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Book review

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Schneider, C. & Girod, P. (eds), 2023. *Fossilien aus dem Campan von Hannover*, 4th completely revised and enlarged edition. Arbeitskreis Paläontologie Hannover, Hannover, 712 p.

Price: € 49.00 (excluding postage); to order via https://ap-h.de.
ISBN 978-938385-82-1.

A sizeable baby—that would be a good description of this tome. After the third edition (published in 2013) it took 10 years for this hefty, newest incarnation to become available. And what a book this is! A collective of authors (both professionals and capable 'citizen scientists', mostly from Hannover and surroundings and Berlin; 23 people in all) worked on this up-to-date standard guide to fossils of early and late Campanian age in the vicinity of Hannover (Lower Saxony, Germany) over recent years.

All fossil groups recognised to date (with exception of calcareous nannoplankton and dinoflagellates) are dealt with. The lead roles are taken by sponges, ammonites and sea urchins; after all, these are the groups most sought after by collectors, even as far afield as the Netherlands and Belgian Flanders. They are all familiar with the 'Lehrter Westmulde', with famous quarries such as 'Alemannia', 'Teutonia' and 'Germania'.

Following an introduction to the local geology and (bio) stratigraphy (with detailed logs and photographs of quarries, so that you may place your finds in the correct biozone), there are separate chapters on all groups. Kicking off are small stuff—foraminifera, mostly benthic but also a few planktic species. Next are sponges, headed by a formidable list of species (tabulated over 5½ pages in A4 format) and illustrated in no fewer than 45 plates. It is hard to decide which species is the most beautiful; maybe the 'sun sponges' (genera *Coeloptychium* and *Troegerella*) rank first; these are a much-desired trophy amongst collectors. Placed on a black background, these marvellously prepared sponges are genuine works of art.

Corals (exclusively solitary taxa) comprise several species, inclusive of octocorals, and also hydrozoans (in tubes of serpulid worms) have been recognised. Molluscs include gastropods, of which Pleurotomariidae and Aporrhaidae feature prominently. There are many new additions that document that the allegedly 'hostile' muddy sea floor sported quite a diversity of snails, including carnivorous taxa. Next in line are scaphopods and bivalves. The latter chapter in particular has left me with many question marks; quite a lot of taxa have been identified erroneously.

Cephalopods are discussed in the next few chapters, starting with nautiloids, and the 'main prize' next: ammonites (pp. 274–354), with admirable *Lewyites elegans* (males and females) and other heteromorphs, to conclude with belemnites and several pathological individuals (p. 367).

Following chapters on brachiopods, bryozoans and worms, the stage is set for the next favourite group amongst collectors—echinoderms (pp. 454–610), with many a new record amongst sea lilies, starfish, brittle stars and echinoids. The last-named also has a very good identification key. Ostracods, isopods, barnacles (Cirripedia, with a number of new, still undescribed species) and higher decapod crustaceans (lobsters, crabs) follow in the next few chapters.

The last portion of this tome discusses cartilaginous and bony fish—lots of dissociated material (teeth and tooth crowns), but also partial jaws and associated remains of teeth and vertebrae of sharks (*Squalicorax kaupi*). Still higher in the food chain were saurians (Elasmosauridae, Mosasauridae) and sea turtles, for which it is not (yet) clear whether their isolated remains stem from floating carcasses or from animals that actually inhabited this basin and reproduced in it.

This heavy book concludes with chapters on ichnofossils (often considered less interesting and less collectable, but they deserve so much more!), plant remains, 'problematica' and 'washed-in' rocks (possibly including reptilian gastroliths). The extensive index and lists of references with all chapters are a welcome addition.

Any criticisms? Well, yes. That is to be expected in a work of this volume. The idea is to list items to be corrected for a second print run—I am certain that this will follow soon, because the 1,250 copies that were printed in March 2023 have proved very popular indeed! I will list two examples here: note the picture of calcareous tubes on p. 250 (identified as *Teredina amphisbaena*), while the same specimen (p. 664) is listed—and rightly so—as the ichnofossil *Apectoichnus longissimus*. In addition, the dissociated starfish ossicles on p. 501 ('Abb. 26') should have been referred to as *Nymphaster mudzborgh*, following Jagt *et al*. (2021).

However, in no way does this have a negative impact on the total picture. This is a marvellous publication; at this price, do make sure to get your own copy!

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Reference

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