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CHROMOSOME BANDING PATTERNS OF *SAIMIRI VANZOLINII* AYRES, 1985 (PRIMATES, CEBIDAE)

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All species of *Saimiri* reported in the literature have 2n=44 chromosomes. However, a number of morphological variations in karyotypes were described, among them the occurrence of pericentric inversions, correlated by Hershkovitz (1984) with the geographical distributions. Another source of variation was the occurrence of differences in the amount of heterochromatin (Jones and Ma, 1975; Ma and Jones, 1975; Lau et al., 1977).

Here we describe the karyotype of *S. vanzolinii*, described as a new species in the preceding paper, from the general area of the mouth of the Rio Japurá, on the Amazon. Chromosome investigations were performed on skin-derived fibroblasts from one male and one female from the type locality, Lake Mamirauá.

G- and C-banding patterns and the distribution of the nucleolar organizer regions were studied (Figs. 1 and 2). The ordering of the chromosomes was based on Jones and Ma (1975). The autosomes were divided in three groups, according to the centromeric position, and were arranged in decreasing order of size in each group (Fig. 1a). Group A has 5 pairs of metacentric chromosomes; pair 2 shows a large secondary constriction in the short arm, corresponding to the nucleolar organizer region (Figs. 1 and 2). Group B has 10 pairs of submetacentric and subtelocentric chromosomes and group C includes 6 pairs of acrocentric chromosomes. The X-chromosome is a submetacentric and the Y is the smallest acrocentric chromosome.

In comparing the karyotype of *S. vanzolinii* with data from the literature it is necessary to note that the paper by Jones and Ma (1975) precedes Hershkovitz's (1984) arrangement; we have adapted their data to the latter work. Thus, G-banding revealed a pattern similar to that of *S. sciureus macrodon* from Leticia, Colombia (Jones and Ma, 1975).

After C-banding, heterochromatic blocks were identified around centromeres, on telomeres and interstitially. Whole chromosome arms were also found to be heterochromatic (Fig. 2a). The heteromorphism of chromosome pair 10 in the female karyotype was due to the presence of a large block of heterochromatin at the end of the short arm of only one of the homologues (Fig. 2b).

The heterochromatin blocks observed in the long arm of chromosomes 13, 15, 17 and 19 of *S. vanzolinii* had not been previously described in other *Saimiri*. On the other hand, the interstitial band in the short arm of chromosome 6 that was described in all C-banded karyotypes of *Saimiri* (Ma and

