

English translator well says, that many and valuable ideas may be obtained. The interesting commentaries contained in this volume render it possible for even the general reader to do this with pleasure and profit.

MANSFIELD MERRIMAN.

Gleanings from Nature. By W. S. BLATCHLEY. Indianapolis. 1899. 16mo. 348 pp., 15 pl., 100 cuts.

The State Geologist of Indiana has here given us a dozen or more chapters on the natural history of his State, with the laudable purpose of interesting young people in the objects about them. If but a fraction only of the 800,000 children to whom he dedicates the book will read it, the results should be good; for the author speaks at first hand of all he writes, and seems equally at home whether discoursing of quadrupeds, birds, reptiles, fishes, insects, trees, weeds or caverns, to which latter feature of southern Indiana much space is given. We have noticed but one serious error, where the femora of *Mantis* are taken for tibiae. The stories are simply told, and derive their chief value from being the outcome of close personal contact with nature and from their local flavor. The book is to be heartily recommended to the young people not only of Indiana but of the neighboring states, to which it is nearly as well adapted. It will take them out of doors on every page and awaken a new interest in living nature. The illustrations are mostly good, many excellent and all to the purpose. There is a sufficient index.

S. H. S.

LIVERPOOL MARINE BIOLOGICAL COMMITTEE'S
MEMOIRS.

THE appearance of No. I., of the Liverpool Marine Biological Committee's 'Memoirs on Types of British Marine Plants and Animals,' deserves more attention from teachers and students of natural history than the intrinsic scientific value of the volume, however much this may be, can justly claim. This because of the uniqueness in several ways of the series which this number introduces. In the first place these volumes are to be unique in the matter of price. Who has ever before heard

of a bound volume, in the English tongue at least, on a natural history subject, written by a distinguished specialist, and containing fifty pages and four good plates, being sold for 37½ cents? Yet that is the price of this first memoir.

It is written by the editor of the series, Professor W. A. Herdman, and the type treated is *Ascidia*, as might be anticipated from the editor's long and distinguished devotion to the group of animals of which this is a representative.

The series again is well-nigh unique in its origin and purpose. What these are may be best shown by extracting a paragraph from the editor's preface.

"In our twelve years, experience of a Biological Station (five years at Puffin Island and seven at Port Erin), where college students and young amateurs formed a large proportion of the workers, the want has been constantly felt of a series of detailed descriptions of the structure of certain common typical animals and plants, chosen as representatives of their groups, and dealt with by specialists. The same want has probably been felt in other similar institutions and college laboratories."

Some twenty other memoirs of like nature and by nearly an equal number of workers are promised.

It is hardly necessary to say that the number before us is scientifically accurate and up to date. It could hardly be otherwise; for its author has himself contributed more than any one else to the making of our knowledge what it is to-day, of the structure and speciology of the Tunicata. No one is better able than he to write such a book, and he has written it as well as he is able to.

The only instances in which I have noticed any doubtfulness or unclearness of statement are in connection with the pericardium and heart, and the coelom. On page 34 we are told that the "pericardial sac and its invagination the heart have formed in the mesoblast between the endostyle and stomach." A reader not already familiar with ascidian embryology would find difficulty, I should think, in harmonizing this statement with the clear statement of the fact found on page 10, viz.: that

the "pericardium [from which the heart itself is produced] and epicardium originate as outgrowths from the archenteron." Comparing the two statements such a reader *might* conclude that the first statement quoted means that the pericardial sac and its invagination are *embedded in* mesoblast as their formation proceeds, but he would also be justified in understanding the one statement to mean that the pericardial sac and hence the heart are of mesoblastic origin, while the other means that they are of hypoblastic origin.

Again the statement (page 10) that the cavity of the pericardium and epicardium 'may be regarded as coelomic spaces' is not exactly clear when compared with the statement made a few lines below on the same page, that the cavities of the renal vesicles and gonads are sometimes interpreted as being formed 'by a splitting of the mesoblast (*coelomic*).'

But the book is an admirable résumé of our knowledge of a typical ascidian, and if the succeeding numbers are equally satisfactory, the series cannot fail to be a potent factor in promoting the study of natural history not only in Great Britain, but as well beyond its borders.

It is unfortunate that the volumes could not be bound a little more securely, for they will hardly withstand the rough usage which they are pretty sure to receive as laboratory guides. If this could not be done without increasing the price, and if the price could not be increased even by a small amount, then it seems to me that it would be better to cut down the text and illustrations, particularly the former, somewhat, and apply the saving in expense thereby to making the binding better.

WM. E. RITTER.

GENERAL.

A LIMITED number of the reports of the University Geological Survey of Kansas still remain for distribution among persons who are interested in mining and geology. The publications to date include five volumes bound in cloth, and two annual reports on the Mineral Resources of Kansas bound in paper. All these may be had for the asking, except Vol. I., the supply of which is entirely exhausted. Persons writing for any or all of the reports

should enclose the necessary postage, or request that they be sent by express. The volumes are: Vol. II., General Geology of Western Kansas, postage 26 cents; Vol. III., a Special Report on Coal, postage 28 cents; Vol. IV., Paleontology of the Upper Cretaceous, postage 32 cents; Vol. V., A Special Report on Gypsum and Gypsum Cement Plasters, postage 16 cents; Annual Report of Mineral Resources of Kansas for 1897, postage 4 cents; Annual Report on the Mineral Resources of Kansas for 1898, postage 7 cents.

MESSRS. D. APPLETON & COMPANY have nearly ready for publication *The International Geography*. Seventy authors have collaborated in its production, including the leading geographers and travelers of Europe and America. The work has been planned and edited by Dr. H. R. Mill, who also wrote the chapter on the United Kingdom. Among the authors are Professor W. M. Davis (The United States), Dr. Fridtjof Nansen (Arctic Regions), Professor A. Kirchhoff (German Empire), Mr. F. C. Selous (Rhodesia), Professors de Lapparent and Raveneau (France), Sir Clements Markham, F. R. S. (Ecuador, Bolivia, and Peru), Sir John Murray, F. R. S. (Antarctic Regions), Count Pfeil (German Colonies), Mr. James Bryce, M. P. (The Boer Republics), Sir H. H. Johnston, the late Sir Lambert Playfair, Sir F. J. Goldsmid, Sir Martin Conway, Sir George S. Robertson, Sir William MacGregor, Sir Charles Wilson, F. R. S., the Hon. D. W. Carnegie, Mrs. Bishop, Dr. A. M. W. Downing, F. R. S., Dr. J. Scott Keltie, and Mr. G. G. Chisholm. The book is illustrated by nearly five hundred maps and diagrams which have been specially prepared.

OTHER books announced for early publication by Messrs. D. Appleton & Co. include Comparative Physiology and Morphology of Animals, by Professor Joseph Le Conte; Some Great Astronomers, by Dr. Edward S. Holden, and the Story of Eclipses, by Mr. G. F. Chambers.

SCIENTIFIC JOURNALS AND ARTICLES.

WITH the December number the *American Naturalist* completes its twenty-third volume. Hermon C. Bumpus has the leading article, on