

Chromosomal Polymorphism in the Phyllostomatid Bat, *Mimon crenulatum* (Geoffroy)

The chromosomes of 49 species of bats of the family Phyllostomatidae have been described based on the examination of 441 specimens¹⁻¹³. In only two species, *Mesophylla macconelli*^{8,9} and *Uroderma magirostrum*¹⁰, have chromosomal polymorphisms been reported. We have found an additional polymorphic chromosomal system in specimens of *Mimon crenulatum* collected from localities in Trinidad, Colombia, and Peru, spanning a distance of more than 1500 miles.

Specimens were obtained by use of mist nets from natural populations and karyotypic preparations were

made from in vivo cultures of bone marrow⁹. A minimum of 25 spreads from each individual was examined. Voucher specimens from Peru were deposited in the collections of the Louisiana State University Museum of Zoology (LSUMZ)¹⁴, and the Museum of Vertebrate Zoology, University of California (MVZ) and the material from Colombia and Trinidad is in The Museum, Texas Tech University (TT).

A total of 20 specimens was examined (8 from Trinidad, 6 from Colombia, and 6 from Peru) and all had a diploid number of 32. Chromosomal data for the 20 specimens are

presented in the Table. Representative karyotypes are shown in Figure 1 and 2. The polymorphism is probably restricted to the 5th largest pair of autosomes. These chromosomes exhibit at least 3 different morphological types - one is submetacentric (M, Figure 1), a second type is subterminal (S, Figure 2), and the last type is acro-

centric (A, Figure 2). In all cases each chromosomal type is easily distinguished from the others. In as much as diploid number remains constant, the chromosomal rearrangements probably arose by pericentric inversions or centric shifts.

Perhaps the most interesting aspect of this polymorphic system is that all 3 chromosomal morphological types are found in the 3 areas (see Table) where the species has been studied. For this polymorphic system to survive over such a wide geographic area, it must either offer a selective advantage to the species that is greater than the expense of its maintenance or be selectively neutral.

Specimens examined-*Trinidad*: Las Cuevas (3♂♂:1♀) 5264, 5340, 5341, and 5448; San Rafeal (1♂) 5460; Caura Valley, St. George Co. (1♂) 5379; Blanchisseuse (1♂:1♀) 5374, 5375. *Colombia*: Departamento de Amazonas, Leticia (3♂♂, 3♀♀) 8826, 8841, 9448, 8828, 9042, 9043. *Peru*: Departamento de Loreto, Balta, Rio Curanja, (3♂♂, 3♀♀) LSUMZ 14087-14090, MVZ 136404 and 136405.

Resumen. Se describe el polimorfismo cromosomal en el murcielago *Mimon crenulatum* desde localidades en Trinidad, Colombia, y el Perú. Se hallaron tres tipos morfológicos para cromosomas considerado a representar el quinto par de autosomas en ejemplares de cada region geográfica donde hemos estudiado la especie. Los tres tipos morfológicos de los cromosomas del quinto par evidentemente originado por medio de inversiones pericentricas son metacéntrico, subteloicéntrico, y acrocéntrico.

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Chromosome phenotype of autosomal pair 5 of *Mimon crenulatum* from 3 localities

Locality	Phenotype					
	SM/SM	SM/ST	SM/A	ST/A	ST/ST	A/A
Trinidad	1♀	1♀2♂♂	3♂♂	1♂	0	0
Colombia, Leticia	1♀1♂	0	1♀	1♀1♂	0	1♂
Peru: Balta	1♂	0	3♀1♂	1♂	0	0

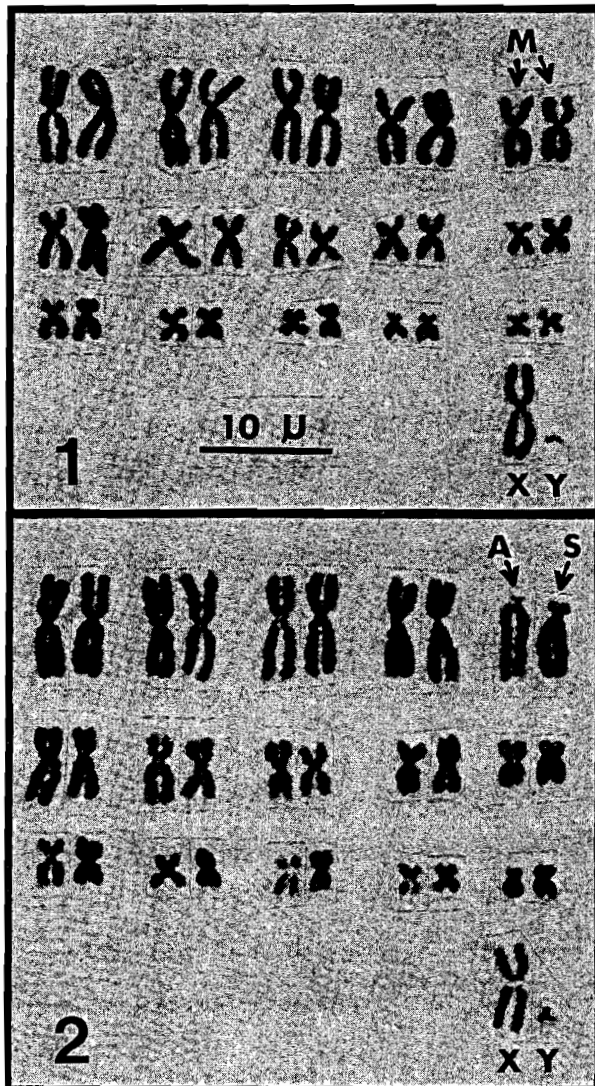


Fig. 1 and 2. Karyotypes of two male *Mimon crenulatum* from Leticia, Colombia. In Figure 1 note that the 5th largest pair is metacentric (M). In Figure 2 note that one to the 5th largest pair of elements is acrocentric (A) and the other is subterminal (S).

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