

Project: Food preference in two mouse lemur species (*Microcebus lehilahytsara* & *Microcebus murinus*)

Institute of Zoology, University of Veterinary Medicine Hannover

Lab course: Experimental behavioural biology

Summer term 2008

Two different species of mouse lemurs (*Microcebus lehilahytsara* and *M. murinus*) were tested for their food preferences. Four different food items were presented in a two paired choice test to find the most adequate reward for upcoming behavioural tests.

Experimental set-up:

During this study, six *Microcebus lehilahytsara* and six *Microcebus murinus* males were tested. A two-choice food preference assessment was performed. For procedures and data collection, similar methods as Fernández et al. (2004) have been used. Animals were tested with 4 different food items, all familiar to the animals. Two food items were presented in concurrent pairs. The two types of food were placed in small dishes at the same distance from the start point, *i.e.* nest box entry. A list of pairs for all four items was produced, presenting each food item against all three other food items, on the left and on the right side. Each food item was thus presented 6 times. A total of 12 food presentation trials were carried out for each mouse lemur.

Video analysis:

Each test has been videotaped with a video recorder. The videos were analyzed with Interact (Mangold, Arnstorf, Germany, version 8.01). During the video analysis, the latency of first dish visit and food choice, the chosen food item, the side of the food item's dish were recorded.

Results:

In this study, we found that mouse lemurs showed food preference among the 4 presented food items. This food preference varied between the species. *M. lehilahytsara* showed a preference for mealworms whereas *M. murinus* showed a strong individual variability. During the trials, no difference between the species in the latency of first visited item was found. However individuals of *M. lehilahytsara* needed significantly longer to choose an item compared to *M. murinus*. *M. lehilahytsara* individuals visited more often the two items before choosing one of them, *M. murinus* chose the item they found in the first visited dish. Altogether we showed that *M. lehilahytsara* and *M. murinus* displayed different feeding strategies and food preferences.

Reference:

Fernández E.J., Dorey N.R., Rosales-Ruiz J. 2004. A two-choice preference assessment with five cotton-top tamarins (*Saguinus Oedipus*). Journal of Applied Animal Welfare Science 7: 163-169.