Proximate correlates of captive African elephant (Loxodonta africana) self-directed behaviours during tourist interactions

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Abstract

One of the primary goals of captive animal management is to maintain a high level of welfare for the individual animals in captivity. As chronic stress is a critical issue facing many captive animals, validation of behavioural markers of stress and anxiety would allow for instantaneous and non-invasive recognition of such stress-inducing stimuli. With self-directed behaviours (SDBs) having been substantially linked with the physiological changes indicative of stress in other species, this project focused on trunk and tail related SDBs in African elephants (*Loxodonta africana*) to understand the proximate correlates of these behaviours in elephants. Taking place at the Knysna Elephant Park in South Africa, the study examined the effect of tourist interaction, elephant general behaviour, and tourist numbers on the rates of several SDB categories. Results indicated that elephant general behaviour was a more reliable predictor of SDB occurrence than tourist interaction type, however, tentative results show that more SDBs due occur at higher rates during Rides. Additionally, results indicated that SDB rates significantly decreased as tourist numbers increased, however it is likely this is directly related to an increase in food availability attributed to increased tourist presence. Findings from this study provide insight into the particular environmental conditions that are coinciding with increased SDB rates, which is a vital step in the process of authenticating them as behavioural measures of stress and anxiety.