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## Descriptions of Two New Rodents from Tobago, the West Indies, and of *Zygodontomys brevicauda tobagi* Thomas

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In a collection obtained on Tobago in 1960 by Franklin Thurab of the Public Health Department, Port-of-Spain, Trinidad, are new subspecies of *Echimys* and *Akodon* and a small series of *Zygodontomys brevicauda tobagi*, which was originally very briefly described by Oldfield Thomas in 1900.

A study of material now available in the American Museum of Natural History indicates that most of the species of terrestrial mammals from Tobago average larger in size than the forms from Trinidad and in most cases are subspecifically distinct.

In the following descriptions, all measurements are in millimeters. Capitalized color terms are from Ridgway (1912). All the material examined is in the American Museum of Natural History. The photographs of skulls were made by Mr. Robert E. Logan, Manager of the Photography and Slide Division, the American Museum of Natural History.

### ***Echimys armatus handleyi***, new subspecies

Figure 1

TYPE: A.M.N.H. No. 184813, skin and skull of an adult male from Speyside, St. John Parish, eastern Tobago, the West Indies, at an altitude

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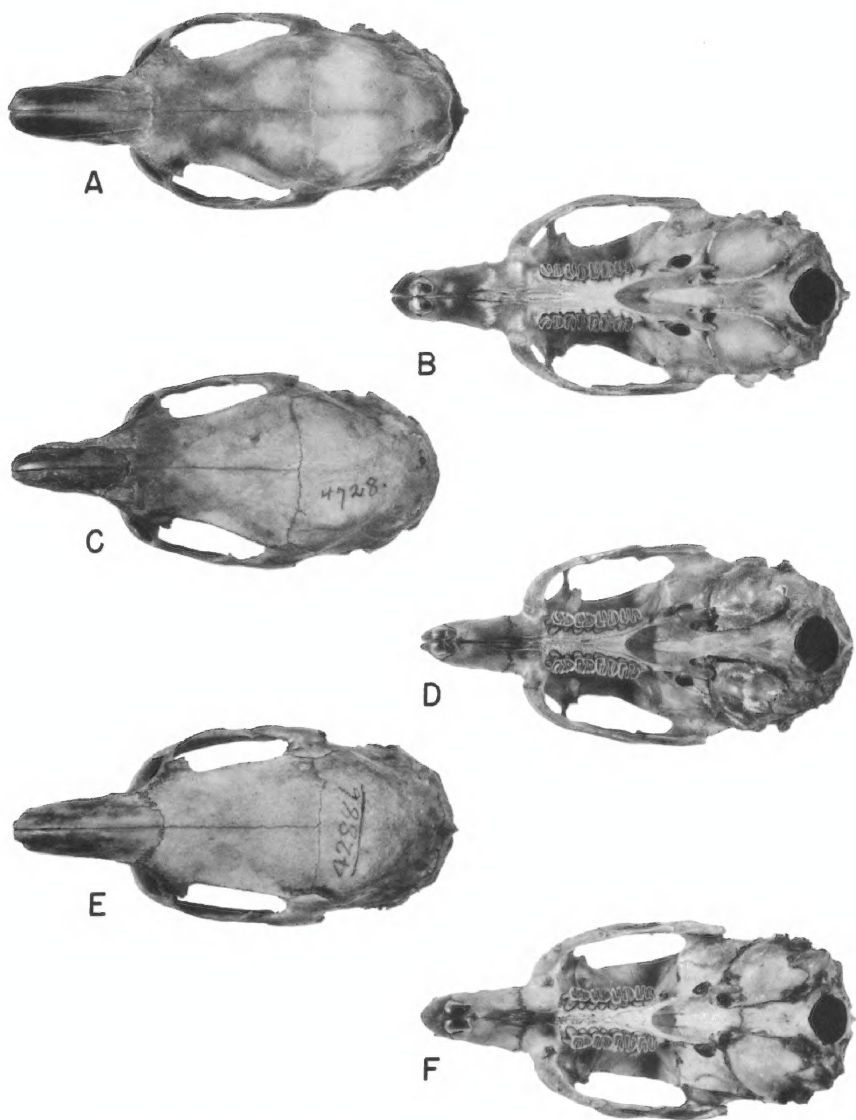


FIG. 1. A, B. Type of *Echimys armatus handleyi* (A.M.N.H. No. 184813). A. Dorsal view. B. Ventral view. C, D. Type of *E. a. castaneus* (A.M.N.H. No. 4728-6001). C. Dorsal view. D. Ventral view. E, F. Type of *E. a. longirostris* (A.M.N.H. No. 42886). E. Dorsal view. F. Ventral view. All  $\times 1$ .

of 300 feet; collector Franklin Thurab, original no. 55; March 20, 1960; skin in good condition, prepared from a spirit specimen shortly after it was trapped; skull complete.

