

BOOK REVIEW

Stratigraphie von Deutschland — Quartär. Quaternary Science Journal (Eiszeitalter und Gegenwart), vol. 56 no. 1–2 special issue. Editor: T. Litt. E. Schweizerbart'sche Verlagsbuchhandlung (Nägele u. Obermiller), Stuttgart, 2007, 138 pp., ISSN 0424-7116.

This is the first volume of a revitalized, well-known journal (Eiszeitalter und Gegenwart) of the German Quaternary Association (DEUQUA), that transformed its outlook to pave the way for inclusion in the Science Citation Index. The new appearance of the journal is accompanied in this volume with an outstanding presentation of the stratotypes that are fundamental to German Quaternary stratigraphy. The volume is edited by Thomas Litt, the Chair of the Quaternary Subcommission of DEUQUA, and this brings significant weight to the published material.

The aim of the volume (which is, in fact, a monograph) is explained by T. Litt in the *Preface*: it is a presentation of the major stratotypes and stratigraphical terms, fundamental to Quaternary stratigraphy in Germany. It comprises a review of the traditional stratigraphical terms, the meanings of which have changed over time and occasionally are regionally heterochronous if compared across different parts of Germany, the Alpine Foreland included. The monograph comprises the next step in stratigraphical understanding, after the compilation of the *Stratigraphical Table of Germany 2002*, part of which, comprising the Quaternary and Pliocene, is a supplement.

There are 5 main chapters in the volume. The first one is *The Quaternary as a chronostratigraphical unit* by T. Litt. It is an introduction to the global principles of the subdivision of the Quaternary. The recent debate as to the status of the Quaternary as a formal stratigraphical unit is also presented.

This chapter is followed by three regional presentations. They start with the *Stratigraphical terms for the Quaternary of the North German Glaciation area* by T. Litt, K.-E. Behre, K.-D. Meyer, H.-J. Stephan and S. Wansa. This part of Germany, which was occupied by ice sheets during the Pleistocene, is a type region for many milestone terms in Quaternary stratigraphy, widely used not only in Europe but also globally. A subdivision of the non-glacial part of the Lower Pleistocene and the lower Middle Pleistocene is based on long continental sequences from the Lieth and Gorleben sites. This chapter contains all 6 illustrations in the volume. They show correlations of different parts of the German stratigraphical subdivision with those in neighbouring countries, with the general European scheme and the marine isotope record, together within the glacial limits in central Europe as well as temperature and vegetation development during selected intervals of the Pleistocene.

The second regional presentation is on *Stratigraphical terms for* the Quaternary of the south German Alpine Foreland by K.A. Habbe,

D. Ellwanger and R. Becker-Haumann. It considers this region, classic for morphostratigraphical terminology since the very beginning of the 20th century when the monograph *Die Alpen im Eiszeitalter* by Penck and Brückner was published. It is however important that the present stratigraphical approach to this region is broadly combined with lithostratigraphical procedures.

The third regional presentation is on *Stratigraphical terms for the Quaternary of the periglacial area in Germany* by B. Urban. It deals with important climatostratigraphical terms from the German periglacial area during the Pleistocene and provides a supplementary description of the most important biostratigraphic terms that are related to warm and cold stages.

The last chapter of the volume is on *Biostratigraphical terms from mammal palaeontology for the Pliocene and Pleistocene in Germany* by W. van Koenigswald and W.-D. Heinrich. It presents terms derived from mammalian palaeontology as well as the constraints on using a strictly biostratigraphical approach to correlation of the stages within the Quaternary. Due to repeated climatic oscillations, there have been several immigration waves of mammals, but few extinctions of recognized species.

At the end of the volume there is a reference list, containing about 500 publications, mostly by German authors. However, there are also several papers by other authors, cited both for general stratigraphical aspects and for interregional correlations.

All stratigraphical terms presented in the volume are described in chronological order and comprise 5 standard sections including definition and first description, type locality, distribution, dating and comments. The presentation of each stratigraphical term is signed by specific author(s). No lithostratigraphic terms are included so far and the German Quaternary Subcommission intends to publish these later.

A huge amount of work has been carried out by the Quaternary Subcommission of DEUQUA. A disadvantage of this published monograph is that most of the text is written in German. This may inconvenience some, as may the lack of location sketches of the described localities and type regions described. In general, there could have been more illustrations, especially in the chapters on the Alpine Foreland and the periglacial region. There are some spelling and citation errors, but these do not affect the value of the monograph greatly.

In general, the volume presents the current state-of-art in German Quaternary stratigraphy. It constitutes a potential archival source and provides good data for identifying the key priorities for future investigations, not only in Germany but also in other countries. The monograph is a valuable, complete and up-to-date regional presentation of the Quaternary stratotypes in Germany and it would be desirable if other countries follow this idea.