

**THE KARYOTYPE OF *SYLVILAGUS BRASILIENSIS MINENSIS* THOMAS
(LAGOMORPHA: LEPORIDAE)**

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RESUMO

O cariótipo de *Sylvilagus brasiliensis minensis* Thomas (Lagomorpha: Leporidae). Um novo cariótipo para *Sylvilagus brasiliensis* é descrito. *S. brasiliensis minensis* de Minas Gerais, Brasil, apresenta $2n = 40$ e $FN = 68$, apresentando 6 pares de cromossomos metacêntricos, 9 pares de cromossomos submeta / subtelocêntricos e 4 pares de cromossomos acrocêntricos. TO par sexual é formado por um submetacêntrico X comparável em tamanho ao maior dos submetacêntricos, e um pequeno submetacêntrico Y. O cariótipo de *S. brasiliensis minensis* é morfologicamente bastante similar ao de *S. floridanus*, seu parente mais próximo, diferenciando-se apenas pela ausência de um par de pequenos acrocêntricos.

Palavras-chave: cariótipo, *Sylvilagus brasiliensis minensis*, evolução cromossômica.

ABSTRACT

The Karyotype of *Sylvilagus brasiliensis minensis* Thomas (Lagomorpha: Leporidae). A new karyotype for *Sylvilagus brasiliensis* is described. *S. brasiliensis minensis* from Minas Gerais, Brazil, shows $2n = 40$ and $FN = 68$, presenting 6-pairs of metacentric chromosomes, 9 pairs of submeta / subtelocentric chromosomes and 4 pairs of acrocentric chromosomes. The sexual pair is formed by a submetacentric X comparable in size to the largest of the submetacentrics and a small submetacentric Y. The karyotype of *S. brasiliensis minensis* is very similar in morphology to that of *S. floridanus*, its closest relative, only differing in the absence of a pair of small acrocentrics.

Key words: karyotype, *Sylvilagus brasiliensis minensis*, chromosome evolution.

INTRODUCTION

The family Leporidae includes 11 genus and 54 species, of which 13 belong to the genus *Sylvilagus* (HOFFMANN, 1993). However, the current estimates of species of this genus may be conservative. Cytogenetic and morphometric studies revealed the presence of two distinct species in what is conventionally regarded a single taxon as for instance in *Sylvilagus transitionalis* (CHAPMAN

et al., 1992). Substantial morphological differences have also been noted in the North American and South American populations of the eastern cottontail *S. floridanus* (DIERSING, 1981).

Sylvilagus brasiliensis, a Neotropical forest species, is distributed from the southeast of Mexico over Central and South America to the southeast of Brazil and northeast of Argentina. The tapetis are generally of small size, solitary, terrestrial and of nocturnal or crepuscular habits, (EISENBERG e REDFORD 1999). The diploid number varies from 36 in *S. brasiliensis truei* (GUERENA-GANDARA *et al.*, 1982) to 52 in *S. transitionalis* (CHAPMAN *et al.*, 1992).

The aim of this work is to describe the karyotype of *Sylvilagus brasiliensis minensis* from Brazil and to compare it with other related species of the genus.

MATERIAL AND METHODS

We studied a male animal collected during the faunal rescue while flooding the Nova Ponte Hydroelectric Dam, in the river Quebra - anzol, 12 km N, 11 km E of Pedrinópolis, MG, Brazil.

Metaphases were obtained from bone marrow, after *in vivo* injection of colchicine, hipotonic treatment with KCl solution and coloration with Giemsa.

A voucher specimen (UFPB 1610) was deposited at the Collection of Mammals of the Department of Systematic and Ecology, Federal University of Paraíba, Paraíba, Brazil.

RESULTS

The cariogram (Fig. 1) shows a $2n = 40$ and $FN = 68$, presenting 6-pairs of metacentric chromosomes, 9 pairs of submetacentric / subtelocentric chromosomes and 4 pairs of acrocentric chromosomes. The sexual pair is formed by a submetacentric X comparable in size to the largest of the submetacentrics and a small submetacentric Y.

DISCUSSION

CERVANTES *et al.*, (1999) in a study of allozyme variation in 4 Mexican species of *Sylvilagus* have found that *S. floridanus* and *S. brasiliensis* were the most closely related species Pair. We will therefore restrict the comparison of our results to these two species.

The only animal of *S. brasiliensis* previously studied, a male of *S. b. truei*, collected in Mexico, (GUERENA-GANDARA *et al.*, 1982) has a $2n = 36$ and a $FN = 68$ formed according to our interpretation by 3 metacentrics, 12 submetacentrics and 2 pairs of acrocentrics, with satellites in a subtelocentric pair. The X is a metacentric of medium size and the Y is a small subtelocentric chromosome. PALMER e ARMSTRONG (1967) first reported the karyotype of

S. floridanus it shows $2n = 42$ and $FN = 70$ and is formed by 6 pairs of metacentric chromosomes, 9 submetacentrics and 5 acrocentrics.

The karyotype of *S. floridanus* is very similar in morphology to that of our *S. brasiliensis minensis* it only differs in having an extra pair of small acrocentrics. This extra pair was probably incorporated in the sexual pair of *S. b. minensis* since the Y is comparatively larger. Thus *S. b. minensis* is one more example of the tendency observed in the Leporidae (ROBINSON *et al.*, 1983) to reduce the diploid number by means of Robertsonian rearrangements.

The karyotype of *S. b. truei* is very different in morphology from that of *S. b. minensis* and *S. floridanus* and has fewer chromosomes. The number of metacentrics and submetacentrics differs considerably and probably originated through a mechanism of multiple fusion / fission. We stained our slides with the G band technique of SEABRIGHT (1971), but only the large chromosomes showed satisfactory banding. We compared their pattern with the ideogram published by (GUERENA-GANDARA *et al.*, 1982) but no homologies were found. Certainly the animal studied by these authors belongs to a different species than our specimen from Brazil.

CABRERA (1961) recognizes 21 subspecies of *S. brasiliensis* and 7 of *S. floridanus* inhabiting South America. We believe that some of the named subspecies of *Sylvilagus brasiliensis* will probably be considered full species in the future.

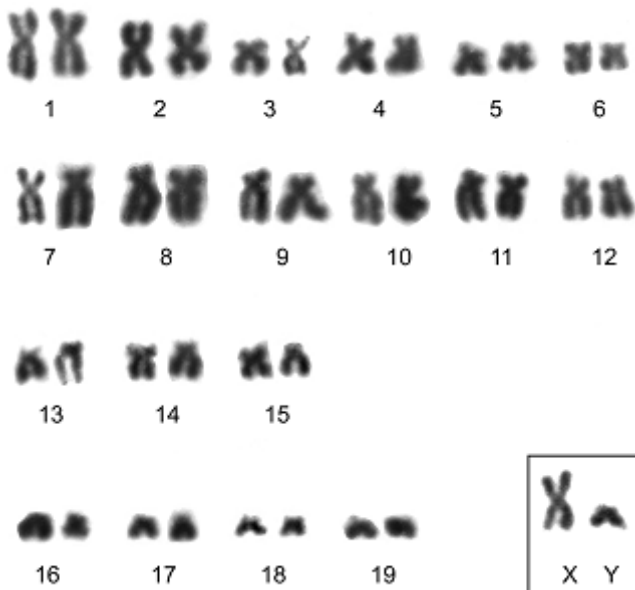


Figure 1- Karyotype of male specimen of *Sylvilagus brasiliensis minensis*, UFPB 1610, with $2n = 40$, $FN = 68$.

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