

Oil palm cultivation critically affects sociality in an endangered Malaysian primate

Anna Holzner¹, Krishna Balasubramaniam², Nadine Ruppert³, and Anja Widdig¹

¹University of Leipzig Faculty of Life Sciences

²University of California Davis School of Veterinary Medicine

³Universiti Sains Malaysia

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Abstract

Human-induced habitat alterations globally threaten animal populations, often evoking diverse and complex behavioural responses in wildlife. This may be particularly dramatic when negatively affecting social behaviour, which fundamentally determines individual fitness and offspring survival in group-living animals. Here, we provide first evidence for critical behavioural modifications of Southern pig-tailed macaques visiting Malaysian oil palm plantations in search of food. Specifically, we found significant reductions of positive social interactions, an increase of non-physical aggression and shifts in the macaques' social network structure, with the central positions of high-ranking adult females and immatures being passed to low-ranking individuals likely resulting from socio-ecological risks posed by plantations. Deviations from natural behaviour also affected the smallest but crucial social units within groups, mother-infant pairs, with increased maternal protectiveness at plantations. Our study provides strong evidence that although primates, and more generally group-living wildlife, can persist in human-altered habitats, their ability to adapt may come with a trade-off for their natural sociality potentially hampering infant development and individual survival.

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