OCCASIONAL PAPERS
THE MUSEUM
TEXAS TECH UNIVERSITY

NUMBER 70 31 OCTOBER 1980

NEW STURNIRA (CHIROPTERA: PHYLLOSTOMIDAE) FROM CENTRAL AND SOUTH AMERICA, WITH KEY TO CURRENTLY RECOGNIZED SPECIES

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In the course of a planned revision of the genus *Sturnira*, Luis de la Torre (1959, 1961, 1966; de la Torre and Schwartz, 1966) substantially advanced our knowledge of that genus of bats. Unfortunately, he turned his many talents to other interests before completing the task. In doing so he left unfinished the description of a species of *Sturnira* that he found masquerading in collections as *Sturnira lilium*. I take pleasure in recognizing his contributions to the field of mammalogy by proposing for this new taxon the name

Sturnira luisi, new species

Holotype.—Adult male, skin and skull, no. 9959, Texas Cooperative Wildlife Collection, Texas A&M University; from Cariblanco, 3000 feet, 11 mi. NE Naranjo, Alajuela, Costa Rica; taken on 12 April 1963 by Robert W. Adams, original number 285.

Paratypes.—From COSTA RICA: Alajuela: the type locality, TCWC 9992 ♀, 9998 ♀, *Limón*: La Lola, LACM 15185 ♀; Cariari, LSU 12778 ♀, 12779 ♀. ECUADOR: *El Oro*: 9 mi. S Zaruma, TCWC 12120 ♂, 12121 ♂, 12122 ♀, 12123 ♀. *Imbura*: Chata, 5800 ft., 14 km. NNE Ibarra, TCWC 12112 ♂. PERU: *Piura*: 4 mi. W Suyo, 1000 ft., TCWC 12124 ♂, 12125 ♀, 12126 ♀, 12127 ♀. Dr. de la Torre (personal communication) examined additional specimens from Panamá and Colombia that he considered referable to this taxon, but they are not available to me.

Description.—A medium-sized, dark-colored *Sturnira* (forearm, 41-45; greatest length of skull, 23-24) characterized by straight zygomatic arches (maxillary arm of zygoma not bowed outward) that form a continuous line with the lateral surface of the maxilla and produce a triangular appearance to the skull as viewed from dorsal or ventral aspect (Fig. 1); lower incisors trilobed; lower molars with distinct lingual cusps separated from each other by vertical notches (as in the *lilium* group).

Comparisons.—*S. luisi* needs comparison only with those species having distinct lingual cusps on at least the first two mandibular molars—namely, *S. lilium* (as defined by Jones and Phillips, 1976), *S. tildae*, *S. aratathomasi*, and *S. thomasi*—from all of which *S. luisi* differs in the shape of the zygomatic arches in which the maxillary arms are not bowed outward. In addition, *luisi* is larger and darker than *lilium* (forearm 41-45 as opposed to 37-41) where the two species are sympatric; much smaller than *aratathomasi*, which has a forearm length of 58-60; smaller than *tildae*, which has a forearm length of 45-48, and smaller than *thomasi* from the island of Guadeloupe in the Lesser Antilles (greatest length of skull 23-24 as opposed to 24.5-26; length of forearm 41-45 as opposed to 46-48).

In the accounts above and the key that follows, measurements are given in millimeters. I am grateful to M. S. Hafner of the Louisiana State University Museum of Natural Science (LSU) and D. R. Patten of the Los Angeles County Museum (LACM) for the privilege of examining specimens in their custody. Specimens in the Texas Cooperative Wildlife Collection (TCWC) were obtained under the aegis of a grant (AI-03743) from the National Institutes of Health.

