Book Reviews

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Spitzenberger, F. 2001. Die Säugetierfauna Österreichs. Grüne Reihe des Bundesminsteriums für Land- und Forstwirtschaft, Umwelt und Wasserwirtschaft. Band 13: 895 pp. + CDROM. ISBN 3-85333-063-0, € 49.42

One of the many interesting aspects of mammals is their occurrence and distribution. Die Säugetierfauna Österreichs, compiled and edited by Friederike Spitzenberger, and containing contributions by different other authors, deals with occurrence and distribution of the mammal fauna in Austria. With its 895 pages of text, analysis and distribution maps, and including a CDROM, enabling us to appreciate fine detail in the distribution maps, it is a very impressive and thorough approach to the Austrian mammal fauna!

Many aspects relevant to the comprehension of species occurrence and distribution, such as climate, altitude, geographical and bio-geographical structure and history of the landscape are discussed. The work deals with 104 species, 97 of these still occurring today. The 27 of the species descriptions concern bats and even taxonomic information and data on distribution of the 'new' *Plecotus* sp. are provided. Information on taxonomic history, recent taxonomy, ecology, biology as well as on conservations issues is presented. Data and knowledge on their distribution in the Holocene (contributions by K. Bauer) are discussed and provide an interesting background for interpretation of recent occurrence and distribution, covering approximately the last 30 years. In this way, e.g., information on a species such as *Myotis dasycneme* is provided, where only records from cave deposits are available, and which is not known to occur in recent history.

An image of distribution is always as good as the data set used to construct it. Here data, collected and presented in a very accurate a geographical minutes grid cell system (app. 2.3 km^2), originate from different museum collections, analysis of owl pellets, cave deposits, literature references and field observations covering different techniques. A large number of both professionals and volunteers contributed. An analysis of the status and completeness of the survey honestly reveals where survey work was not complete.

Unfortunately no information is given as to whether the survey approach was actively directed on assessment of occurrence and distribution, or whether 'merely' available data are presented on a map. We have to be aware, however, that given the difficulty to observe and survey mammal species, the latter already is a great achievement.

The maps of recent distribution of the individual species, and here I rely on my judgment of the Chiroptera species, demonstrate that in most cases a good insight in distribution is achieved, but that on the level of occurrence the data set certainly could be improved. It is clear that species dwelling in houses, on attics and in caves, such as *Myotis myotis*, *Barbastella barbastellus*, *Rhinolophus* spp. or even *Eptesicus serotinus*, where active assessment in some parts of the country has been undertaken, are better represented than tree-dwelling species, such as *Nyctalus noctula* and *Myotis daubentonii*, e.g., where availability of distribution data appear to be very much biased by ecological studies done in some areas. A better resolution in time would definitely ask for a shorter survey period (< 10 years).

All in all this work presents an excellent assessment and analysis of available data, and a great contribution to science and conservation of Austrian (and European) mammals. I am sure the Austrian nature conservation authorities and professional and amateur mammal scientists and conservationists also see the great opportunity provided by the 'empty areas' on the distribution maps: setting priorities to where to start future survey work.

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CHARLES-DOMINIQUE, P., A. BROSSET, and S. JOUARD. 2001. Les chauves-souris de Guyane. Patrimoines Naturels, 49: 1–172 (pbk). ISBN 2-85653-535-6, € 21.00

As presently known, there are exactly 100 species of bats reported from French Guiana, an Overseas Department of France, located on the northeast coast of South America. This is a remarkable number for the smallest country on the continent and represents over half of the approximately 186 species of mammals documented in French Guiana. The authors of this book and other researchers have come a long way since the initial count of 28 bat species over 30 years ago (Brosset and Dubost, 1967). The book represents a synthesis of their long-term research on bats in French Guiana.

This publication, written in French, is interesting in that it is a hybrid field guide and textbook on bats, and is really split into two parts. The first section is a general review of bat biology that would be a good summary for any Neotropical community, although they use several examples relating specifically to French Guiana. These include a history of bat research in the country and the different types of habitats in French Guiana. Other topics cover trophic guilds, roost sites, predation, social behaviour, interactions between man and bats, and the role of bats in forest regeneration, which would be informative for the amateur naturalist. There is a chapter on field methodology geared specifically to the bat researcher.

The last half of the book is devoted to the identification of the 100 species of bats found in the country and is obviously aimed at the bat researcher who will be netting and examining bats in-the-hand. There are colour photographs of about half the species of bats, including some nice pictures of roosts, followed by two traditional dichotomous keys for the families and genera, however, usually only one diagnostic character is used. For those not intimately familiar with the fauna, they may get bogged-down in the key before getting to the species identification. As an example in the generic key, the character used for identifying *Centronycteris* is a short muzzle in contrast to a moderately developed muzzle. Without the other species of emballonurid bats for comparison, the user may not be confident in distinguishing this subjective trait. Other descriptive characters would have been helpful such as parallel rows of dots on the tail membrane or a yellowish-brown fur colour to help confirm the species identification.

One of the things I like are the illustrations in the "anatomically important characters" section. The only drawback is that it is not in dichotomous format. Instead, there is a list of characters that, in combination, describe the species. Again, unless you are familiar with the fauna and have properly keyed out your specimen to genus, you end up, by trial and error, trying to reconcile the best description with the bat in hand, instead of consciously deciding if your bat has a particular diagnostic character. A good compliment to this illustrated key is the dichotomous field key to the bats of the Guianan subregion (Lim and Engstrom, 2001).

The book ends with several appendices giving further notes on identifications, summary of life history traits such as weight, abundance, diet, roosts, and habitat, French common names, dictionary translating French biological terms into English, bibliography, English abstract, and index to scientific names. For anybody seriously interested in Neotropical bats or for the serious bat aficionado, this book would be a nice addition to their library, but it may not satisfy everyone. The book is a good introduction for the bat neophyte and will be useful for the professional bat biologist, however, those wishing an in-depth book will have to consult the more recent references in the bibliography (many by the authors) to delve deeper into the world of bat research in French Guiana.

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