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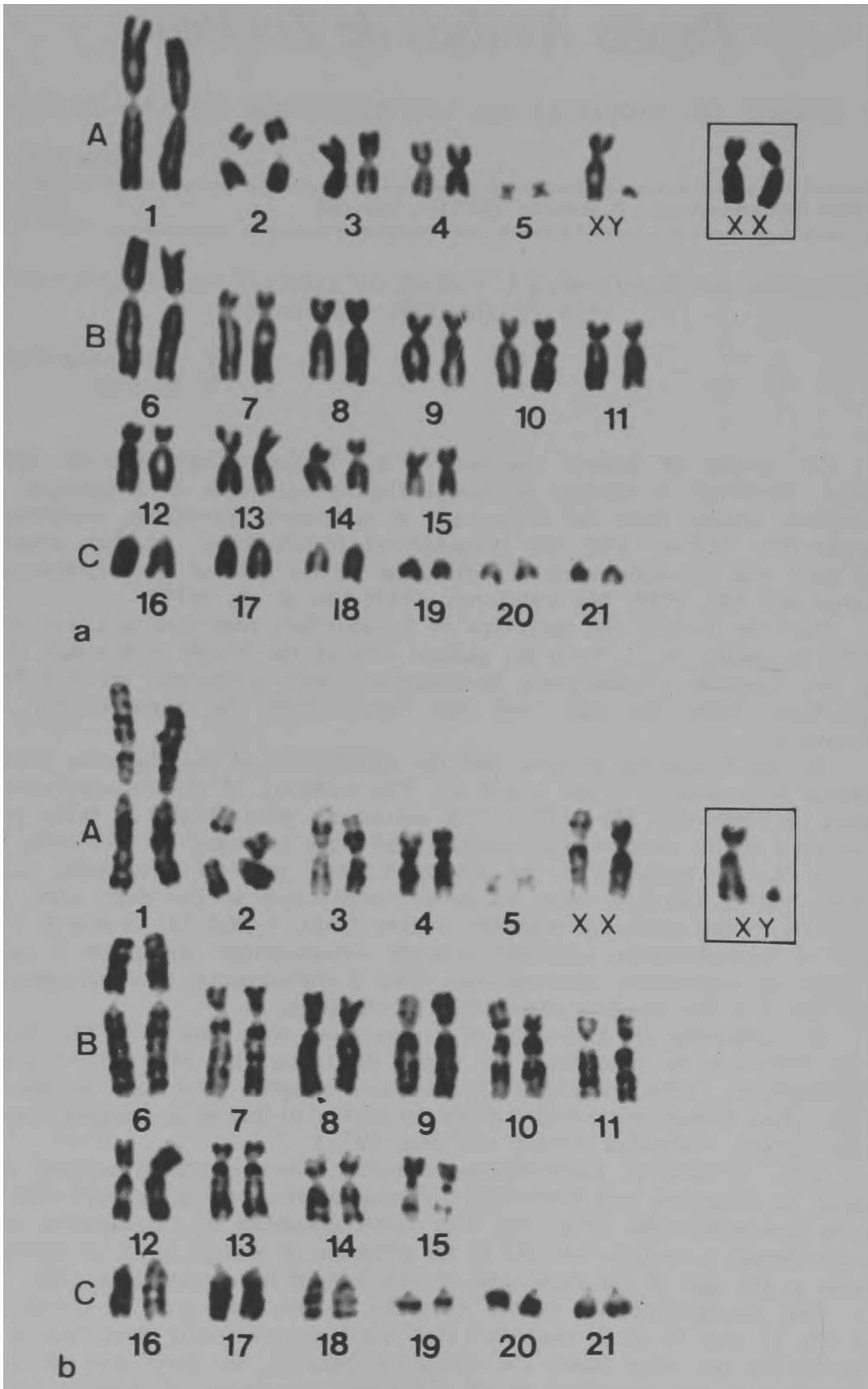

Fig. 1 — Karyotype of *S. vanzolinii* (2n=44). *a.* Conventional stained chromosomes of a male. In the inset, sex chromosomes of a female. *b.* G-banding in a female heteromorphic for pair 10. In the inset, sex chromosomes of a male.