In addition to the type there are 19 topotypes (14 skins and skulls and three incomplete skeletons, and five in spirits), and one skin and skull from Charlotteville, Tobago; all are adult.

DIAGNOSIS: Size large; pelage spiny; color buffy gray; length of tail about equal to length of head and body, thick at base, tapered to a fine slender tip; tail hairy at base, rest of tail scaly, sparsely covered with short, coarse hair; hind feet large and broad; similar in general coloration and cranial features to *Echimys armatus castaneus* J. A. Allen from Princes Town, Trinidad, and to a specimen of *Echimys armatus armatus* E. Geoffroy St.-Hilaire from Kartabo, British Guiana (type of *E. longirostris* Anthony) but larger; length of hind foot in specimens from Tobago 44–50, as compared with 37–42 in those from Trinidad, British Guiana, and Venezuela; cheek teeth also larger in *handleyi* (11.8–13.0) than in the subspecies *castaneus* and *armatus* (10.5–11.9).

DESCRIPTION OF TYPE: Color of hair on upper parts between Cinnamon-Buff and Ochraceous-Tawny, shaded with blackish brown on neck and shoulders; spines on back and sides Olive-Brown, with a subterminal band of Cinnamon-Buff; nose Ochraceous-Tawny; vibrissae black (white in one topotype); ears blackish brown; under parts, including inner sides of fore and hind limbs, under side of neck and throat Light Drab; upper sides of forefeet and hind feet Light Buff; scaly part of tail Hair Brown above, paler below; base of tail Olive-Brown above, Ochraceous-Tawny below. Skull long and narrow; frontals broad; supraorbital ridges well developed; bullae prominent, rounded; palatal foramina normally short; cheek teeth complex, tooth rows long and narrow.

MEASUREMENTS OF TYPE: Total length, 480; length of tail, 240; hind foot, 46. Skull: Greatest length, 59.0; condylobasal length, 52.5; nasal length, 19.1; zygomatic breadth, 26.1; interorbital breadth, 13.5; mastoid breadth, 22.5; maxillary tooth row, 12.6.

Additional measurements of *E. a. handleyi* are given in table 1; measurements of *E. a. castaneus*, in table 2; and measurements of *E. a. armatus*, in table 3.

REMARKS: Charles O. Handley, Jr., of the United States National Museum, compared the Tobago series of *Echimys* with *E. a. castaneus* and *E. a. armatus*. Handley noted that, while specimens of the Trinidad *castaneus* are indistinguishable from specimens of typical *armatus* from British Guiana and Venezuela, the Tobago specimens of *Echimys* are distinct from both these forms and represent an undescribed subspecies.

TABLE I  
 MEASUREMENTS (IN MILLIMETERS) OF *Echinys armatus handleyi*, NEW SPECIES, FROM TOBAGO

A.M.N.H. No.	Locality	Sex and Age	Total Length	Tail	Hind Foot	Skull, Greatest Length	Condylobasal Length	Nasal Length	Zygomatic Breadth	Interorbital Breadth	Mastoid Breadth	Maxillary Tooth Row
184794	Charlottesville	♂ ad	487	260	48	59.7	50.8	18.3	—	13.1	22.2	12.1
184796	Speyside	♀ ad	—	—	—	55.4	49.7	16.5	—	—	22.5	12.0
184797	Speyside.	♀ s.ad	—	—	—	53.4	46.3	15.8	26.0	12.2	22.4	12.5
184798	Speyside	♂ ad	465	235	46	57.5	50.5	16.4	26.0	13.3	21.4	12.8
184801	Speyside	♀ ad	—	—	—	57.8	51.2	17.6	25.4	13.5	—	12.5
184807	Speyside	♂ ad	480	250	46	58.5	51.5	18.4	26.5	13.3	21.8	13.0
184811	Speyside	♂ ad	470	210	44	54.8	48.2	16.5	25.3	13.2	21.5	12.5
184812	Speyside	♂ ad	480	240	50	57.2	48.4	16.4	25.5	13.2	22.5	12.0
184813	Speyside	♂ ad	480	240	46	59.0	52.5	19.1	26.1	13.5	22.5	12.6
184814	Speyside	♀ ad	400	170	46	62.0	53.7	19.7	27.7	12.7	23.2	12.3
184816	Speyside	♀ ad	500	250	46	55.8	50.5	17.0	25.8	13.6	21.5	12.0

