

Fruitful foraging: the use of internal and external information in foraging decisions of mandrills



- Animals make use of external and internal information to make foraging decisions
- An example of external information is the use of olfaction: using smell to locate a food source
- An example of internal information is the use of fruiting synchrony cues

Aims: To study the use of synchrony cues in an old-world monkey species and for the first time assess the use of olfaction to locate food in an old-world monkey species

Internal Information

A group of 10 mandrills were taught the locations of two food sources in their enclosure. Mandrills were presented with a synchrony cue, and afterwards their first foraging decisions were recorded.

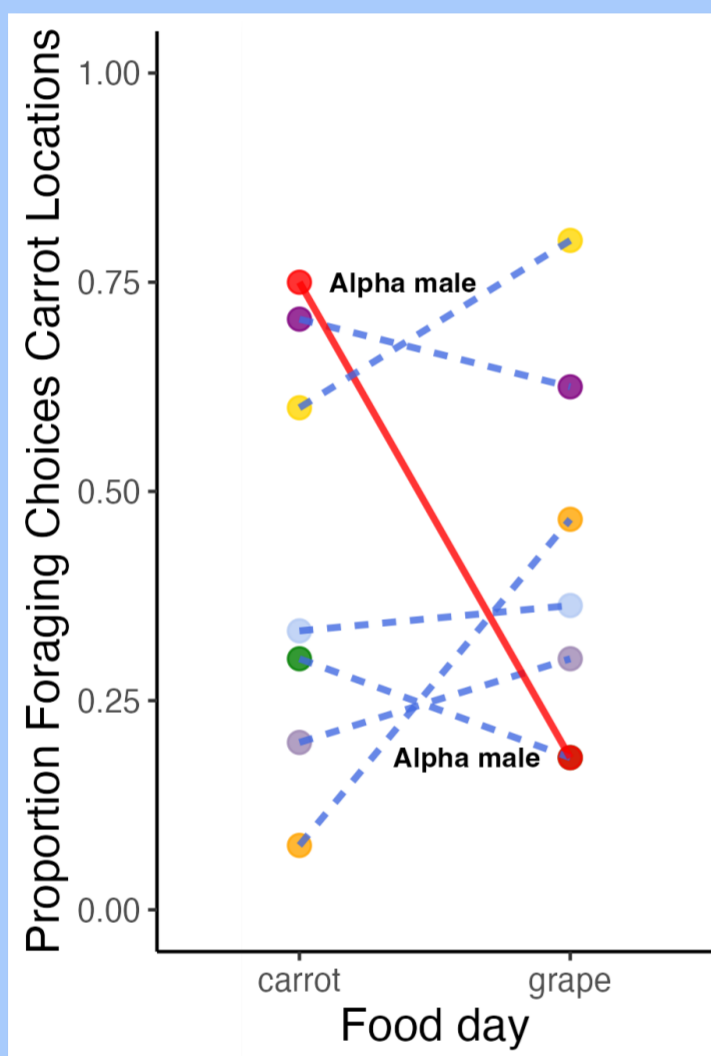


Figure 1. The proportion of foraging choices at carrot locations against which food was provided. Each colored dot represents an individual.

- Overall, the mandrills did not use synchrony cues. One individual, the alpha male, did.
- This is contrary to findings from studies in wild old-world monkeys

External Information

A group of 10 mandrills was presented with 4 puzzle feeders at randomized locations in their enclosure. Two puzzle feeders had an olfactory cue and food reward (olfactory feeder), and two other puzzle feeders were empty (control feeder). Individuals' first foraging choices at puzzle feeders were recorded.

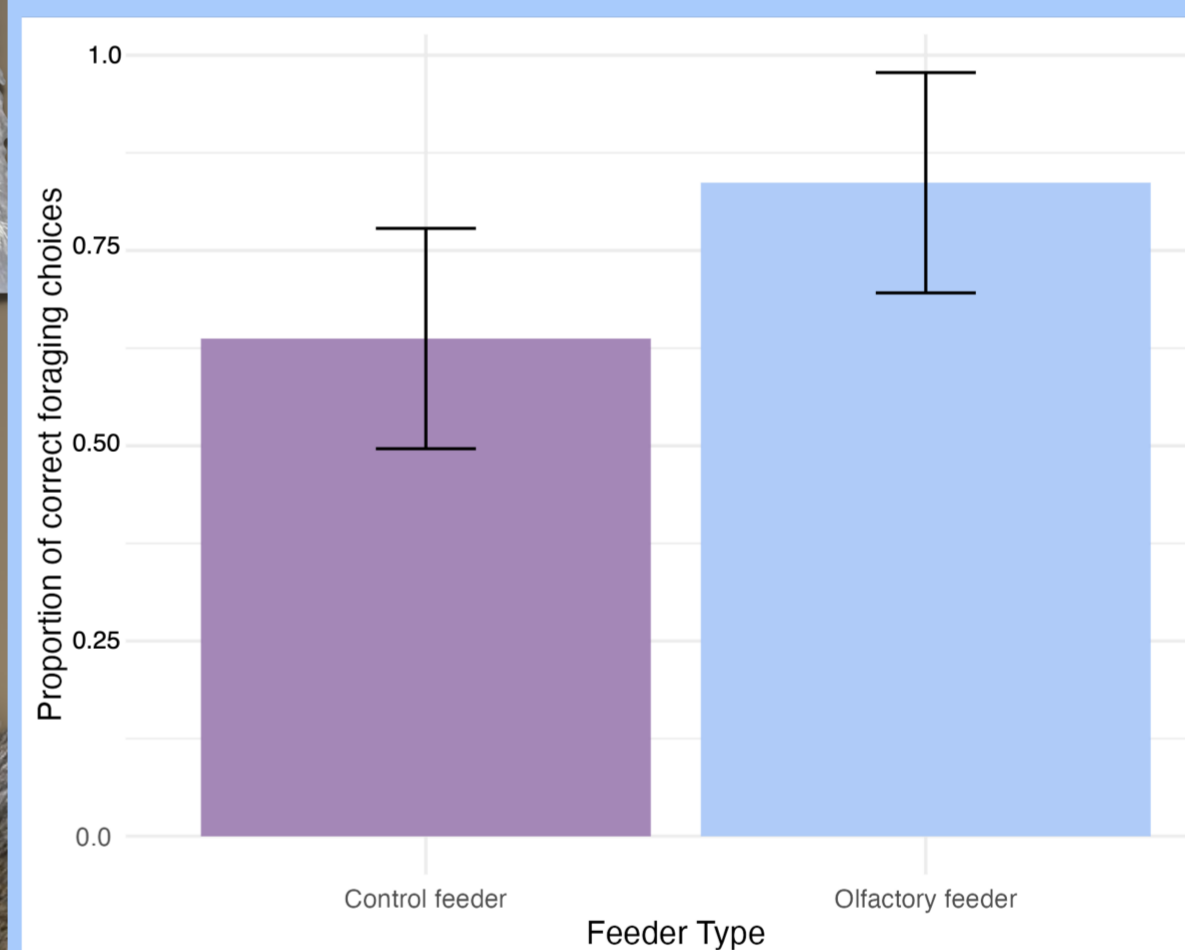


Figure 2. The proportion of correct foraging choices against which feeder type was visited

- The proportion of correct foraging choices was higher at olfactory feeders
- Indicating that mandrills used olfaction to locate food sources

Conclusion

- While mandrills as a group do not rely on synchrony cues to make foraging decisions, the alpha male does rely on these cues
- The significance of olfaction as a sensory modality in primate foraging cannot be overstated.