

## Besprechung / Review

WESTRICH, P. 2018: **Die Wildbienen Deutschlands**. – Eugen Ulmer, Stuttgart: 824 pp., 1700 colour photos, 17 drawings, 14 tables. – hardcover. – ISBN 978-3-8186-0123-2.

The first comprehensive compilation of Westrich's bee studies appeared in 1989, also published by Ulmer, as „Die Wildbienen Baden-Württembergs“ in two volumes: „Lebensräume, Verhalten, Ökologie und Schutz“ (General Part) and „Die Gattungen und Arten“ (Special Part) (972 pp., 496 photos). The 1990 second edition was also immediately sold out, because the work, which so impressively displayed the diversity, beauty and significance of this insect group, turned overnight the hidden favourites of some specialists into a trendy model group, not only for numerous insect lovers, but for nature friends in general. This microcosm becomes even more attractive as it becomes more visible, and Westrich's richly illustrated and well-written volumes were thus the perfect companions for leisure, art and science. The (at that time publicly subsidized) editions were produced in numbers too small to satisfy this demand, but, inspired by this book, at least several websites subsequently appeared on the Internet, not least those by Paul Westrich himself („Faszination Wildbienen“, <https://www.wildbienen.info>). A number of nature guides to wild bees also appeared throughout Europe, also orientated largely on „Die Wildbienen“.

Now a new version of the successful book has been published, geographically extended to the whole of Germany, enriched by the experience of a further 30 years of research, and with three and a half times the number of pictures. In format it resembles the famous „Schmiedeknecht“ (Die Hymenopteren Nord- und Mitteleuropas) from 1930, but – let me say this in advance – not only outwardly. The new book is a tremendous achievement, and will advance wild bee science several steps further. It places Paul Westrich in the first rank of German bee researchers, alongside Schmiedeknecht, Friese, Stoeckert and Blüthgen. We are fortunate to have this monumental work at our disposal as a reliable orientation and starting point for research, teaching and ecological practice.

In its structure, the work follows its predecessor insofar as it begins with a general part (386 pp.) and continues with the special part (336 pp.). The section titles are also largely identical: habitats of wild bees, way of life of bees, beneficiaries and opponents of bees, bees and flowers, genera and species. The texts, however, are generally more compact, more essential, more mature and, above all, more influenced by personal experiences. They clearly aim to promote practical measures to conserve the species in their ecological context. The idea of protection is the continuous theme down to the individual presentations. Westrich provides access to general understanding via a carefully conceived

intellectual key: The life of a bee population takes place in an „overall habitat“ consisting of relationships between food, nesting sites and building materials as a three-part prerequisite („partial habitats“). The species are also temporally adapted, seasonally and daily. These factors are basically species-fixed and can only vary slightly in context. In order to initiate effective protection measures, a special way of thinking is therefore necessary in addition to species knowledge. This way of thinking is used in the book both to present the habitats and to explain the demands of the bees.

This results in a completely new quality for a bee book. Westrich also tells us how such basic knowledge can be applied practice. He has gained relevant experience over many years during his own environmental assessments, as well as working on the Red Lists for Germany, which he coordinated. As a result, a full 52 % of bee species were found to be endangered in different ways, while 7 % have disappeared completely. If one wants to do something against this, one must get to know the animals, because it is still true that one can only protect what one knows. Westrich knows the wild bees like no other, and it is most meritorious that he here communicates his knowledge in detail.

A total of 565 species (1990: 429) are listed in the species inventory of Germany, a number determined after careful consideration. After adding the taxonomically still unclear or controversial taxa, among which are „certainly also independent species“, Westrich assumes that more than 570 species have become known in the country since the beginning of research on bees. In the new book, the genera are systematically arranged according to families (in 1990 alphabetically). For each species, a photo and a profile are given (identification characters, distribution, habitat, nesting mode, flowers visited, phenology), also with a German name, if available and established. In the explanation of his treatment of problems – be it a determination of names or the evaluation of facts – he communicates this in detail and comprehensibly. One notices how the facts are critically thought through and responsibly decided. The reader is persuaded and convinced, which is another attraction of this book that is rarely encountered elsewhere.