TABLE 2  
MEASUREMENTS (IN MILLIMETERS) OF *Echimyus armatus castaneus* J. A. ALLEN FROM TRINIDAD

A.M.N.H. No.	Locality	Sex and Age	Total Length	Tail	Hind Foot	Skull, Greatest Length	Condylobasal Length	Nasal Length	Zygomatic Breadth	Interorbital Breadth	Mastoid Breadth	Maxillary Tooth Row
6000-4727	Caroni River	♀ ad	456	225	43.0	55.0	49.2	16.9	25.2	12.4	21.5	11.9
6001-4728	Princes Town	♀ ad	—	—	40.0	55.2	48.8	15.4	25.7	12.8	21.9	11.1
6311-4944	Caroni River	♀ ad	—	—	—	51.0	46.0	15.3	24.3	12.0	20.5	10.8
6312-4945	Caroni River	♀ ad	—	—	—	47.3	43.2	14.1	22.5	10.9	19.0	10.5
7704-6089	Caparo	♂ s.ad	410	190	39.0	50.0	45.2	15.3	—	12.0	21.1	10.5
7705-6090	Caura	♀ ad	474	234	40.0	51.6	47.1	15.4	23.7	11.2	21.2	11.0
7707-6092	Caura	♀ ad	465	218	37.0	55.7	51.0	17.4	26.0	13.0	21.3	10.8
7709-6094	Caura	♂ ad	430	205	40.5	52.2	46.5	16.5	24.5	11.7	21.2	11.6
29686	Aripo	♂ ad	418	210	40.0	50.5	45.0	15.1	22.6	11.5	19.8	9.6
171379	Carnage	♀ ad	442	227	37.0	53.2	49.2	16.9	26.0	—	22.0	11.4

TABLE 3  
MEASUREMENTS (IN MILLIMETERS) OF *Echimys armatus armatus* E. GEOFFROY  
ST.-HILAIRE

	Adult, A.M.N.H. No. 42886, Kartabo, British Guiana	Male Adult, A.M.N.H. No. 69897, Cumancoa, Venezuela
Total length	466.0	457.0
Tail	225.0	231.0
Hind foot	38.0	38.0
Greatest length of skull	56.4	54.0
Condylobasal length	49.2	47.6
Nasal length	19.2	17.9
Zygomatic breadth	26.1	24.9
Interorbital breadth	14.7	12.2
Mastoid breadth	21.8	21.0
Maxillary tooth room	11.4	11.0

***Akodon urichi tobagoensis*, new subspecies**

Figure 2

TYPE: A.M.N.H. No. 184789, skin and skull of an adult male from Speyside, St. John Parish, eastern Tobago, the West Indies, at an altitude of 300 feet; collector Franklin Thurab, original no. 163; March 31, 1960; skin in fairly good condition, prepared from a spirit specimen shortly after it was trapped; skull complete.

Besides the type there are two topotypes.

DIAGNOSIS: Size relatively large; tail slightly longer than half of length of head and body; color dark reddish brown; similar in general characters to *Akodon u. urichi* J. A. Allen from Caparo, Trinidad, but color paler, size slightly larger; length of hind foot, 26.0–27.5 (23–25 in *urichi*); cheek teeth larger, 5.2–5.4 (4.8–5.1 in *urichi*); bullae smaller; other cranial features about the same as in typical *urichi*.

DESCRIPTION OF TYPE: General color of upper parts Prout's Brown, the hairs Cinnamon, heavily mixed with black; under parts Cinnamon; tail nearly unicolored blackish above, slightly paler below; ears, forefeet and hind feet blackish. Skull long and narrow; rostrum slender; brain case large; interorbital region swollen; incisive foramina long, narrow, extending posteriorly to a plane across anterior border of first molars; interparietal very short and narrow.

