

Feeding Behaviour of *Chameleo calyptratus* Regarding Prey Preference and Prey Ratio

Key-Words:

Veiled Chameleon
 Captive rearing
 Food Ratio
 Prey Preferences
 Zoological Garden Basel

Summary:

Within a project about metabolic bone disease of the veiled chameleon (*Chameleo calyptratus*), this study was performed to examine the feeding behaviour of female hatchlings in relation to their body weight (small vs. large hatchlings). Three sorts of prey, including grasshopper nymphs (*Locusta migratoria*), crickets (*Acheta domesticus*) and *Drosophila* sp. were fed in different ratios. After 24 hours the not eaten prey was counted. The main interest was focused on the prey preferences and how the different ratios influenced the eating behaviour. The prey preference was, for both the small and the large hatchlings clearly on the side of the crickets although there was an increase in the number of eaten crickets in the large group. *Drosophilae* seemed to be less attractive because they were just eaten when there was no other prey possibility. In the group with the heavy hatchlings the dominant prey (high in ratio) was eaten more often. The total amount of eaten prey in the small hatchling group decreased when the prey ratio shifted towards the grasshoppers.

Introduction:

Since chameleons are an increasing pets in home and zoo care the Zoological Garden Basel is trying to minimize the often occurring metabolic bone disease in young and pregnant chameleons. Therefore a project was launched in which the optimal light conditions and the optimal feeding with vitamins A,D and Calcium should be determined. At the beginning of the study, it was planned to keep all the individual under the same feeding regimen for a periode of three weeks. During this initial time, this study was performed to gain information about what those young chameleons eat per day in regard of their body size and the variable offering of living prey. To maintain a successful main experiment one must know the food preferences of the hatchlings. It should be excluded that the vitamins from the main experiment were not taken up because of a not ideal feeding. For an ideal feeding it is important to know the preferred prey and the ideal ratio of prey variability. As first food small and large flightless drosophila, cricket nymphes (*Acheta domesticus*), mediterranean flour moth (*Ephestia kuehniella*), houseflies, two days old grasshopper nymphs (*Locusta migratoria*), cockroaches (*Blattella* sp.), woodlice (*Armadillidium vulgare*) are recommended (Schmidt, 2006). From this great choice only cricket nymphs, two day old grasshopper nymphs and the flightless drosophila were fed in different ratios regarding the following two hypotheses:

1. Bigger hatchlings of veiled chameleons eat bigger prey. The different prey fed were graded from the biggest to the smallest as following: large cricket nymphs, grasshopper nymphs, small cricket nymphs, drosophila. It was assumed that the grasshoppers are preferred by the bigger hatchling and that the larger crickets will only be preferred if the hatchlings are already big enough.