figures rather than in the legends. A good number of simplified diagrams have also been used in this edition. More subtitles have been provided in the text, and this remedies a condition which made earlier editions somewhat unpopular among students. The text treatment is, except for changes in organization, rather similar to that of the earlier editions and seems to have received least attention in the revision. The emphasis is clearly morphological.

The classification used in the organization of the book is essentially that found in the earlier editions, with a few exceptions. One is glad to find the Endoprocta and Ectoprocta separated into two phyla and the Graptolita now treated with the protochordates. The phyla Priapulida and Kinorhynchia, omitted from earlier editions, are now included, albeit very briefly. The sections on the Nemertea, Nematoda, Araneida, and Onychophora have been slightly expanded. The minor phyla, however, still continue to be treated very superficially; more than 50 percent of the text is devoted to Protozoa and Arthropoda. With the increasing tendency to make protozoa and insects the subjects of special courses and to consider them apart from the remainder of the invertebrates, this emphasis is not always desirable.

A new chapter, entitled "Literature," has been added. This is an interesting introduction for the student to further sources of information on all phases of invertebrate zoology.

In summary, although this book is on a subject so extensive in scope that the choice of content has, of necessity, been somewhat arbitrary and hence will not please everyone, the character and certainly the general quality of the coverage make this volume one of the best general undergraduate textbooks available.

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The Problem of Scientific and Technical Manpower in Western Europe, Canada and the United States. 2nd report. Organisation for European Economic Co-operation, Paris, 1958. 221 pp. $2.

The Organisation for European Economic Co-operation has shown a steadily expanding interest in studying the scientific and engineering manpower trends and the problems of education and utilization of technological manpower in the OEEC countries. This volume is OEEC's second statistical report on supply and demand in the sciences and applied sciences. Also included is employment information and information on the numbers graduating from universities and other institutions. The information differs somewhat from country to country due to differences in the detail and completeness of available records. Comparisons between nations must be interpreted in light of differences in terminology and educational systems. Nevertheless, the report is a valuable source of scientific and technical manpower information for the member countries—Austria, Belgium, Denmark, France, Germany, Greece, Iceland, Ireland, Italy, Luxembourg, the Netherlands, Norway, Portugal, Sweden, Switzerland, Turkey, and the United Kingdom—and for Canada and the United States, which are not member countries but which cooperate closely with OEEC.

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Treatise on Marine Ecology and Paleoecology. vol. 1. *Ecology.* Joel Hedgpeth, Ed. vol. 2. *Paleoecology.* Harry S. Ladd, Ed. Memoir 67. Geological Society of America, New York, 1957. vol. 1, viii + 1296 pp., $12.50; vol. 2, x + 1077 pp. $10.

The breadth of the world's seas and their deepest dimensions scarcely exceed the scope of these outstanding reference volumes. Each is a monument to its editor and to the scores of specialists who contributed so fully. Each volume consists of a series of chapters with individual bibliographies, summarizing present knowledge on representative topics, followed by still different annotated bibliographies and an index.

Of the 29 chapters in volume 1, about a third are contributions from the Scripps Institution of Oceanography, another third from European authorities in Denmark, Finland, Germany, the Netherlands, the U.S.S.R. and the United Kingdom. After classifying marine environments and considering methods used to obtain ecological data from the sea, the specialists have analyzed modern understanding of physical and chemical factors, marine biogeography and bottom characteristics, and the living communities of major habitats as far as high-tide line on rocky shores and sandy beaches and into estuaries, with special consideration given the Baltic, Black, Caspian, and Aral seas. A combination of case-history method and informed speculation features the final chapters on lunar periodicity, fluctuations in littoral populations, and the etiology of mass mortality in the sea. The annotated bibliographies (215 pp.), each by a specialist, group ecological publications by taxonomic groups of animals and plants.

Of the 24 chapters in volume 2, about a third are by members of the U.S. Geological Survey; all are from this country. An initial six chapters give general consideration to evidence from the fossil record about ecological conditions of the past. The next 15 chapters go carefully into selected North American samples—the paleoecological inferences derived from individual formations—representing the full time scale from the Precambrian to the marine Pleistocene. By way of comparison, two chapters are given over to analysis of modern situations favorable to fossilization, one in bays of the central Texas coast, the other in a tidal flat in Maine. G. Evelyn Hutchinson has attempted to peer into the future of marine paleoecology in a final chapter. The annotated bibliographies (342 pp.) are again on a taxonomic base, but often broken down into separate treatments by geological horizon. As in volume 1, the annotations are at least as valuable as the references themselves, and a conscientious attempt has been made to include pertinent material in all languages (including Russian).

These volumes will probably wear out from repeated use before they grow too out-of-date. All scientists concerned with the sea and the fossil record of its past will need to refer constantly to the *Treatise* and should bless the several organizations which have made the publication in present form a possibility.

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Figurets. More fun with figures. J. A. H. Hunter. Oxford University Press, New York, 1958. xi + 116 pp. Illus. $3.50.

This book is not a "survey of mathematics for the layman"; in fact, it makes no pretense of containing much serious mathematics. In the preface, the author calls the book a "selection of teasers . . . meant for people . . . who enjoy figures without being too serious about them." Readers familiar with his earlier volume, *Fun with Figures,* will know what to expect.

The author is more conscientious than some in that when he says his material is within the grasp of the nonmathematician he really means it. The book is a collection of 150 separate short problems presented entertainingly and in many disguises. Nearly all of them can be solved by arithmetic or algebra, but many are by no means easy. Solutions are given (in the back); and as a further (perhaps too kindly) assist to the solver, most of them are classified by code letter in the table of contents so that the general method of solution can be anticipated.