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A NEW SUBSPECIES OF *GLOSSOPHAGA COMMISSARISI* (CHIROPTERA: PHYLLOSTOMIDAE) FROM SOUTH AMERICA

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Glossophaga commissarisi is a relatively small glossophagine bat known from three disjunct populations in Central and South America. The northernmost of these, *Glossophaga commissarisi hespera*, is known from the coastal lowlands and riparian woodlands of western México from central Sinaloa southward to Colima (Webster and Jones, 1982). The nominate race, named and described by Gardner (1962), is found in a wide variety of tropical habitats from the Isthmus of Tehuantepec (central Veracruz and eastern Oaxaca) southeastward to Panamá (except on the arid Yucatán Peninsula), and probably occupies the coastal rainforests of western Colombia as well (Webster and Jones, 1982). The third population of *G. commissarisi* is found in the upper Amazon Basin of South America. It was first reported from southeastern Colombia by Webster and Jones (1983), who noted that the three individuals examined by them averaged larger than specimens from Mexico and Middle America, but they tentatively referred these individuals to *G. c. commissarisi*, otherwise known from no closer than 2200 kilometers to the north and on the other side of the Andes. Specimens of *G. commissarisi* subsequently have been reported from eastern Ecuador (Albuja, 1983) and eastern Perú (Graham and Barkley, 1984).

We now have had the opportunity to examine seven individuals of *G. commissarisi* from Amazonian South America—three from

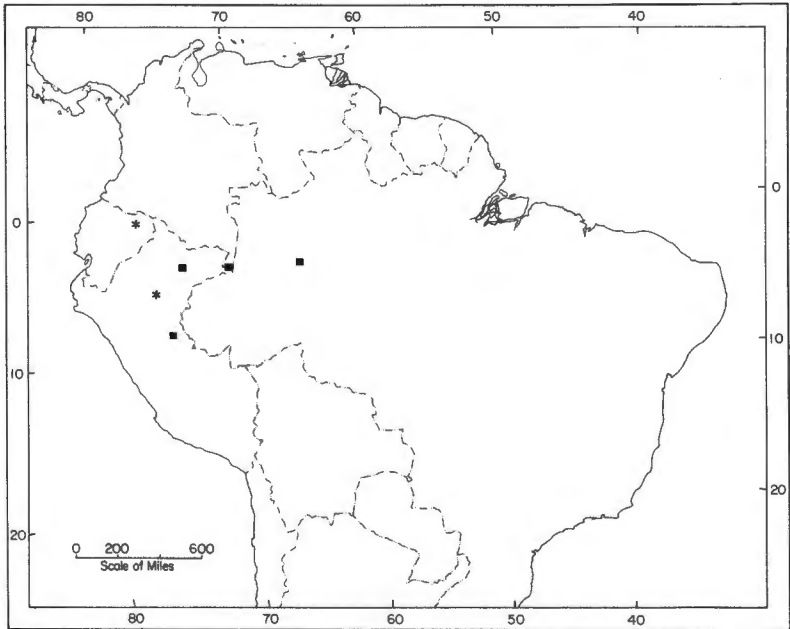


FIG. 1.—Geographic distribution of *Glossophaga commissarisi bakeri* in South America based on specimens examined (squares) or reported elsewhere (asterisks).

Colombia (those reported by Webster and Jones, 1983), two from Perú (reported by Graham and Barkley, 1984), and two from Brazil (USNM 562719-20)—and consider them to represent an undescribed subspecies, for which we propose the name:

Glossophaga commissarisi bakeri, new subspecies

Holotype.—Adult male, preserved in alcohol but with skull removed, TTU 9093, from Isla Santa Sofia, 30 km. NW Leticia, Amazonas, Colombia; obtained on 28 June 1969 by R. J. Baker, original no. 1453.

Selected external (from fluid-preserved specimen) and cranial measurements (in millimeters) of the holotype are: length of tail, 5.0; length of hind foot, 10.0; length of ear from notch, 12.0; length of forearm, 34.0; greatest length of skull, 20.1; condylo-basal length, 18.5; zygomatic breadth, 9.3; mastoid breadth, 9.0; interorbital breadth, 4.1; length of maxillary tooththrow, 6.8; length of mandibular tooththrow (c-m³), 7.2

Distribution.—Upper Amazon Basin of southern Colombia, eastern Ecuador, eastern Perú, and western Brazil (Fig. 1); known altitudinal distribution from approximately 50 to 300 meters.