The distribution maps had to be dispensed, mainly for technical reasons. This is easy to accept, because on the one hand these very quickly become out of date, and on the other hand there are meanwhile other media, which are better suited for this.

Detailed chapters are devoted to the systematics and taxonomy as well as the nomenclature of wild bees. Experience has shown that this always ignites a lot of academic controversy, which can hardly be mediated to less specialised nature lovers. Westrich has been wise in choosing a practical-conservative path, which is in no case „wrong“. Widespread among „bee people“ is a sort of neophilia, in which one tries to show that one knows the newest

papers. Possibly the newest is then also considered to be the most “modern”, although this word has no real meaning in this context. In truth, one can only choose to agree or disagree, if the results of one’s own investigations are available. Among the (above all European) specialists there is a structural problem which from the outset works against achieving a general consensus: they work exclusively within a limited taxonomic range, mostly on genus groups or even only on individual genera. Since genus rank cannot be objectified, but is first and foremost a matter of the opinion of the individual researcher, no single authority can act as “umpire” for the whole (and any move in this direction would probably be rejected outright by many). Charles Michener did set a certain standard for taxonomic views with his work “Bees of the World” (2007). However, “Mich” was the only one who possessed the undisputed professional competence to do this. But if you want to make a name for yourself, above all you must of course contradict authority ... Fortunately, Westrich here shows no signs of developing such a subversive ambition. He considers it more honest to explain the problem than simply to use a name and hide the problem. And he does this in depth, with purely objective arguments, making himself clearly understood. In his critical approach to serious science, he struggles to identify the details which form a coherent whole, until he can finally accept them himself. He takes obvious pains not to frighten off the non-specialist user with quarrels, but instead gives him a suitable basis on which he can form his own opinion. An understandable and well-founded procedure. The “bridge” to works that use other names is the list of “Synonyms” (p. 734). New and especially valuable is a table containing the basic data of all presented species.

Although an in-depth methodological debate lies outside the scope of this book, Westrich also makes use of molecular genetic taxonomic analysis, a field which is still being developed. Corroborated results have already been included in the species lists. Fortunately, there are fixed

rules for the nomenclature, although there are still many disputes. Here, too, Westrich knows his way around, and communicates the aims and basic principles of the internationally agreed ICZN regulations in an understandable way.

In summary, I consider this new bee book to be an extremely well-prepared and extraordinarily valuable work. In general, the following applies to all parts of the book: the not uncomplicated matter is presented completely and succinctly, but is still a pleasure to read. Westrich has remained true to his credo: “My aim was to write the texts and illustrate them in such a way that the work will not only be read by scientists, but also be understandable and useful for lay people interested in natural history”. One of the special advantages of Westrich’s way of working is that he can draw on his own experience in virtually all statements. He has certainly read the 3000 titles in the bibliography. One can therefore rely on his statements. In view of this accomplishment, which no one else would be able to achieve today, it would be churlish to behave like a carping enthusiast, and pick out one or two contentious details. Anyway, it would make more sense to inform the author directly about these. As I know him, he is always open to arguments, and the extremely large number of colleagues whom he thanks for their cooperation in the work reflects this.

By the way, not only the text is good, this is also a beautifully illustrated book. The photos on the PEFC-certified Omnisilk 130g/m<sup>2</sup> paper are excellent, even if they make the book a bit heavier. The publisher Eugen Ulmer is to be congratulated on this outstanding design achievement, which is a fitting present for its 150th anniversary. Sure, the price is not low, but the book is worth it. The starting edition of 4000 copies could soon be out of print, and consider what it will cost in the antiquarian online shop! Do I have to make any further recommendations?

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