

## **Individuals in urban dwelling primate species face unequal benefits associated with living in an anthropogenic environment**

### **ABSTRACT**

In primates, living in an anthropogenic environment can significantly improve an individual's fitness, which is likely attributed to access to anthropogenic food resources. However, in non-professionally provisioned groups, few studies have examined whether individual attributes, such as dominance rank and sex, affect primates' ability to access anthropogenic food. Here, we investigated whether rank and sex explain individual differences in the proportion of anthropogenic food consumed by macaques. We observed 319 individuals living in nine urban groups across three macaque species. We used proportion of anthropogenic food in the diet as a proxy of access to those food resources. Males and high-ranking individuals in both sexes had significantly higher proportions of anthropogenic food in their diets than other individuals. We speculate that unequal access to anthropogenic food resources further increases within-group competition, and may limit fitness benefits in an anthropogenic environment to certain individuals.

**Keyword:** Anthropogenic food; Urban environment; Macaques; Foraging