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A case of mosaicism in the germinal line of *Odontophrynus americanus* (Dùmeril et Bibron. 1841)

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The cytogenetic studies have special importance in the zoological research because by means of karyotype analysis they contribute to the identification of different entities, facilitate the evaluation of the proximity or relationship degree among certain species and finally they contribute with fundamental data to the phylogenetic assessment (Schmid et al., 1985; Zampieri et al., 2004). The occurrence of polyploidy in different anuran families that appear as cryptic species highlights the importance of the cytogenetic study at the population level (Valetti et al., 2009).

Key words: Mosaicism, *Odontophrynus americanus*.

The objective of this work was to report the presence of cells of different ploidy in a population of *Odontophrynus americanus*.

The cytogenetic study was carried out in three males (ALM 249-251) of the *Odontophrynus* species captured at Merlo village , San Luis province, Argentina (32° 21´S, 65° 02´W). The village is located in the western side of the Sierra de Comechingones at 850 meters above sea level.

Mitotic metaphases were obtained from testicles after *in vivo* colchicine treatment according to conventional protocols. All the techniques employed for the cell preparations, hypotonic treatment, fixation and staining with Giemsa were applied to all the specimens as described in Schmid (1978).

Photographs were obtained by using an Axiophot Microscope (Carl Zeiss) with Cannon Powershot G6 Digital Camera and Zoom Browser EX.

The cytogenetic study performed in testicular tissues of the three studied males showed the presence of cells with different ploidy. Two germinal lines were observed: diploid (2n = 22) and tetraploid (4n = 44), with frequencies of 35,1 % for diploid cells and 64.9 % for tetraploid cells (Figure 1a, b, Figure 2a, b and Table I).

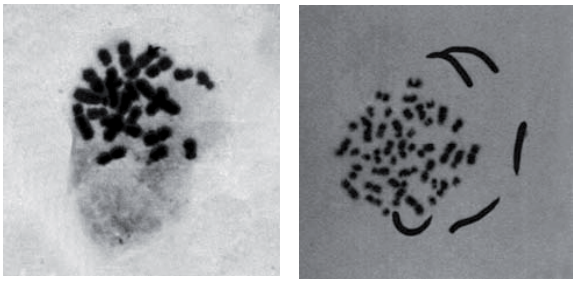

Figure 1. Diploid metaphase, 2n = 22 (a) and tetraploid metaphase 4n = 44 (b), both from testicle cells of *Odontophrynus americanus*. Giemsa stain.

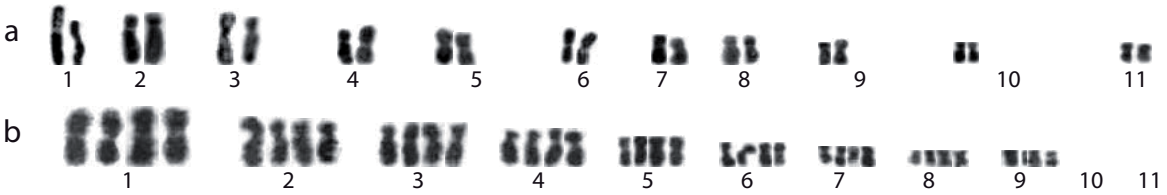

Figure 2. Karyotype of each germinal line (a) 2n = 22 and (b) 4n = 44 both from testicle cells of *Odontophrynus americanus*. Giemsa stain.

Individual	Diploid metaphase	Tetraploid metaphase	Total
1	25	36	61
2	15	37	52
3	13	25	38
Total	53	98	151

Table I. Cell number with different ploidy in testicle tissue of *Odontophrynus americanus* from Merlo village, San Luis Province, Argentine.

In spite of the existence of several polyploid anurans species, the mosaicism phenomenon has only been reported for the *Bufo viridis* complex in the one which the tetraploid species *Bufo pseudoraddei baturae* presented cells of different ploidy (diploid, triploid and tetraploid) (Stöck et al., 1999). The mosaicism observed in the germinal line of *O. americanus* population from Merlo village of San Luis Province, is a finding particularly interesting that deserves to continue investigating.

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