

Vivo, 1991). Quanto a *Cebus apella (nigritus?)*, citada por Drumond (1987), não foi possível obter nenhum registro confirmando ou não a sua ocorrência na área percorrida pelos pesquisadores.

A partir da chave de classificação das matas, observa-se que na "Classe A" estão agrupadas a maioria das matas investigadas (Tabela 2) e são as que devem ser consideradas de máxima importância para a conservação dos primatas que nelas habitam. Embora ocorrendo somente três espécies de primatas na região do Parque, a área pode ser considerada rica em termos de densidade, e de muita importância no contexto regional. Duas das espécies, *A.fusca* e *C.personatus*, estão citadas no 1994 IUCN Red List of Threatened Animals (Groombridge, 1993). Fica evidente com os dados obtidos, que os atuais limites do Parque do Ibitipoca não incluem as melhores matas, e os mesmos precisam ser redefinidos e ampliados.

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TWINS OR ADOPTION?

Since August 1989, we have been studying a black howling monkey (*Alouatta caraya*) group in the southern limit of the species' distribution - Estância Casa Branca (29^o 37'S, 59^o 17'W) (Bicca-Marques, 1990). Our research began with an intensive 12-month study (Bicca-Marques, 1991; Calegari-Marques, 1992), followed by yearly surveys of the age-sex composition of the population.

In January 1994, we observed an adult female (CAN) nursing and carrying two infant males of about 9 to 12-months of age. Since we did not observe the birth, we considered the hypothesis of adoption of one of the infants by CAN. However, we believe this to be unlikely due to the evolution of the group composition since the last survey, in late December 1992, because all the adult females present in the group in the January 1994 survey were also present in the previous survey and no other reproductively mature female was recruited. The infants' age indicated that the adoption hypothesis could be real only if one of the infants was the son of an immigrating female that died after giving birth. Information from local people corroborates the hypothesis of twins. Thus, we believe that this is a real case of twinning in *A. caraya* (for further information regarding the reproductive behaviour of this *A. caraya* population, see Calegari-Marques and Bicca-Marques, 1993). Twinning is uncommon in Cebidae but has been reported for *Alouatta seniculus* by Crockett and Rudran (1987) and Schultz (1921; cited in Hill, 1962), and also *Brachyteles* (Strier, 1992).

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AN UPDATE ON THE LONG-TERM FIELD RESEARCH ON RED HOWLER MONKEYS, *ALOUATTA SENICULUS*, AT HATO MASAGUARAL, VENEZUELA

Introduction: Field studies on the demography and behaviour of red howler monkeys, *Alouatta seniculus*, at Hato Masaguaral, Estado Guarico, Venezuela, have been carried out under the direction of Dr. Rudy Rudran of the Smithsonian Institution since 1976 (Agoramoorthy and Rudran, 1993). Hato Masaguaral is a wildlife preserve and working cattle ranch, located in the central llanos of Venezuela, about 45 km south of the town of Calabozo, approximately 8° 34' N, 67° 35' W. At Masaguaral, the forest and native wildlife species are protected by the owner, Sr. Tomas Blohm, while domestic animals are controlled so as to have a minimal impact on the howlers' habitat and food

resources. The vegetation in this area is semi-deciduous, and most trees and shrubs lose their leaves in January and February (Troth, 1979; Crockett and Rudran, 1987a, 1987b). The red howlers in the savanna woodlands and gallery forest are sympatric with wedge-capped capuchin monkeys (*Cebus olivaceus*).



Methods: I have been monitoring some 36 groups in the savanna woodlands and 25 groups in the gallery forest since 1989 on a monthly basis to record demographic data. Most of the home ranges of red howler groups at Hato Masaguaral are already known. I usually record demographic details of group composition, sex of individuals, age classification, physical characteristics (for example, body size, coat color of infants, size and shape of nipples and female genitalia, and the size of the throat/beard of the males), births, emigration and immigration. Between 1989 and 1993, certain howler groups were selected to record data on social interactions. Social interactions of several groups which had been invaded by males were observed from dawn to dusk for five continuous days each month, but were also observed for at least three or four hours per day during the rest of the month. In each case, the identity and approximate age of the invading males, body size and the physical condition of both invading and resident males, and the social interactions between group members were recorded. Social interactions were recorded in three major categories: aggressive, affiliative and sexual. All-occurrences sampling and scan sampling were used as observational methods (Altmann, 1974).

Recent findings: Red howlers have attracted attention in recent years because of the occurrence of infanticide during and after male invasion (Rudran, 1979a, 1979b, 1974; Sekulic, 1983; Crockett and Sekulic, 1984; Agoramoorthy, 1992;