Diagnosis.—Externally similar to other species of *Glossophaga*; cranial and dental morphology most closely resembling that of *G. commissarisi* as defined by Webster and Jones (1980), Webster (1983), and Webster and Handley (1986). Compared to *G. c. commissarisi* and *G. c. hespera*, specimens of *G. c. bakeri* have a presphenoid ridge that is better developed (rather than noticeably flattened subterminally), the parastyle of M1 is reduced (rather than better developed and directed posterolabially), the upper and lower molars are relatively larger, and the lower incisors are subequal in size (rather than unequal, the outer pair the larger). Quantitatively, *G. c. bakeri* differs from *G. c. commissarisi* in being larger in most external and cranial dimensions and approaches the relatively large size of *G. c. hespera*; however, *G. c. bakeri* averages smaller than *G. c. hespera* in measurements of cranial width (Table 1).

Remarks.—Specimens of *G. commissarisi bakeri* have been taken in mist nets set in tropical forests (Albuja, 1983) and abandoned fruit groves (Webster and Jones, 1983); most specimens have come from sylvan habitats adjacent to permanent bodies of water.

Females collected on 28 May and 8 August each carried one fetus, another taken on 28 June evinced no reproductive activity. A male collected on 24 October had enlarged testes.

C. O. Handley, Jr. (personal communication) provisionally identified an adult male (British Museum of Natural History, 66.4648) from San Lorenzo, 500 ft. Río Marañón, Loreto, Perú, as *G. commissarisi*. Handley's notes mention that the cranium of this individual is narrower than that of Central American *G. commissarisi* as well as differing in details of the dentition. Considering these characters and locality of capture, this specimen probably represents *G. c. bakeri*.

It is a pleasure to name this race of bat after its collector, Robert J. Baker, in recognition of his contributions to our understanding of the systematics of New World leaf-nosed bats.

Specimens examined (7).—BRAZIL. Amazonas: Lago de Tefé, 2 (USNM). COLOMBIA. Amazonas: Isla Santa Sofia, 30 km. NW Leticia, 3 (TTU). PERU. Loreto: Iquitos, 1 (TCWC). Ucayali: 11 mi. SE Pucallpa, 500 ft., 1 (TCWC).

Additional records.—ECUADOR. Napo: Limoncocha (Albuja, 1983). PERU. Loreto: San Lorenzo, Río Marañón, 500 ft. (Handley, personal communication).

Specimens of *G. commissarisi* from México used in the comparisons and in Table 1 are from the localities that follow. *G. c. commissarisi* (40).—CHIAPAS: 15 km. ESE Tonalá, 3 (LACM); 10 km. SE Tonalá, 20 (LACM); 8 mi. SE Tonalá,

TABLE 1.—Selected comparative measurements (mm) of *G. c. bakeri*, *G. c. commissarisii*, and *G. c. herspera*. Mean followed by standard deviation, extremes in parentheses, and sample size.