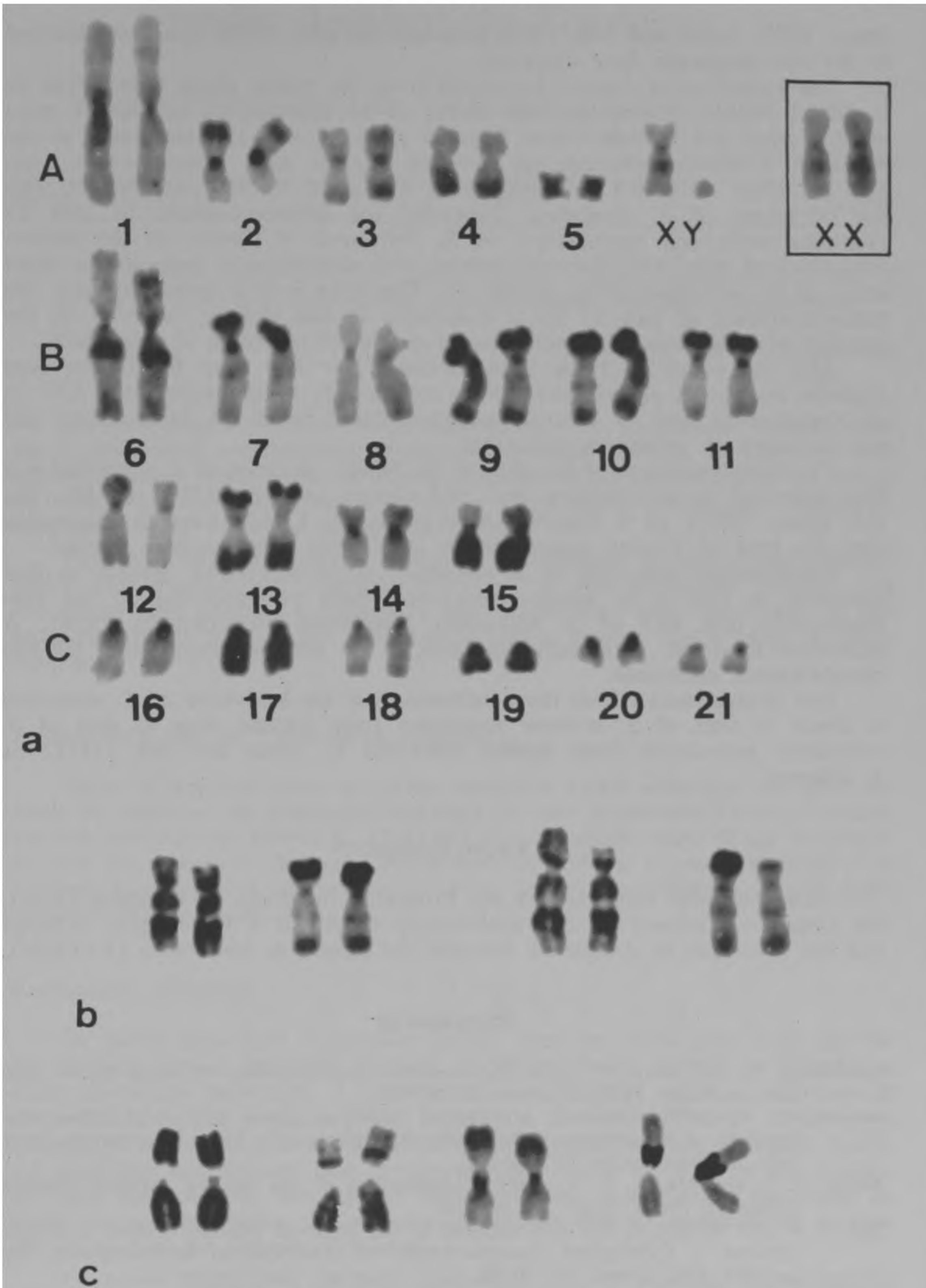

Fig. 2 — *a*. C-banded karyotype of a male of *S. vanzolinii*. In the inset, sex chromosomes of a female. *b*. G- and C-banding patterns of pair 10 from the two specimens. *c*. Pair 2 showing a large secondary constriction in the short arm: conventionally stained, G- and C-bands and silver staining.

Jones, 1975; Jones and Ma, 1975; Lau and Arrighi, 1976) was not observed in the two specimens here analyzed.

The karyotype of *Saimiri boliviensis* from the region about Santa Cruz de la Sierra, Bolivia (Cambefort and Moro, 1978) presents six acrocentric pairs of autosomes and heteromorphic biarmed pairs 14 and 15, interpreted as the result of a deletion-translocation between one of each heteromorphic pair. The published G-banded karyotype does not allow a clear comparison with the karyotype of *S. vanzolinii*. However, the heteromorphism of pair 15 (submetacentric and acrocentric) of *S. boliviensis* is similar to the heteromorphism of pair B10 (submetacentrics with difference in size of the short arm) of *S. vanzolinii* (Figs. 1 and 2). Therefore it is a possibility that the heteromorphism of pair 15 of *S. boliviensis* is also due to variation in the amount of constitutive heterochromatin, as we evidenced in *S. vanzolinii*.

Also the variation of the submetacentric pair B10 from the Iquitos type (*Saimiri boliviensis peruviensis*) which corresponds to the acrocentric C17 in the Georgetown type (*S. sciureus sciureus*) could be of the same nature and not the result of pericentric inversion.

The heteromorphism of pair B10 of the female specimen of *S. vanzolinii* was also described in chromosome pair B10 (Jones and Ma, 1975) or B5 (Ma and Jones, 1975) of a Pucallpa monkey and a Leticia monkey, suggesting that this type of C-band polymorphism is of wide occurrence in *Saimiri*.

Chromosome pair C16 of *S. vanzolinii* is an acrocentric similar to that described as C18 in *S. sciureus macrodon*, both corresponding to the submetacentric pair B15 of *S. boliviensis peruviensis* (Hershkovitz, 1984). A pericentric inversion, as already suggested, is the probable explanation for this morphological difference.

Our comparisons allows the conclusion that the karyotype of *S. vanzolinii* is closer to that of *S. sciureus macrodon* from Leticia than to that of *S. boliviensis peruviensis* from Iquitos described by Jones and Ma (1975) as *S. sciureus*.

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