

MALE REPRODUCTIVE STRATEGIES OF RING-TAILED LEMURS (*LEMUR CATT*A) AT BERENTY RESERVE, MADAGASCAR

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The ring-tailed lemur (*Lemur catta*) is a group-living lemur with several unique traits: largest group size among lemurs, lack of sexual dimorphism in body size, female dominance over males, an equal adult sex ratio, and a brief mating period. This study aims to examine relationships among these traits and male reproductive strategies in free-ranging troops at Berenty Reserve, southern Madagascar. The study groups have been individually identified since 1989 and demographic data has been collected for 20 years. Mating behavior data was gathered during the five mating seasons at 1998, 1999, 2001, 2007, and 2009. Reproductive success was determined via microsatellite analyses on 8 polymorphic loci from genomic DNA extracts of blood samples collected during the study period. The paternities of 25 infants who were born in 1998 and 1999 in the study groups (6 groups) were decided. Behavioral data showed that estrus females mated with multiple males (including extra-troop mating) irrespective of rank and dominant males did not monopolize reproductions. Demographic data showed highly variable birth rates and infant mortality. This means that mating efforts of males often did not result in reproduction. Finally, results of genetic analysis suggest that male reproductive success does not always correlate with male dominance rank order in free-ranging ring-tailed lemurs. These results might explain the lack of sexual dimorphism and the equal adult sex ration in this species.

Keywords: Paternity, Dominance rank, Microsatellite, Lemur