BOOK REVIEW

Müller, A., L. Ortmann & L. Eismann. Die Schwerminerale im fluviatilen Quartär des mittleren Saale-Elbe-Gebietes. Ein Beitrag zur mitteleuropäischen Flussgeschichte. — Altenburger naturwissenschaftlichen Forschungen, 4, 1988.

In 76 pages the authors have put together a wealth of information on the development of the drainage-system between the Harz region in the West and the river Oder in the East during the Quaternary. This is done by means of heavy mineral investigations in the size-fraction 0.1–0.2 mm of about 330 samples taken from boreholes as well as from exposures. Where possible the gravel composition is also used for interpretation.

The results are grouped by means of triangle diagrams, which enable a good identification of each river system. The age of the deposits is also taken into consideration.

After some introductory chapters the results for each separate river are treated. Successively the rivers Bode, Saale, Weisse Elster, Pleisse, Mulde, Elbe and Neisse are presented. It is shown that, in general, the upper reaches of these rivers can be separated rather well by means of their heavy mineral content.

The Saale river is marked by its dominance of epidote together with andalusite, the Weisse Elster by very high values of topaz with andalusite, the Mulde especially is marked by topaz, while the enrichment to the North with garnet is this river system is very conspicuous. The river Elbe is marked by the occurrence of augite, the value of which increases with decreasing age, while sillimanite occurs already in the Late Tertiary.

It is stated that the values for unstable minerals increase for all rivers in the course of the Quaternary, while the influence of Scandinavian material had greatly increased since the far-reaching Elsterian glaciation. At the same time the draining of this area to the West became disturbed.

The conclusions in this paper are of importance for the knowledge of the 'white sands' in The Netherlands. The opinion that the river Elbe flowed to the West into The Netherlands during the Early Pleistocene, with major influences of the Mulde and Saale rivers, is supported. The Weser and Ems rivers were only very minor tributaries. The last chapter is devoted to the comparison with these deposits in The Netherlands.

The authors have presented a very thorough study, giving a detailed account of the regional development, where even shifts of rivers could be proved. For scientists concerned with the study of Quaternary river deposits, especially those of 'eastern' origin, this publication is a 'must'.

A.W. Burger,
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