



Estimating diurnal primate densities using distance sampling method in Moukalaba-Doudou National Park, Gabon

MANGAMA-KOUMBA Lilian Brice^{1,2,*}, YOSHIHIRO Nakashima³, MAVOUNGOU Jacques François², AKOMO-OKOUE Etienne François², YUMOTO Takakazu⁴, YAMAGIWA Juichi⁵ and M'BATCHI Bertrand¹

¹ Université des Sciences et Techniques de Masuku (USTM), BP: 901, Franceville-Gabon

² Institut de Recherche en Écologie Tropicale (IRET-CENAREST), BP: 13354, Libreville-Gabon

³ College of Bioresource Science, Nihon University, Fugisawa City, Kanagawa 252-0880, Japan

⁴ Primate Research Institute, Kyoto University Inuyama, Aichi 484-5806, Japan

⁵ Graduate School of Science, Kyoto University, Oiwake-cho, Kitashirakawa, Sakyo-ku, 606-8502 Kyoto City, Kyoto, Japan

*Corresponding author : MANGAMA KOUMBA Lilian Brice

Université des Sciences et Techniques de Masuku (USTM), BP : 901, Libreville-Gabon. E-mail : mangamalilian@yahoo.fr

Tel : +241 06 59 91 77/ 07 15 47 45

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ABSTRACT

Objective: To complete data of diurnal primates, we have estimated the density of diurnal primates in the north-eastern part of Moukalaba-Doudou National Park (MDNP) in Gabon and then we compared the results from those obtained in other areas.

Methodology and results: we estimated the densities of each species based on the conventional distance-sampling approach. Sampling was done in two sessions along 14 line-transects including various types of vegetation. *Cercocebus torquatus* is the species most abundance with 62.37 ind.km⁻², followed by *Cercopithecus nictitans* (33.26 individuals.km⁻²), *Cercopithecus cephus* (29.38 individuals.km⁻²) *Lophocebus albigena* (15.72 ind.km⁻²). The low density was observed in *Cercopithecus pogonias* (5.23 individuals.km⁻²). Those values are higher than Makokou with *C. cephus*, *C. nictitans* 25 ind.km⁻² and 30 ind.km⁻² respectively. Those results are relatively high unlike to Lopé *C. cephus* (5.1 individuals.km⁻²) *C. nictitans* (19.2 individuals.km⁻²) *C. pogonias* (4.6 individuals.km⁻²) which have the same vegetation types. They are different from Loango Loango, *C. cephus* (13.33 individuals.km⁻²) *C. nictitans* (3.71 individuals.km⁻²) *Cercocebus torquatus* (15.89 individuals.km⁻²) which have a disturbed forest, which may affect monkey's density.

Conclusion and application: our results showed that the density of monkeys in MDNP is among the highest in Gabon. This can be explained by the lacking of colobine monkeys, which generally dominated in the African rainforest, and the different types of vegetation that we founded.

Keywords: Moukalaba-Doudou, distance sampling, monkeys, density, comparison.