Measurements.—External and cranial measurements (mean, standard deviation, range, coefficient of variation in that order for each measurement) of five males, followed by those of seven females, from Costa Rica, Ecuador, and Peru are: length of forearm, 42.70 (1.35, 41.1-44.5, 3.16), 43.46 (1.11, 42.0-45.0, 2.56); greatest length of skull, 23.78 (0.45, 23.2-24.2, 1.89), 23.73 (0.20, 23.5-24.0, 0.83); zygomatic breadth, 13.94 (0.44, 13.5-14.5, 3.15), 13.81 (0.19, 13.5-14.1, 1.35); cranial breadth, 10.68 (0.26, 10.4-11.0, 2.42), 10.61 (0.20, 10.4-11.0, 1.84); postorbital breadth, 6.14 (0.21, 5.0-6.4, 3.38), 6.03 (0.05, 6.0-6.1, 0.81); maxillary toothrow (C-M3), 7.02 (0.23, 6.8-7.3, 3.25), 7.11 (0.09, 7.0-7.2, 0.06); width across M2-M2, 8.50 (0.14, 8.3-8.7, 1.66), 8.47 (0.25, 8.0-8.7, 2.95); length of mandible, 15.50 (0.36, 15.0-16.0, 2.33), 15.33 (0.22, 15.0-15.6, 1.44); man-

