SUMATRAN TIGERS MONITORING DURING ZSL LONDON ZOO EVENTS (*PANTHERA TIGRIS SUMATRAE*)

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The main focus of this research is to investigate the response of five Sumatran tigers in the zoo environment, during evening events. Animal response is behavioural as well as physiological and the zoo environment includes climatic, intraspecific and interspecific contact factors that can vary significantly from the in-situ habitat where the species evolved. Monitoring these responses is essential to animal welfare and offer insight of the species' behaviour and ex-situ adaptability, producing valuable data relevant for their husbandry. For this project, we monitored a group of five Sumatran tigers (*Panthera tigris sumatrae*) comparing their behaviour during evening social events (Zoo late Nights and Sunset Safari) and control evening during Summer 2014 and 2015. Tiger behaviour was monitored using focal animal sampling technique, crowd level around tiger enclosure recorded every minute, flash photography as it occurred, and noise levels (maximum and minimum levels) every five minutes using a portable decibel reader. In order to evaluate the potential disturbance of the aforementioned factors on tigers, the probability of changing a zone of a subject in the 9-minute period of observation was analysed by a logistic regression model. Direct observations indicate that the behaviour of these species was not significantly altered on Zoo Lates while the logistic model applied underlined the significance impact of several variables on the displacement of subjects. In particular, the total camera flashes and the maximum decibels resulted statistically significant, whereas the minimum decibels were borderline for significance. Qualitative variables (subject, crowd, and year) did not influence the displacement, although a slight difference between subjects was observed. The distribution of the subjects on the zones for the three degrees of crowd was analysed by the chi-square test. This study outlines the importance of monitoring animal behaviour during potential stressing events and individual response to environment stimuli.