The *Aotus* from Northern Argentina

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**ABSTRACT.** Eight specimens of *Aotus* from Argentina were studied. Their geographic distribution, pelage phenotype, diploid number, chromosome measurements and morphology and C- and G-banding patterns have been reported in the present work. Cytogenetic analysis with Giemsa showed $2N = 50$ in the females and $2N = 49$ in a male. C- and G-banding patterns differed from those published for owl monkeys from other geographic regions.

**INTRODUCTION**

"Mirikinha," as Guarani indians named genus *Aotus* monkeys, was described for the first time by the Spanish naturalist Félix de Azara in 1802. There is no consensus among zoologists about the number of species and subspecies of the genus. Cabrera, 1940, affirms the existence of *Aotus azarae* in the Argentine province of Formosa, particularly along Pilcomayo river, according to Elliot's description who gave the right bank of Pilcomayo river in the northeastern Argentine as *Aotus* (Elliot, 1912) typical environment. Since the moment Elliot distinguished 15 subspecies, genus *Aotus* systematic has undergone many different changes (Hershkovitz, 1949, 1972; Cabrera, 1957; Napier & Napier, 1967). But cytogenetic studies done during the last decade permitted to distinguish three species: *A. azarae, A. griseimembra,* and *A. trivirgatus* according to chromosome morphology and its number (Brumback et al., 1971; Brumback, 1973, 1974, 1975a, b, c; Boer, 1974; Boer & Reumer, 1979; Cambefort & Moro, 1978; Dutrillaux & Couturier, 1981). The existence of three species has been proposed taking into account geographic distribution, karyotype studies and pelage color (Brumback, 1974). In polymorphic *Aotus* from northern Colombia and Panama five karyotypes have been characterized. Another three correspond to Peruvian forms and even three more have been assigned to Bolivian, Brazilian and Colombian specimens respectively. Karyotypes of Venezuelan and Ecuatorian *Aotus* are unknown. That of the Argentine *Aotus* is described here for the first time. Nine allopatric species were distinguished by karyotype (Ma, 1981), color and pelage patterns (Hershkovitz, 1983). Karyotypes of the three species have been published. Here, we describe and compare eight specimens with those studied by other authors, among them that of *Aotus azarae azarae* has not been described, taking into account their geographic distribution, pelage color, pattern and cytogenetic characters. We also try to relate them with the nearest known populations of *Aotus azarae.*

**MATERIAL AND METHODS**

The karyotypes of one male and seven females *Aotus azarae azarae* (Hershkovitz, 1983) were captured alive Gran Guardia, in the province of Formosa, Argentina (Fig. 1).

Cytogenetic studies were made on cultured lymphocytes coming from heparinized peripheral blood of each specimen (Abbott, Heparine).
We used the modified culture technique (BUCKTON & EVANS, 1973) at 37°C for 72 hr in F-10 medium (Gibco) supplemented with 15% fetal calf serum (SBF, Gibco). Zero point zero two cubic centimeters Phytohemaglutinine (M, Difco) was used as mitotic stimulating agent. 0.12 g/ml colchicine (Demecolcin, CIBA) was added to prevent spindle formation thereby promoting dispersion of metaphase chromosomes.

Hypotonic treatment was done with KCl 0.075M in bidistillated water. Fixation was achieved with cold methyl-alcohol-acetic acid (3:1). About 20–40 well spread metaphases from each specimen were analyzed under immersion objective. Chromosome number (2N) and chromosome formula were established.

Ten karyotypes of each specimen were examined regarding to chromosome morphology and size. In order to compare the different karyotypes we have followed TJio and LEVAN’s system (1956) of metacentric and submetacentric and acrocentric chromosomes. Relative length (% TCL), arm ratio (AR) and centromeric index (CI) were determined. C-banding (ARRIGHI & HSU modified by KANDA, 1976) and G-banding (SEABRIGHT, 1971) techniques were used to identify chromosomes.

PHENOTYPE

The characteristics do not allow to differentiate between the Argentine and Bolivian specimens except for discreet signs. Adult females have a superciliary spot of white hair upon each eye: that continue as narrow bands bordering the eyes and the corners of lips, joining themselves with the chin.

Fig. 1. Distribution of *Aotus trivirgatus* in the North of Argentina. (GG = Place of capture of owl monkeys)