

A Catalogue of the Ammonites of the Liassic Family Liparoceratidæ in the British Museum (Natural History)

By Dr. L. F. Spath. Pp. ix + 192 + 26 plates. (London: British Museum (Natural History), 1938.) 30s.

THIS work has a much wider significance than might be inferred from the fact that it deals with only one family of ammonites, and that a comparatively short-lived one. Unlike most writers on ammonites, the author attaches but little importance to phylogeny which is based on the evidence of ontogeny. Previous work on the family Liparoceratidæ has been done by Hyatt, Buckman, and Trueman, and their conclusions rest mainly on the assumption that the phylogeny of an ammonite may be seen in its ontogeny. According to these authors, the evolute capricorn Liparoceratids were ancestral and gave rise, through the dimorphs, to the involute sphaerocoones.

In the view now put forward by Spath this order of evolution is entirely reversed. He maintains that the more or less involute (closely coiled), often sphaerocoone, Liparoceratids are ancestral to the more evolute (dimorph) forms, and that these in turn gave rise to the capricorns, which are the most evolute Liparoceratids. This order of evolution is borne out by the stratigraphical succession which, owing largely to the work of Dr. W. D. Lang, is now known in much greater detail than hitherto, and shows that there are no capricorns among the early Liparoceratids.

In his systematic and phylogenetic work, Spath relies mainly on resemblances in the characters of the adolescent and adult stages, on the existence of passage forms, and particularly on the order of appearance in time of different ammonites. He considers that the value of small differences in the suture line has been greatly over-rated; that the position of the siphuncle in the early stages of development is too variable to be of importance; and that too much stress has been laid on the configuration of the earliest whorls. He shows that new characters often appeared in the younger stages of development, and, as evolution proceeded, spread to later whorls.

The numerous and excellent illustrations will enable readers to follow in some detail the author's views on the evolution of the Liparoceratidæ, and the glossary of technical terms will be of value to those who have not made a special study of this group of fossils.

Fernsehen:

die neuere Entwicklung insbesondere der deutschen Fernsehtechnik. Vorträge von M. von Ardenne, Dr. F. Banneitz, Dr. E. Brüche, W. Buschbeck, Prof. Dr. A. Karolus, Dr. M. Knoll, Dr. R. Möller, Prof. Dr. F. Schröter. Herausgegeben von Prof. Dr. Fritz Schröter. Pp. vi + 260. (Berlin: Julius Springer, 1937.) 21 gold marks.

IN the autumn of 1936 the German Society of Electrical Engineers (Elektrotechnischer Verein) and the German Post Office arranged a course of lectures on

television at the Technische Hochschule, Berlin. These lectures were intended to give to a technical audience an introductory survey.

The present book is based on this course and contains the contributions of the various lecturers (most of them well-known specialists in their subjects) in abstracted form. The book covers the ground very well. It deals not only with the electron optical systems of television, but devotes also adequate space to the mechanical systems. It pays special attention to the problem of transmitting television signals by radio or by cable and also contains a chapter on large-screen television.

The treatment of the subject by the various contributors is as a rule clear, though naturally concise; and the essential points are well brought out. The only notable exception is the discussion of the optical efficiency of mechanical scanners, where some vague statements are made.

The book is a valuable addition to the few existing text-books on the subject, though its main use to English workers will be as an account of German tendencies and the state of development reached by the end of 1936.

A. B.

The Principles of Soil Science

By Prof. Alexius A. J. de Sigmond. Translated from the Hungarian by Prof. Arthur B. Yolland; translation edited by G. V. Jacks. Pp. xiv + 362 + 4 plates. (London: Thomas Murby and Co., 1938.) 22s. 6d. net.

PROF. DE SIGMOND'S "Altálanos Talajtan" has been translated into English and adapted by omitting the sections on soil physics and microbiology from the agronomy section, and other material of only local interest.

Part 1 deals with soil genetics. The chemical composition of rock-forming minerals is not given, the author stressing the point that it is the chemically weathered part that is of particular significance in soil formation and the development of soil character. The relative influence of soil-forming factors is fully discussed and the effect of climate on soil development well portrayed. In the agronomy section the chemical properties of soils are described and their method of presentation leads logically to the system of classification adopted.

The main section of the book—soil systematics—is treated from a novel aspect, as the classification is based on the results of leaching experiments. It is fully comprehensive, is based on the characteristics of the soil and in addition is claimed to depict the genetic and dynamic character of the soil. Twenty-five soil orders are described and each is subdivided into main types of which the eight in soil order XI largely cover the range of useful soils.

Part 4—cartography—contains useful suggestions for the mapping of small areas and the dissemination of useful advice to farmers in the form of practical soil maps showing one variant each, for example, need for lime, pH values, manurial requirements, etc. Four well-produced plates are included in an appendix to this section.

J. W. B.