ago The Macmillan Company were ready to undertake the publication, but they wanted a ten-volume encyclopedia alphabetically arranged in place of the separate volumes which were an essential part of the proposal. Several leading scientific men, including Simon Newcomb, agreed to prepare volumes, but the cost and then the war led to postponement.

The editor will appreciate the cooperation of all men of science who approve the plan of making an *Encyclopedia of the Sciences* that will reflect adequately the great advances and dominant position of modern science. He will welcome suggestions and advice.

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GARRISON-ON-HUDSON,
NEW YORK

SCIENTIFIC BOOKS

Pflanzen als Gesteinbildner. By JULIUS PIA. viii, 355 pp., 166 tf. Borntraeger, Berlin, 1926.

THE author has a well-deserved reputation as an authority on algae, particularly the fossil calcareous forms that bulk so large in the Alpine Triassic and of which geologists in this country have but a slight realization. Consequently, it is Pia's discussion of the algae which holds the most interest for geologists, paleobotanists and algologists. For all these as well as the general student he has produced a comprehensive, well-illustrated and well-indexed text, which is all inclusive, after the German manner, but, unlike some, this appears to cover the literature very well and to be thoroughly up-to-date.

The general scope and contents may be gathered from the following outline: Following a brief introduction there are chapters on bacteria and the simpler algae, followed by chapters on the higher unicellular calcareous and siliceous algae, a short chapter upon the rôle of unicellular plants in the formation of coal and petroleum, and a long and important chapter on those green, brown and red multicellular algae which form calcareous sediments.

Chapter 7, of over 150 pages, deals with mosses and vascular plants, the resulting sediments being considered under the broad headings "Calcareous" and "Coal." Much space is devoted to a rather exhaustive discussion of coal, its origin and history. This is somewhat discursive, and the author takes occasion to discuss the recent discovery of peat-forming plants in the mid-Devonian, world production of coal, peat bogs, lignite and hard coals, their geologic occurrence, chemistry and by-products. There is much of paleobotanical interest in this part of the book, including accounts of the morphology of the more important plant types from the Paleozoic to the Recent which have contributed to carbonaceous deposits.

Although the author is not exactly synoptic in his treatment, I imagine that the matter presented is exactly what the non-specialist or student versed in but a single aspect of the subject will be glad to have brought together in this convenient form.

Contrasted with the discussion of organic sediments in the "Treatise on Sedimentation," by Twenhofel, and others, published last year under the auspices of the National Research Council, it may be noted that the present work gives a much fuller and more satisfactory treatment in the sections devoted to bacterial action, calcareous and siliceous sediments. The fifty pages devoted to carbonaceous sediments in the American work, is however, much better done than Pia's much longer chapter, which was, perhaps, to have been expected.

The German work has essential bibliographies at the end of each chapter, and the elaborate account that is given of the part played by the lower plants in sedimentary processes will, I imagine, come as a surprise to most American geologists, for, in North America, outside the tropics and except for diatomaceous earth, scattered chara marls, etc., plants have not been recognized as having played such a conspicuous rôle in the formation of non-carbonaceous sediments as they have in Europe.

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The Salamanders of the Family Plethodontidae. By EMMETT REID DUNN, Smith College Fiftieth Anniversary Publications, Northampton, Mass. xi + 1–441 pp., frontisp., 2 unnumbered pls., 86 figs. (distribution maps). 1926. $6.00.

SINCE the appearance of E. D. Cope's "Batrachia of North America" in 1889, there has appeared no synoptic work on the amphibia of this continent save the check lists by Stejneger and Barbour in 1917 and 1923. The numerous individual researches on American amphibians during the past thirty-seven years have resulted in the accumulation of a relatively large mass of literature, never adequately digested. Dunn's monograph of the Plethodontidae now fulfils this need so far as one important group is concerned, and in addition gives us much new information obtained by the author himself.

The Plethodontidae, as here considered, include fifteen genera and eighty-six species and subspecies of lungless salamanders, most of which are also gill-less after hatching. Most of the species occur in North America, either east of the Mississippi River or west of the Sierra Nevada-Cascade ranges. Thirty species of the Genus *Oedipus* occur in Central America and