

**In memoriam Prof. Dr. rer. nat. Ekkehard Wachmann
(20.12.1937 - 01.09.2023)**

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Ekkehard Wachmann during the 20th Central European Auchenorrhyncha Meeting (Berlin, 2013) (Photo M. Zilch).

On 1 September 2023, our dear colleague and friend, Ekkehard Wachmann passed away after a long illness at the age of 85.

Ekkehard was well recognized in the Central European Auchenorrhyncha group, as he, together with the late Reinhard Remane, had written the very first popular scientific book on leaf- and planthoppers of Central Europe, illustrated with numerous excellent live photographs (Remane & Wachmann 1993). During his stays in Marburg to prepare the book, he quickly won over Remane's entire working group with his friendliness and open-mindedness. In particular, his patience and persistence in obtaining pictures for the book are still remembered today. For many years, this book was the 'one and only' introduction to the fascinating world of Central European Auchenorrhyncha for many students. In addition to the valuable text written by R. Remane, it were Ekkehard's attractive photos that contributed to the book's success, so that it was quickly sold out. It was all the more pleasing that he decided to contribute his photos again for a new popular scientific book, now dedicated to the "Auchenorrhyncha of Germany, Austria and Switzerland".

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As more than 20 years had passed between the two works, the quality of the old slide photos was no longer sufficient for him, and he took new digital pictures of almost all the species presented. This necessitated extensive excursions, and his work only really began after a day in the field (Fig. 1). The majority of the photos of the freshly caught leafhoppers and planthoppers were then taken between two and four o'clock at night, as he had noticed over the years that many Auchenorrhyncha are calmer at this time and therefore easier to photograph. And the next day the results were visible in the form of top-quality digital photos. It is therefore not surprising that also the new book was particularly praised in the reviews for its brilliant illustrations.

His enthusiasm for insects began at an early age. Ekkehard was born on 20 December 1937 in the small village Reinbek (Schleswig-Holstein) not far from Hamburg. He grew up at the Hamburg-Bergedorf Observatory, where his father worked as an astronomer. In addition to insects, Ekkehard was particularly interested in birds and observed them passionately. Thankfully, his interests in biology were strongly supported by his parents, who even allowed him to keep owls and crows on the observatory grounds. The love for his animals, but also his scientific curiosity, meant that he built up a very personal relationship with many of his animals and was happy to pass these experiences on to the following generations.

Following his passion, Ekkehard started his studies in zoology, botany and biochemistry at the University of Hamburg in 1957 and later continued his studies at the University of Tübingen and at the Kiel University. He finally returned to the University of Tübingen and there he completed his doctoral thesis on "Untersuchungen zur Entwicklungsphysiologie des Komplexauges der Wachsmotte *Galleria mellonella* L." (Studies on the developmental physiology of the compound eye of the wax moth *Galleria mellonella* L.) under the supervision of Professor Viktor Schwarz in 1965. During his university years Ekkehard formed lifelong friendships with some of his fellow students. Often, they went together on nature excursions, and they experienced many exciting things that have remained in their memories. There are countless anecdotes from his time in Tübingen, which Ekkehard was always happy to share with colleagues and students.

Later his scientific career took him to Freiburg im Breisgau in south-western Germany, where he was appointed assistant to Klaus Sander, head of the Department of Developmental Biology at the Albert Ludwig University. From this point onwards, he devoted himself intensively to his speciality, the structure and development of insect eyes. It was also during his time in Freiburg that Ekkehard met his future wife Dietlind.

Following the call of a scientific research position as at the Freie Universität Berlin, the young couple moved to Berlin in 1967. At his new place of work, he had electron microscopes at his disposal (SEM and TEM), and he continued to dedicate himself with great vigour and success to the elucidation of various fine morphological structures in arthropods. A particular outstanding result of this work on the electron microscopes was the 3D reconstruction of the adhesive or spherical hairs of the Opiliones genus *Nematostoma*. Four years later, he was appointed Professor of Zoology at the Zoological Institute of the Freie Universität Berlin. He continued his research on the morphology of arthropod eyes, their function, and ontogenetic development in many groups and gained a high reputation as a specialist in this field.