Variate	Sex	<i>G. c. bakeri</i> (upper Amazon Basin)	<i>G. c. commissarisii</i> (vicinity type locality)	<i>G. c. herspera</i> (western Mexico)
Length of forearm	M	34.88 ± 0.80(34.0-35.9)4	33.48 ± 1.14(31.1-35.1)19	34.88 ± 0.90(32.7-35.6)12
	F	35.13 ± 0.06(35.1-35.2)3	33.94 ± 1.18(32.0-36.6)21	35.00 ± 0.92(33.2-36.6)28
Greatest length of skull	M	20.53 ± 0.93(20.1-20.9)4	19.99 ± 0.43(19.3-21.0)19	20.60 ± 0.27(20.3-21.1)12
	F	20.77 ± 0.47(20.4-21.3)3	20.00 ± 0.26(19.5-20.5)21	20.67 ± 0.29(20.2-21.3)29
Zygomatic breadth	M	9.57 ± 0.25(9.3-9.8)3	9.46 ± 0.27(9.0-10.1)18	9.64 ± 0.15(9.4-9.9)12
	F	9.60 ± 0.44(9.3-10.1)3	9.36 ± 0.20(9.1-9.9)19	9.45 ± 0.19(8.9-9.8)27
Mastoid breadth	M	9.05 ± 0.17(8.9-9.3)4	8.99 ± 0.23(8.7-9.4)19	9.15 ± 0.13(9.0-9.4)12
	F	8.97 ± 0.23(8.7-9.1)3	8.97 ± 0.12(8.8-9.2)21	9.14 ± 0.16(8.7-9.5)30
Interorbital breadth	M	4.08 ± 0.17(3.9-4.3)4	4.01 ± 0.13(3.8-4.3)19	4.33 ± 0.07(4.2-4.4)12
	F	4.03 ± 0.15(3.9-4.2)3	4.02 ± 0.14(3.8-4.3)21	4.24 ± 0.12(3.9-4.4)30
Depth of braincase	M	6.85 ± 0.17(6.7-7.1)4	6.95 ± 0.13(6.7-7.2)19	7.03 ± 0.10(6.9-7.3)12
	F	6.93 ± 0.15(6.8-7.1)3	6.88 ± 0.14(6.6-7.1)21	6.97 ± 0.17(6.6-7.3)29
Length of maxillary toothrow	M	7.00 ± 0.26(6.8-7.3)3	6.76 ± 0.15(6.5-7.0)18	6.89 ± 0.20(6.5-7.2)12
	F	7.03 ± 0.23(6.9-7.3)3	6.79 ± 0.13(6.5-7.0)21	6.99 ± 0.18(6.7-7.5)30
Greatest width across molars	M	5.50 ± 0.22(5.3-5.8)4	5.45 ± 0.17(5.1-5.7)18	5.67 ± 0.13(5.4-5.9)12
	F	5.60 ± 0.26(5.4-5.9)3	5.46 ± 0.19(5.2-5.6)20	5.66 ± 0.10(5.4-5.8)30
Length of mandibular toothrow	M	7.43 ± 0.17(7.2-7.6)4	7.19 ± 0.13(7.0-7.4)18	7.33 ± 0.17(7.0-7.5)12
	F	7.55 ± 0.21(7.4-7.7)2	7.18 ± 0.18(6.8-7.5)21	7.42 ± 0.13(7.2-7.7)30

Finca Ocuilapa, ca. 100 ft., 6 (3 LACM, 3 UA); 9 mi. SE (and then) 8 mi. NE Tonalá, 1 (LACM); 12.5 mi. SE Tonalá, 8 (LACM); 21 km. SE Tonalá, 2 (LACM).

G. c. hespera (42).—COLIMA: Miscoate, 2 (LACM); 11 mi. W Comala, Miscoate, 4 (LACM); Pueblo Juárez, 1 (UA); 5 km. SE Pueblo Juárez, 1 (UA); 35 km. NW Pueblo Juárez, Rancho Tavernillas, 2 (UA); 1 km. S Pueblo Nuevo, 1 (UA); 2.5 km. NW Pueblo Nuevo, 1 (UA). DURANGO: 2 mi. N Pueblo Nuevo, 6000 ft., 1 (MSU); 6 mi. S Pueblo Nuevo, 3000 ft., 1 (MSU). JALISCO: 14 mi. WSW Ameca, 5000 ft., 1 (KU); 8 km. ESE Chamela, 30 m., 1 (MSU); 6 mi. E Limón, 2700 ft., 1 (KU); 2 mi. N Milpillás, 3000 ft., 1 (KU); 20 km. WNW Purificación, 1400 ft., 1 (KU); ca. 20 km. N Soyatlán del Oro, Tepehuajes Mine, 2 (1 TTU, 1 UA); 10 mi. SE Talpa de Allende, 5300 ft., 1 (KU); 7.5 mi. SE Tecomates, 1500 ft., 1 (KU). NAYARIT: 4 km. S Aticama, 2 (USNM); Chacala, 2 (USNM); Jalcootán, 1 (USNM); 1 mi. S Lo de Marcos, 2 (USNM); Paso de Soquiapa (Zoquepa), 1 (USNM); Río Chilte, 1.2 mi. S El Casco, 480 ft., 1 (USNM); 5 mi. NE San Blas, 1 (KU); 8 mi. E San Blas, 3 (1 LACM, 2 UA); 4 mi. S, 5 mi. E San Blas, 1 (MSU); 5 mi. SE San Blas, 1 (KU). SINALOA: 20 km. N, 5 km. E Badiraquato, 1800 ft., 2 (KU); Santa Lucía, 3600 ft., 2 (KU).

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