ANIMAL WELFARE: THE VISITOR EFFECT ON THE BEHAVIOR OF FIVE *GORILLA GORILLA* INDIVIDUALS

Martínez[1], Eva; Lomillos[2], Juan M.; Gandarillas[3], Lucía; Borragán[3], Santiago; Alonso[1], Marta E.

[1] 1 IMAPOR Research Group, Universidad de León, León. Spain.

[2] Departamento de Producción y Sanidad Animal, Salud Pública Veterinaria, Universidad CEU Cardenal Herrera, Valencia. Spain.

[3] Parque de la Naturaleza de Cabárceno, Obregón. Cantabria. Spain.

eva.mg96@gmail.com

Can the presence of visitors influence gorilla behavior? Tourists are an inevitable presence in zoos, so this study aimed to determine their impact on the behavior of the gorillas in the Parque de la Naturaleza de Cabárceno, as an indicator of their welfare. For this purpose, a comparative study of the behavior of 5 individuals was carried out, between the summer period when visitor numbers are high (277,082), and the winter period when there are fewer visitors (71,279). Ethograms specifically designed for this species were adapted, and behavioral data were collected using the "focal sampling" and “zero sampling” methods, with one minute of observation per gorilla, resulting in a total of 74 hours of observation. A total of 776 observations were collected for adult female 1, 789 observations for adult female 2, 813 observations for adult female 3, 697 observations for youth male, and 539 observations for adult male when they were present on-site during sampling. The sampling was conducted from the visitors' space between 10:00 and 18:00, with observations recorded every 15 minutes. Various variables were considered, including the periods mentioned above, the number of visitors present during observations, and the influence of open/closed dormitories. Data collection was facilitated by the free software "Behavioral Observation Research Interactive Software" (BORIS), and subsequent analysis was performed using SAS version 9.1, employing the "CATMOD" and "FREQ" procedures. Overall, the findings of this study showed a significant increase in the frequency of feeding, locomotion, and environmental monitoring behaviors during the peak period, corresponding to the summer season. Visitor vigilance behavior, which is related to anxiety levels, was more prevalent during the off-peak period, and this trend was particularly significant for the male silverback. An increase in visitor numbers correlated with higher levels of vigilance and abnormal behaviors such as trichotillomania, ear cover and coprophagy. The study also found that resting and abnormal behaviors frequency were higher when the dormitories were closed. Statistical analyses confirmed the presence of a visitor effect, which needs to be evaluated individually for each gorilla. Moreover, several significant relationships were found between the variables studied, providing valuable insights for welfare assessment and recommendations for improvement.