Variation in the diet of the Greater Mouse-tailed Bat, *Rhinopoma microphyllum* (Chiroptera: Rhinopomatidae) in south-western Iran

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Abstract: The diet of *Rhinopoma microphyllum* was investigated through the analysis of droppings collected from two summer roosts in the temperate mid-Zagros Range, and was compared with a similar study made on the closest known maternity roost in the arid zone of the Persian Gulf Littoral. The results show that this bat remains primarily a Coleoptera feeder in both maternity and summer quarters, although a more diverse feeding habit is found in the summer roosts. Data indicate that in the summer roosts a high dominance of beetles (Coleoptera) accounted for 77 and 89% of the recovered items by volume, while in the maternity roost 86% of the volume belongs to the beetles. Prey types recovered in the summer quarters which were not represented in the maternity roost included small numbers of Diptera, Neuroptera and Hymenoptera.

Kurzfassung. Die Nahrung der Großklappnase, *Rhinopoma microphyllum*, wurde an zwei Sommerrastplätzen im temperierten zentralen Zagrosgebirge mit Hilfe von Kotaufsammlungen analysiert und mit Ergebnissen verglichen, die von der nächstgelegenen Fortpflanzungskolonie in der Trockenzone des Persischen Golfs stammen. Die Ergebnisse zeigen, dass sich diese Fledermaus sowohl an den Sommerrastplätzen, als auch in der Fortpflanzungskolonie vorwiegend von Käfern (Coleoptera) ernährt. Am Sommerrastplatz ist das Nahrungsspektrum jedoch diverser. Die Daten zeigen, dass Käfer an den Sommerrastplätzen 77 bzw. 89% der Menge der Nahrung ausmachen. In der Fortpflanzungskolonie betrug dieser Anteil 86%. An den Sommerrastplätzen wurde eine geringe Anzahl von Nahrungspartikel (Diptera, Neuroptera, Hymenoptera) gefunden, die in der Fortpflanzungskolonie fehlten.

Key words. Bats, Zagros Range, Persian Gulf Littoral, feeding habits, zoogeography, Persia.

Introduction

In dry habitats, large and seasonally rich insect patches may support large colonies of bats, but these will be well separated and overall population density will be low (ALTRINGHAM 1999). Dry habitat bats must therefore be opportunistic foragers to contend with the marked spatial and temporal variation in food supply (NEUWEILER 2000). Several attributes of bats can offset disadvantages associated with the shortage and irregularity of food supply in a dry habitat. Wing morphology may give access to wider range of prey (FENTON 1972). Occasionally the use of diurnal torpor may also help to reduce the cost of thermoregulation (AUDET & FENTON 1988). Finally, foraging style in combination with reproduction pattern or hibernation may allow a long distance movement to new maternity roosts or feeding grounds, as in *Balantiopteryx plicata* (BRADBURY & VEHRENCAMP 1977) and the Mexican Free Tailed Bat *Tadarida brasiliensis* in parts of its range (PAGELS 1975).

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