Acta Theriologica 42 (1): 14, 1997.

Ecology of sibling bats

Ecology of the sibling mouse-eared bats (*Myotis myotis* and *Myotis blythii*): zoogeography, niche, competition, and foraging. R. Arlettaz. Ph D thesis, Université de Lausanne. Horus Publishers, Martigny, 1995, 222 pp. ISBN 2-940141-00-2.

This work is a kind of comparison of two sibling bat species – *Myotis myotis* and *M. blythii* – with emphasis put on their ecological differences. The book consists of 6 chapters, each of which is arranged like a separate scientific paper – it contains an introduction, methods, results and discussion. The first one – "Identification" – introduces the reader to the whole work through the problem of discriminating *Myotis myotis* from *M. blythii*. A new method of identification is described, based on two measurements available from live animals. It is simpler than a biochemical one (Ruedi *et al.* 1990) and can be easily applied in the field work. The effectiveness of this method is high – over 99% of studied individuals were classified correctly. Usefulness of some qualitative external characters in discrimination between those two species was also checked.

A new concept of distribution ranges of the two mouse-eared bat species is presented in the chapter "Zoogeography". The controversial studied area includes the Mediterranean islands and adjacent regions of northern Africa and Asia. Four different approaches to this subject were used: cranial and external morphometrics, genetics and diet. The dietary approach is of special interest because it is not very common in literature. Cranial measurements did not yield clear results, but the findings of the other three methods are consistent with one another and negate the results of previous studies.

Four next chapters ("Niche", "Habitat", "Prey selection" and "Foraging") form a section dealing with different aspects of trophic ecology. The author tested the hypothesis that to reduce interspecific competition and allow the stable coexistence of those very often sympatric species, the resource partitioning between them should exist. Because of their rather separated diets *Myotis myotis* and *M. blythii* could be considered as, respectively, ground- and grass-gleaners. Narrow and distinct trophic niches seem to be a result of distinct feeding habitats and not active prey selection. *Myotis myotis* prefers habitats where ground-dwelling prey is easily accessible, whilst *M. blythii* chooses more grassy places. However, both species may represent so called "passive specialists" because of some morphological, behavioural and physiological constraints, which limit their diets only to types of prey they can detect.

Presented work is a very valuable contribution to *Myotis* ecology. It arranges and enriches hitherto existing knowledge and clarifies some important aspects of sympatric occurrence of species. A new identification method given by the author will be a useful tool in further studies on these bats.

References

Ruedi M., Arlettaz R. and Maddalena T. 1990. Distinction morphologique et biochimique de deux espces jumelles de chauves-souris: *Myotis myotis* (Bork.) et *Myotis blythii* (Tomes) (Mammalia; Vespertilionidae). Mammalia 54: 415–429.

Katarzyna DALESZCZYK, Mammal Research Institute, PAS, 17-230 Białowieża, Poland