words on metal-semiconductor rectifiers.

Compared to other books in the field, *Physics of Semiconductors* is more current and authoritative, and more oriented to devices, in its selection of topics and emphasis, although it is less comprehensive than R. A. Smith's *Semiconductors*. In the field of devices, it is less complete than, for example, L. B. Valdes' *The Physical Theory of Transistors*, but with respect to the areas treated it is generally more thorough than Valdes.

The author has succeeded in his "intention not to be all-inclusive but to present the concepts and related theories . . . in such form as to encourage further investigation."

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Anatomy of Fishes

Handbuch der Binnenfischerei Mitteleuropas. H. H. Wunsch, Ed. vol. 2A, *Anatomie der Fische*. Wilhelm Harder. Schweizerbart'sche, Berlin, 1964. Text volume, xiv + 308 pp.; plates, vi + 115 pp. Illus. Paper, DM. 94; cloth, DM. 103.

In *Anatomie der Fische*, the latest volume of this series which is under the general editorship of H. H. Wunsch, Wilhelm Harder attempts to assemble and present the great mass of scattered information on the morphology and anatomy of fishes in an organized fashion. As the author notes, despite the series for which it was intended, the text is not limited to an antomy of European freshwater fishes but includes data on and covers the literature of fishes as a group.

This general anatomy of fishes, which is the first published in German since the middle 1800's, attempts to treat body structure according to classical systems (skeleton, musculature, respiration, and the like). The method of treating anatomical nomenclature is useful in that several of the most commonly used synonyms are indicated. However, the material included in the various sections differs markedly and does not always reflect the data available.

The author in his preface goes to some length to explain the breadth and depth of the literature examined and employed in the text. Therefore, in spite of the extensive bibliography, the variation in text and reference material afforded the different sections is somewhat surprising. For example, discussion of the endocrine system contains no reference to the extensive work of Pickford and Atz. Although physiology is a special topic of another volume in the series (vol. 2B), some reference to this subject is, of course, necessary in a text that treats anatomical aspects. But it is surprising that Margaret Brown's two-volume work on the physiology of fishes is not cited among the many texts that are noted. Nor is Harrington's fundamental and widely accepted paper on the osteology of fishes mentioned. Nevertheless, the book and its accompanying volume of figures provide an excellent summary of fish anatomy and of the widely scattered pertinent literature. A minor criticism is that the zoological nomenclature, in spite of the author's statement to the contrary, is not wholly modern, and the subfamily designations (which apparently follow Berg) are in contradiction to the International Rules of Zoological Nomenclature.

The book is very clearly written and should not be difficult for the student who has only a minimum knowledge of scientific German.

Additional useful features of the volume are a separate glossary of syncranial bones, the 17-page bibliography previously noted, and an index prepared with Teutonic thoroughness (24 pages). The accompanying volume of figures and plates is composed largely of reproductions from other sources, but again it is useful to have illustrations of a wide variety of structures available in a single volume. The plate illustrating the bones of the syncranium is particularly noteworthy in that the various bone series (circumorbital, opercular, and suspensorium) are printed as overlays to be used in conjunction with the base figure of the neurocranium.

A handbook that attempts to cover as much ground as Harder has attempted to cover here is bound to be criticised, for each specialist would enjoy an expansion of a particular interest. Nevertheless, *Anatomie der Fische* is an excellent and a clearly written summary of available data on the subject. A possible inhibition to its extensive use will be its excessive cost.

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Pictorial Geology for Laymen

The Earth Beneath Us. Kirtley F. Mather. Random House, New York, 1964. 320 pp. Illus. $15.

During a period of 30 years a large number of students at Harvard University took advantage of the opportunity to sit in Kirtley Mather's lectures and become infused with his enthusiasm for geology and the natural world. But this was not as large an audience as Mather deserved. Now, at long last, that audience will be greatly expanded by the fulfillment of his "long-nurtured ambition to produce a pictorial geology for the layman." That is exactly what he has done.

The Earth Beneath Us, the story of the development of the landscape on the parts of the world we can see, should be as interesting and informative to the person who has had a course in general geology as it will be to the one who wants to become informed about this field of science. In every chapter Mather's excellence as a teacher comes through loud and clear to convince the reader that the earth is a dynamic, living planet.

Recent college texts in general geology are characterized by excellent photographic illustrations—the late William C. Putnam's *Geology* comes first to mind—and, among books for the layman, John Shimer's *This Sculptured Earth* holds high rank. But one need leaf through only a few pages of *The Earth Beneath Us* to see that this book about the earth stands at the top as far as excellence of illustrations is concerned. There are 240 photographic illustrations, 116 of them in color, and most are full- or half-page (page size is 8½ by 11 inches). Infinite care has gone into the selection of the photographs, and many of them are superb, not only because of composition embodying the highest pictorial and esthetic qualities but also for the clarity and vividness with which they depict geologic features and the operation of the processes that create these features. Among the contributing photographers are such names as Joseph Muench, Andreas Feiniger, Emil Schultess, Robert Clemenz, and others of like caliber. Chanticleer Press is to be commended for the splendid handling of the color engravings.

Fully half the book consists of photographic illustrations. The colored plates are numbered and are referred to in the text. Unfortunately