

## Birth in Free-ranging Howler Monkeys *Alouatta seniculus*\*

RANKA SEKULIC  
*Smithsonian Institution*

**ABSTRACT.** This report describes two live births in the red howler monkey (*Alouatta seniculus*) at Hato Masaguaral, Venezuela. Both births took place during the afternoon on a limb of a tree. An adult troop male was next to the females during delivery.

### OBSERVATION

Four troops of *Alouatta seniculus* were studied at Hato Masaguaral, Guarico State, Venezuela. The animals were contacted nearly daily during 39 weeks of field work between August 1979 and August 1980 (SEKULIC, 1981, in press). This report describes two live births observed during the course of the study.

The first birth took place in a troop which included three adult females, two adult males, a subadult male, a young juvenile female and two infants. The juvenile female was 1 of 11 infants studied by MACK (1979; animal 7 in Table 1) and the daughter of female 7121. On the morning of the birth (October 1, 1979) the troop was contacted at 06:15 for a full day observation. Female 7121, the juvenile female and a male (7111) were found resting on a tree about 30 m from the rest of the troop. This behavior was considered unusual but I was not aware that the female was in the late stages of pregnancy. At 07:50 female 7121 moved toward the rest of the troop and was immediately followed by the juvenile female and the male. The troop left the vicinity of the tree at 11:20 and by 14:30 had travelled about 230 m. At 15:35, following a feeding bout, the troop was resting about 6 m above ground. The adult male 7111 was next to the pregnant female while her daughter was on the other side of male 7111. No sign of labor was observed until the head of the infant was noticed. At this time the female was facing in the direction perpendicular to that of the limb of the tree. When the female shifted position by turning 90°, the male jumped to another branch and her daughter moved closer. As the infant emerged, the female was leaning forward with her head and shoulders low, her rear raised slightly off the branch and her body arched. The birth, from the time the infant's head became visible, until it emerged completely, lasted less than 2 min. While the mother licked the infant the juvenile female muzzled it, then left to feed. About 3 min postpartum, when the mother began to move, the infant was clinging to her side unsupported, and the umbilical cord was clearly visible (Fig. 1). The mother climbed to a branch about 12 m above ground, some 20 m from other troop members and shortly after (about 15:50) began consuming the placental membranes while the infant was at her chest. During most of this time the infant was covered by the mother's tail that was tucked up over her shoulder. The mother pulled pieces of emerging placental membranes, chewed them rapidly, as well as licked her bloody fingers. The last part of the placental membranes emerged at 16:15. At

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**Fig. 1.** Red howler monkey infant 3 min following birth. Note that the umbilical cord has not yet been severed.

16:19 the mother followed the rest of the troop to a tree clump about 80 m away. The infant was again in the abnormal position, clinging to her side. At 16:57 the mother licked the blood at the end of the 10 cm umbilical cord still attached to the infant. At 17:35 an infant female approached to sniff the newborn but the mother pushed her away with her hand. When the mother moved again, the infant was precariously clinging to her side. Throughout the afternoon, the infant's tail was extremely mobile, frequently swinging from side to side, which may have been related to its abnormal position. At 17:50 an adult female briefly stopped next to the mother and the two grunted at each other. Adult males were observed passing within 5 m of the mother on three occasions. At 17:56, when the mother moved up the sleeping tree, the infant was located ventrally. The juvenile female approached at 18:07, sniffed the infant and sat next to the mother. There was no change in their position until 18:30, when the observations stopped. This infant (a male) was killed by the adult male 7111 the next day, at the age of 19 hr (SEKULIC, 1981, in press b).

The second birth was observed in another troop at 18:05 on March 29, 1980. The pregnant female was sitting next to the only adult male while other monkeys were resting several meters away. Suddenly a yellowish fluid fell from the female and strong vulvar contractions followed. The infant emerged, head first, in less than a minute. Several troop members approached the mother but she moved away, 5 m from the nearest animal. At 18:13 the mother was observed chewing the umbilical cord but the placental membranes were not visible. Two infants attempted to touch the newborn briefly, then moved to their respective mothers. The observations stopped at 18:35, when it became too dark to see. This infant survived.

Both of the described births took place during daytime. Another infant, whose birth was anticipated from estimates of the date of conception and gestation (about 190 days, CROCKETT & SEKULIC, in press; see also GLANDER, 1980; SHOEMAKER, 1979), was born at night. CARPENTER (1964) saw an *Alouatta palliata* female with a wet infant about an hour before dark. SHOEMAKER reports that two captive black howler monkey *Alouatta caraya* infants were born during the night while two others were born between 15:00 and 17:00. Most primates usually give birth at night (JOLLY, 1972). The tendency toward nocturnal births may be related to the inactivity of the troop during this time. By giving birth at night the new mother avoids excessive attention to the newborn by troop members, and also does not have to keep up with the moving troop during or immediately after parturition (BOWDEN, WINTER & PLOGG, 1967;

JOLLY, 1972; NOWELL, HEIDRICH & APPOLYNAIRE, 1978). The late afternoon and nocturnal births of howlers appear to support this argument. However, howler monkeys spend most of their time inactive which is related to their feeding ecology (MILTON, 1980). Therefore, as suggested by JOLLY for some apes, selection against giving birth during the day may be reduced.

Two other points are worth noting here. Adult males were next to both females during delivery and at least one male showed interest in the female hours prior to the event. Secondly, female 7121 held her infant in an abnormal position and this behavior was also observed the day following the birth, when the infant was killed. Other 1-day-old infants were carried ventrally, as is normal for this species during the first two months (MACK, 1979). The reason for the unusual position of this infant cannot be mother's inexperience as the female had given birth before. However, two adult males were competing for access to females during this period (SEKULIC, 1981, in press b) which may have been responsible for the female's negligence of her infant. This unusual behavior was not repeated when female 7121 gave birth again in May 1980. By this time the second adult male had left the troop and male 7111, who was the probable father, closely associated with the female and her newborn.

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Author's Name and Address: RANKA SEKULIC, Department of Zoological Research, National Zoological Park, Smithsonian Institution, Washington, D.C. 20008, U.S.A.