

LEVELS OF PARASITISATION IN HOWLER MONKEYS: INTER AND INTRA-ANNUAL VARIATIONS BETWEEN TWO GROUPS LIVING IN FOREST FRAGMENTS IN MEXICO

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The study of supra-seasonal variation in levels of parasitisation is important for our understanding of parasite-primate ecology and primate conservation. However, very few studies have analyzed this phenomenon in wild primate populations. Here, we analyzed the inter- and intra-annual variation in levels of gastrointestinal parasites between two groups of mantled howler monkeys in different years. The two groups lived in very different conditions in terms of population size, habitat size and habitat quality, which should have favoured the divergence in levels of parasitisation between groups. However, we found that levels of parasitisation were high during the first year and low during the second year in both groups, in such a way that the inter-annual variation (within groups) was greater than the between-group variation. Evidence suggests that the significantly higher rainfall recorded during the 5 months prior to and the first four months of the first study year, including the dry season, may be responsible for the observed trends. Further, whilst in the first year we found that the differences in habitat conditions between study groups resulted in different levels of parasitisation, this was not the case in the second year. These results suggest that habitat conditions may sometimes be less important than climatic conditions in predicting levels of parasitisation in wild primates and highlight the importance of considering various years of data in such studies to understand the relationship between habitat characteristics and levels of parasitisation.

Keywords: parasites; howler monkey; climate; forest fragmentation.