MEASUREMENTS: Of the type (an adult male), an adult female topotype,

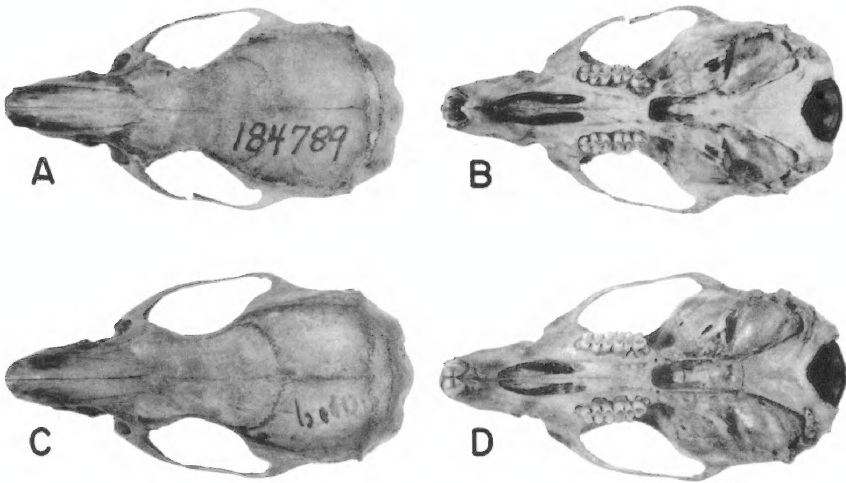


FIG. 2. A, B. Type of *Akodon urichi tobagoensis* (A.M.N.H. 184789). A. Dorsal view. B. Ventral view. C, D. Type of *A. u. urichi* (A.M.N.H. No. 7725-6110). C. Dorsal view. D. Ventral view. All  $\times 1.75$ .

and (in parentheses) the type of *Akodon u. urichi* (an adult female), an adult male from Princes Town, and an adult female from Sangre Grande: Total length, 183, — (200, 194, 195); length of tail, 65, — (68, 70, 70); hind foot, 26.5, 27.0 (24, 25, 25). Skull: Greatest length, 29.9, 29 (29.5, 30, 30.3); condylobasal length, 28.7, 27.9 (29.0, 27.5, 28.5); length of nasals, 11.2, 10.6 (11.2, 11.0, 11.1); zygomatic breadth, 15.0, 15.0, (14.9, 15.0, 15.0); interorbital breadth, 5.7, 5.5 (5.7, 5.8, 5.7); mastoid breadth, 12.7, 12.2 (12.5, 12.2, 12.5); maxillary tooth row, 5.4, 5.2 (5.0, 5.1, 5.0).

REMARKS: In addition to being larger than typical *Akodon urichi*, *A. u. tobagoensis* is paler, having a basic coloration of Cinnamon rather than Tawny, as in *urichi*.

*Zygodontomys breviceauda tobago* Thomas

Figure 3

*Zygodontomys breviceauda tobago* THOMAS, 1900, Ann. Mag. Nat. Hist., ser. 7, vol. 5, p. 274.

TYPE LOCALITY: Richmond, Tobago, the West Indies.

RANGE: Tobago, the West Indies.