In addition to his intensive research activities, Ekkehard was particularly characterised as a passionate university lecturer. He supervised numerous doctoral theses and dissertations as well as many state examination theses, even after his retirement in 2003. The training of

schoolteachers was particularly close to his heart. It is therefore not surprising that many of Ekkehard's former graduates kept in touch with him and later enjoyed inviting him into their classes, where he enthusiastically and lovingly passed on his knowledge about insects and birds to the pupils. The university field excursions with Ekkehard also remain very fond memories. These led not only into nice habitats in Berlin, for example to the Spandau Forest or Grunewald, but also to Eschwege (Hesse) in western Germany. It was always important to him not only to teach the participants of the excursions the names of the organisms they encountered, but also to give them an insight into their ecology and behaviour. This combination and interdisciplinary knowledge in particular remained in many students' memories, and they were even able to recall these facts many years later when they met together.

But Ekkehard was also known and highly respected as a nature photographer. His passion for photography has also accompanied him since his early youth. As a pioneer of macro photography of insects in the 1980s, he shared his passion with the younger generation and introduced a course in scientific (photographic) documentation at the university. After his retirement, he dedicated himself even more intensively than before to his passion for nature photography with a focus on various beetle families (i.e. *Cerambycidae*, *Coccinellidae*) as well as the *Heteroptera* and *Auchenorrhyncha*. Working closely with colleagues, he published numerous important works on a wide variety of insect groups. Unfortunately, he did not live to see the completion of an identification book on the true bugs of Germany. But he was still able to enjoy the publication of a popular science book on the fascinating world of insects in 2022 (see full list of his publications at the end).

The German Society for General and Applied Entomology (DGaE) awarded him the Fabricius Medal in February 2023 in recognition of his outstanding achievements in the field of insect morphology, in particular his pioneering contributions to research into the ultra-structure of insect eyes and the systematics of the *Heteroptera*, as well as for his standard-setting image identification works on various insect taxa. The society published an obituary in volume 37(2) of the DGaE-Nachrichten.

Thanks to his good contacts with his former students, Ekkehard has been heavily involved in nature education projects in Berlin over the past few years. We would particularly like to emphasise his commitment to activities of the "Deutsche Waldjugend" and the Gardening School in Berlin-Reinickendorf. Whenever time and health permitted, he took part in the numerous events and enthusiastically taught the young people to appreciate and love animals and nature. The children literally hung on his every word and always wanted to hear more and new stories about the various animals (Fig. 2). Some of us would have felt rushed, but Ekkehard, lovingly known just as "Ekki" not only by the children, was always very patient and happy to tell more anecdotes.

At the meetings of the "Arbeitskreis Mitteleuropäische Zikaden" Ekkehard was always a welcome colleague and friend (Fig. 3, 4). We could not only share exciting and enjoyable scientific discussions, but also to talk about many other topics, including private ones. We will always remember his knowledge and his humour. Ekkehard Wachmann will be fondly remembered by all of those who had the honour of getting to know him. We have not only lost an exceptional biologist, an outstanding nature photographer and a dedicated lecturer, but also a dear colleague and good friend.



Fig. 1: Ekkehard Wachmann on a field trip with Wolfgang Rabitsch (left) and Roland Mühlethaler (right) in eastern Austria (Neusiedler See National Park) in July 2016 (Photo W. Holzinger).



Fig. 2: Ekkehard Wachmann with school children during the Erasmus Day 2022 (Berlin-Reinickendorf) (Photo: N. Weiß).



Fig. 3: Roland Mühlethaler, Nadine Weiß and Ekkehard Wachmann during the excursion of the 20th Central European Auchenorryhacha Meeting in 2013 (Seeburg, Brandenburg) (Photo W. Holzinger).



Fig. 4: Ekkehard Wachmann attending the 20th Central European Auchenorryhacha Meeting (Berlin, 2013) (Photo W. Holzinger).

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