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Behavioral Responses of Asian Elephants (*Elephas maximus*) to Tourist Vehicles in and around Minneriya National Park

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Abstract

Nature based tourism is major source of revenue for wildlife rich countries. The congregation of elephants on the lake beds of Kaudulla and Minneriya National Parks in Sri Lanka is a major draw for tourists. However, tourism-related disturbance to wildlife is a cause for concern among wildlife managers. We examined the behavioural changes of Asian elephants in the Minneriya and Kaudualla National Parks in relation to the presence of tourist vehicles. The data collection was done July to October 2023 using vehicle-based observations. Focal animal sampling was conducted on adults and juveniles of both sexes in the presence and absence of tourist vehicles. A total of 180 individuals were observed. Both adult males and females showed a high representation of alert, stress, aggressive and vocalization in the presence of vehicles. Both juvenile males and females showed fear behaviours in the presence of tourists. Adult females displayed a higher frequency of alert (Average 104.5) and stress (Average 75.4) behaviours than males. Adult males showed a high representation of alert and stress behaviours when they were <10 m from the tourist vehicles. Females showed a high representation of alert, stress, fear and aggressive behaviours when they were <10 m from vehicles. Similarly, both juvenile males and females showed high representation of fear behaviour near tourist vehicles. In the case of state behaviours, females devoted a lower proportion of time locomoting (16.5%) in the presence of tourist vehicles. Our study shows that the presence of tourist vehicles influences the behaviour of Asian elephants. Hence, we recommend that tourist vehicle numbers and behaviour be managed to minimize their impact on the behaviour of wild elephants.

Key Words: Asian elephants, Behaviour, National parks, Tourism