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THE MODEL OF THE OPTIMAL DIET IN THREE SYMPATRIC LEMUR SPECIES IN THE BERENTY RESERVE

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Eulemur rufus and E. collaris were incidentally introduced in the Berenty private reserve in the south of Madagascar. They hybridized and colonized the reserve so the two native species (Propithecus verreauxi and Lemur catta) have to cope with them to meet their optimal diet. For 90 days using scan sampling method, we had followed and recorded every 5mn, the behavior and the plant species and parts eaten by two groups of each lemur species ranging in the same areas of the reserve during lactation and late lactation periods. The rate of energy acquisition is the device used in the model of optimal diet but as the absolute value of energy contained in the food is not available for most of them, we replaced it with Sailer et al. index of diet quality to calculate the rate. Amidst the three species Propithecus verreauxi had the lowest rate of energy acquisition with high proportion of foliage material in its diet. Eulemur rufus had the highest rate with a high proportion of animal and reproductive plant materials in the diet. Lemur catta had an intermediate rate having an equal amount of foliage and reproductive plant and a small amount of animal materials in its diet. The three lemur species inhabiting the same environment met in their own way their optimal diet which responded to their respective presupposed constraints. The study was financially supported by the Research Mixed Unit 7206 Centre National de Recherche Scientifique- Museum National d'Histoire Naturelle- Université Paris Diderot.

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