Cytogenetic Studies in the Cricetid Rodent *Scapteromys tumidus* (Rodentia-Cricetidae)

The genus *Scapteromys* is a common inhabitant of the extensive plains of Argentina and Uruguay and reaches to the South of Brazil. *Scapteromys tumidus*, *S. tomentosus*, *S. aquaticus*, *S. chacoensis* and *S. gnambiquarae* are the 5 species recognized by GYNDELSTOLPE[1] and CABRERA[2] for this genus, which is included within the tribe Akondontini by VORONTZOV[3]. HOOPER and MUSSER[4] considered this genus as an independent group but in close relationship with primitive genus such as *Zygodontomys*. The systematic status of this genus needs a serious revision, but it is evident that this is a group of singular characteristics with poor intrageneric diversity.

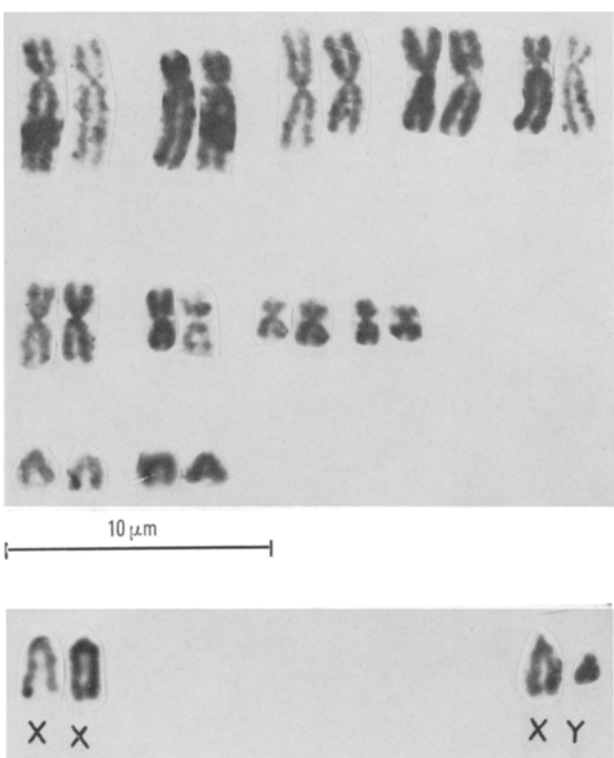
The species *S. tumidus* is endemic to the Uruguayan plains, and closely related to the species *S. aquaticus* which inhabits the Argentinian plains. MASSOIA and FORNES[5], after a comparative study of the morphological pattern in different populations of both species, considered that both groups belong to one species; *Scapteromys tumidus*. Cytogenetic studies were carried out in Uruguayan populations[6] and recently in Argentinian populations[7]. There are significant differences in chromosome number and morphology between these groups. The purpose of the present work was to clarify the specific status of *S. tumidus* with regard to their chromosome complement in comparison with the cytogenetic studies of the Argentinian populations.

Five males and 2 females from differents localities of the Republica Oriental del Uruguay were employed for the cytogenetic studies. The specimens were incorporated to the mammal collection of the Museum of Natural History of Montevideo, Uruguay, with the following numbers and localities: 1. Parque Lecoq (Montevideo), 2 females MNHN 1961 and 1963 and 3 males MNHN 1962, 2291 and 2292; 2. Las Canas near Fray Bentos (Rio Negro), 1 male MNHN 1957; 3. Barra de Maldonado (Maldonado), 1 male MNHN 2049. Karyological studies were performed from c-metaphases, obtained from bone marrow cells following the technique used by REIG et al.[8].

In all the 40 metaphases studied we found an identical chromosome complement with a diploid number of $2n = 24$. Following the nomenclature proposed by LEVAN et al.[10], the chromosome pairs 1, 2 and 5 are submetacentries (sm) (see Figure), but the pairs 3,4, 6, 7, 8, and 9 are meta- centric (m) the pair 10 is telocentric and the last autosomal pair 11 is subtelocentric.

The sexual chromosome pairs have a subtelocentric *X* chromosome which lays between pairs 7 and 8, and a little submetacentric *Y*. The first 5 pairs are larger than the rest, following a group of 4 metacentric pairs and a third group of 2 little pairs, 1 telocentric and the other subtelocentric. The specimen studied belongs to populations that cover most of the distributional range in Uruguay. We think that in Uruguay, the genus *Scapteromys* is represented only by the species *S. tumidus*.

CABRERA[2] claimed that *S. tumidus* and S. *aquaticus* belonged to 2 different species. Our results agree with his conclusion, since although these 2 groups are very similar in their morphological trait their karyotypes are completely different. These 2 species are, without doubt, closely related, and we think that the most probable mechanism of speciation might be Robertsonian chromosome changes of fission/fusion following inversion mechanism.



Resumen. Se han realizado estudios citogeneticos en ejemplares de diversas localidades de la planicie Uruguaya de la especies *Scapteromys tumidus* muy relacionada con la especie *S. aquaticus* de la planicie Argentina. El complemento cromosomico de la especie que nos ocupa es de $2n = 24$, diferente de la especie Argentina. Estos datos convalidan a estas especies como plenas.

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[11] I am indebted to A. XIMENES and J. C. GONZALEZ for contributing specimens used in this research.