below along median line of soles; tail (except extreme base which is white) mixed black and grayish above and below to near white tip where it becomes black all round; sides of tail white to black subterminal zone.

Skull.—Similar to that of *D. s. spectabilis*, but broader and more massive; broader especially posteriorly between outer sides of audital bullae; mastoid and audital bullae more expanded in front of meatus; jugals less nearly parallel, more divergent posteriorly. Resembling that of *D. s. cratodon*, but incisors smaller; mastoid bullae less evenly rounded or inflated; supraoccipital and interparietal broader; jugals less bowed inward, more divergent posteriorly.

Measurements.—*Type*: Total length, 340; tail vertebrae, 197; hind foot, 54. Average and extremes of four adults, including type, from type locality: 341.5 (334–352); 201.5 (195–212); 52.2 (49–54).

Skull (type): Greatest length on median line, 44.2; greatest breadth (between outer sides of audital bullae), 30.7, breadth across maxillary arches, 27.2; least width of supraoccipital (near interparietal), 2; maxillary toothrow, 6.2.

Remarks.—While close alliance with the other forms of *D. spectabilis* is indicated by the general characters this kangaroo rat differs in rather well marked cranial details, especially the laterally projecting mastoid and audital bullae. The lateral development of the audital bullae, affording increased surface for squamosal attachment as compared with other forms, apparently is associated with the posterior divergence of the zygomata.

Specimens examined.—Four, all from the type locality.



Goldman, Edward Alphonso. 1923. "Three new kangaroo rats of the genus *Dipodomys*." *Proceedings of the Biological Society of Washington* 36, 139–141.

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