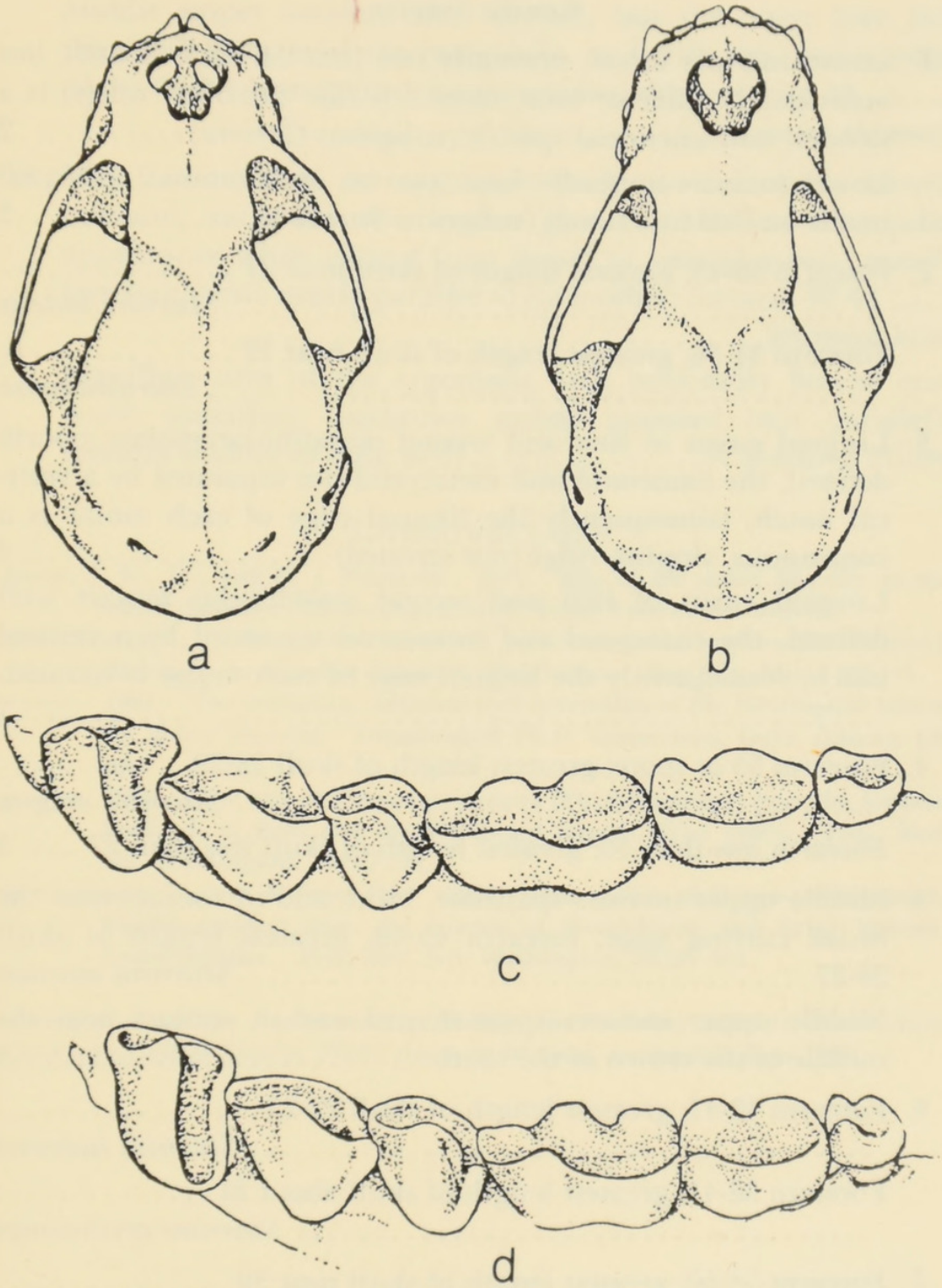

FIG. 1.—Dorsal views of typical skulls of (a) *Sturnira lilium* and (b) *Sturnira luisi*. Compare the bowed zygomatic arches of *lilium* with the straight arches of *luisi*. Drawings of the teeth of the left mandibular ramus of *luisi* (c) and *lilium* (d) compare the serrated condition of the lingual edges of the molars.

dibular toothrow (c-m3), 7.74 (0.18, 7.5-8.0, 2.35), 7.60 (0.16, 7.4-7.9, 2.15). The males weighed an average of 20.2 (17.4-22.7) grams, whereas the females (nonpregnant) averaged 19.68 (17.8-21.8).

Key to Species

1. Lower incisors broad, normally two (one on each ramus), but occasionally three or four, in which case the outer one(s) is a slender, nonfunctional spicule (subgenus *Corvira*).....2

   Lower incisors normally four (two on each ramus), subequal in size and all functional (subgenus *Sturnira*).....3

2. Forearm 39-43; greatest length of skull near 21 ..... *Sturnira bidens*

   Forearm 34-36; greatest length of skull near 19 ..... *Sturnira nana*

3. Lingual cusps of first and second mandibular molars poorly defined, the entoconid and metaconid not separated by a vertical notch, consequently the lingual edge of each molar is a continuous, sloping ridge (not serrated).....4

   Lingual cusps of first and second mandibular molars well defined, the entoconid and metaconid separated by a vertical notch, consequently the lingual edge of each molar is serrated. 7

4. Forearm 55 or more; greatest length of skull 28-29 ..... *Sturnira magna*

   Forearm less than 50; greatest length of skull less than 27 5

5. Middle upper incisors spatulate, bifid, and in contact near the broad cutting edge; forearm 45-48; greatest length of skull 25-27.....*Sturnira mordax*

   Middle upper incisors spear-shaped and in contact near the middle of the crown of the tooth 6

6. Forearm 42-47; greatest length of skull 22-25 ..... *Sturnira ludovici*

   Forearm 38-41; greatest length of skull about 21 ..... *Sturnira erythromos*

7. Forearm 58-60; greatest length of skull near 30 ..... *Sturnira aratathomasi*

   Forearm less than 55; greatest length of skull less than 28 8

8. Forearm 46-48; greatest length of skull 24-26 9

   Forearm 45 or less; greatest length of skull 20-24 10

9. Middle upper incisors bilobed, with the lobes of equal size, and forming a broad cutting edge; zygomatic breadth about 14 .....*Sturnira tildae*

Middle upper incisors also bilobed, but the outer lobe less than half the size of the inner lobe, and with the cutting edge of the teeth spear-shaped; zygomatic breadth less than 13 .... *Sturnira thomasi*

10. Maxillary arm of the zygomatic arch not noticeably bowed outward, thus the two arches give the skull a triangular appearance when viewed from dorsal or ventral aspect; maxillary toothrows nearly parallel to each other; forearm 42-44 ....*Sturnira luisi*

Maxillary arm of the zygomatic arch noticeably bowed outward; maxillary toothrows arched outward (not parallel); forearm seldom as long as 41..... *Sturnira lilium*

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