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Oral Communications

Stress and Play Fluctuation in Wild *Lemur catta*

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Key Words: Ring-tailed lemurs · Anxiety · Indicator · Scratching · Playful activity · Madagascar

Strepsirrhines have been neglected in the study of animal play. Yet, data from a wide array of primate taxa are needed to understand role, functions and social determinants of play. We investigated play behaviour in wild ring-tailed lemurs (*Lemur catta*) at the Berenty Reserve (Madagascar) where two other sympatric lemur species, and potential resource competitors, live (*Propithecus verreauxi* and *Eulemur fulvus*). We followed two groups of ring-tailed lemurs (9 and 16 individuals) from November 2006 to February 2007. We evaluated play fluctuation during possible stressful conditions, such as the presence of neighbour groups of conspecifics (C), and the presence of groups of other lemur species (NC). We considered the absence of any other group (A) as the control condition. We first verified whether the presence of other groups did increase stress levels in the study groups. Stress levels were measured via scratching, which previous studies have shown to be a reliable indicator of anxiety in human and non-human primates. Scratching rates in the study animals were higher in the presence of other groups (C+NC) compared to when other groups were absent (A). Overall play rates were highest when other groups were nearby. In presence of NC groups, play rates decreased as NC groups approached the study groups. Instead, when only C groups were in sight, play rates increased as the distance between the study groups and other conspecifics decreased. Moreover, play was highest during extra-group aggressive encounters (involving C groups) whereas it was suppressed during intra-group fights. Our results suggest that play fluctuates in response to different stressful conditions and may be used as a mechanism to cope with anxiety.

applied to male notes showed that 66.4% of individuals were correctly classified considering long notes and 64.9% considering descending phrases notes. Song structure reflects intrinsic behavioural characteristics such as identity traits.

The Snub-Nosed Monkeys of China

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The genus *Rhinopithecus* comprises three species endemic to China: *R. roxellana*, *R. brelichi*, and *R. bieti*. They represent a unique, though understudied, adaptive array. Their distributions span from relatively low to high altitudes (1,000–4,000 m), from tropical to conifer forests. All species are threatened by poaching and habitat loss (because of wood extraction, building projects and illegal mining). Estimates of 1,500 to 10,000 were reported by IUCN and urgent conservation actions are required to prevent the extinction of these species. Basic descriptions of the ecology and behaviour of the three Chinese snub-nosed monkey species have been provided in recent years, but more field studies are needed to reveal how their peculiar morphology plays a role in communication.

Unusual Plant Consumption by Captive Chimpanzees (*Pan troglodytes*), Gorillas (*Gorilla gorilla*) and Orangutans (*Pongo sp.*): Learning Mechanisms Involved

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More and more studies suggest the existence of self-medication behaviours in great apes. This study aimed to understand the factors influencing the discovery of potentially curative items and to evaluate the possibilities for social transmission of such knowledge. We presented four different categories of plants ($n_{\text{species}} = 7$) to captive groups of chimpanzees ($n_{\text{individual/group}} = 14-9$), gorillas ($n_{\text{individual/group}} = 7-5-3$) and orangutans ($n_{\text{individual/group}} = 7-10-4$): (1) more preferred-familiar item, (2) less preferred-familiar, (3) more preferred-unfamiliar and, (4) less preferred-unfamiliar. We recorded inspecting behaviours, food consumptions, inter-individual observations and food transfers with continuous sampling. Chimpanzees sniffed plants more frequently and ingested them less than the other apes. Close observations and food sharing were very rare in gorillas in comparison to orangutans and chimpanzees. We hypothesize that individual learning, allowed by low neophobia levels, may be linked to adaptation to the unpredictable habitats (orangutans) and to physiological features (the gorilla digestive system able to detoxify plants). Furthermore, social learning may be favoured by a social system that allows moderate levels of tolerance and interactions among the individuals (chimpanzees and orangutans).