GENERAL CHARACTERS: Size large, color reddish brown, tail 75 per

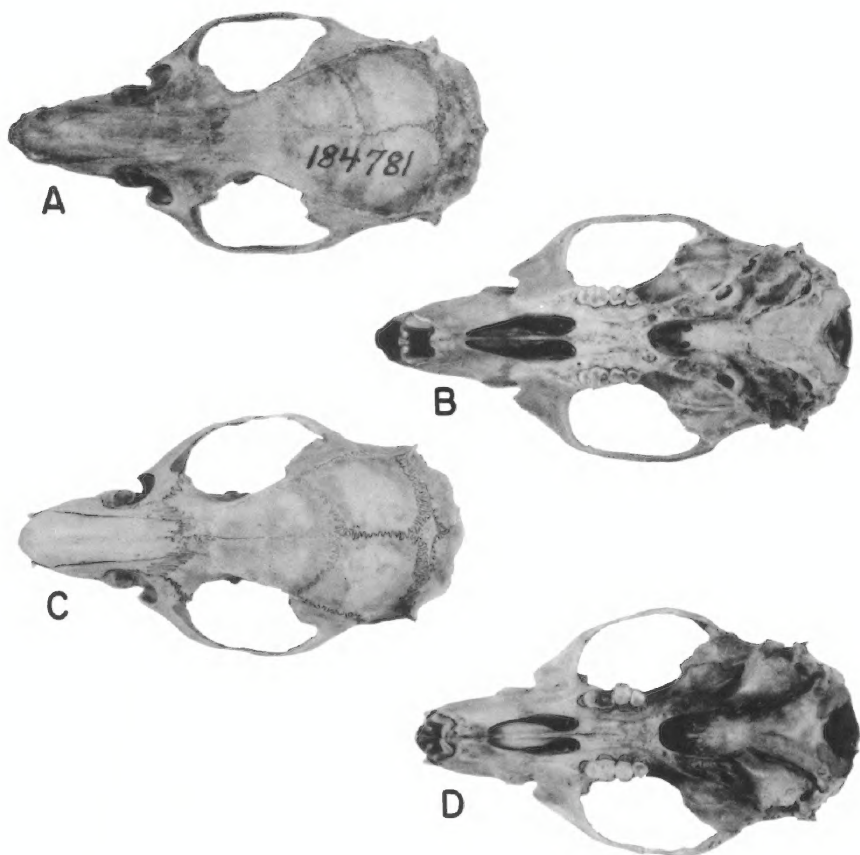


FIG. 3. A, B. *Zygodontomys brevicauda tobagi* (A.M.N.H. No. 184781). A. Dorsal view. B. Ventral view. C, D. *Z. b. brevicauda* (A.M.N.H. No. 173952). C. Dorsal view. D. Ventral view. All  $\times 1.75$ .

cent of length of head and body; averaging larger and more Tawny, and having longer and narrower skull, than *Zygodontomys b. brevicauda* J. A. Allen from Princes Town, Trinidad.

DESCRIPTION: An adult male from Speyside, Tobago, has upper parts rather paler than Ochraceous-Tawny, under parts Cinnamon Buff, tip of nose and ears blackish brown, tail nearly unicolored, blackish brown above and slightly paler below, forefeet and hind feet buffy white. Skull of subspecies relatively long and narrow, with rostrum long and broad, supraorbital ridges strongly developed and extending across parietals to occipital crest in adult, incisive foramina long and wide, extending



posteriorly to a plane across anterior borders of first molars, and bullae relatively small.

MEASUREMENTS: Type of *Z. b. tobagi* (adult male), two adult males, and one adult female from Speyside, Tobago, and (in parentheses) type of *Z. b. brevicauda* (adult male), two adult males, and one adult female, all from Princes Town, Trinidad: Total length, 246, 250, 260, 215 (258, 280, 272, 230); length of tail, 100, 110, 105, 90 (104, 120, 115, 86); hind foot, 32, 30, 31, 29 (28, 30, 30, 26). Skull: Greatest length, 35.0, 33.7, 35.4, 31.5 (32.2, 34.1, 34.5, 31.3); condylobasal length, —, 31.8, 33.0, 29.6 (30.6, 31.8, 31.5, 28.5); nasal length, —, 14.1, 15.3, 11.6 (13.0, 14.8, 15.0, 12.2); zygomatic breadth, 19.0, 17.4, 17.8, 16.1 (16.3, 17.5, 17.5, 15.8); interorbital breadth, —, 5.6, 5.5, 5.6 (5.3, 5.4, 5.3, 5.3); mastoid breadth, —, 13.6, 13.7, 12.7 (13.0, 13.3, 13.2, 12.3); maxillary tooth row, 4.6, 4.9, 4.9, 5.0 (4.9, 4.9, 5.1, 4.3).

REMARKS: In the original description, Oldfield Thomas stated that *Z. b. tobagi* is a darkened insular race of the Trinidad *Z. b. brevicauda*. Thomas gave only one distinguishing character, "a more dirty brownish hue" than the typical form. In all essential characters, *tobagi* is closely allied to *Z. b. brevicauda*, except that the skulls of Tobago specimens average larger than the skulls of Trinidad specimens. The largest skull in a series of 12 specimens from Tobago (greatest length, 35.4) is larger than the largest skull (34.5) in a series of more than 100 specimens from Trinidad.

## REFERENCES

RIDGWAY, ROBERT

1912. Color standards and color nomenclature. Washington, D. C., published by the author.

