

generating scarcely any chlorin'; titanium, zirconium and thorium are spoken of as 'uncommon' elements.

But if these are the worst criticisms that can be passed upon the book, and this is perhaps the case, it must be conceded that both author and translator have done their work in a very satisfactory manner, and we have no doubt but that Holleman, as well as Jones, will find its way into many class-rooms and will also prove to be but a pioneer of an improved type of text-book, which will revolutionize the teaching of inorganic chemistry. And for this let us be devoutly thankful.

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A Text-book of Zoology. By G. P. MUDGE. London, Edward Arnold. 1901. Pp. viii + 416.

The author of this book is lecturer on biology at the London School of Medicine for Women, and on zoology and botany at the Polytechnic Institute, Regent Street, and is also demonstrator in biology at the London Hospital Medical College. His text-book may, therefore, be presumed to be an expression of the practice of an experienced and active teacher of biology. It differs markedly in matter and arrangement from the usual zoological texts, arranged systematically, that is, according to the accepted classification of animals. In a first part are an interesting introduction called 'the scope of biology' and a brief statement of 'the characters of the great divisions of the animal kingdom,' in which Protozoa, Metazoa, Acelomata, Coelomata, Vertebrata, Invertebrata, Diploblastica and Triploblastica are defined. Then comes a second part given to a study of 'the comparative morphology of the organs of *Scyllium*, *Rana* and *Lepus*.' The organs of these three vertebrates are discussed on the plan of the comparative anatomist, the condition of each organ or system of organs being compared in the three forms. This discussion covers one hundred and sixty-seven pages, and is illustrated by fifty-two diagrammatic figures. To this part is added a chapter of twenty-two pages on the morphology of *Am-*

phioxus. A third part, of sixty-eight pages, is given to the morphology of four coelomate invertebrates, viz., *Astacus*, *Periplaneta*, *Anodonta* and *Lumbricus*, the treatment being again that of the comparative anatomist. Then comes a chapter on 'the morphology of *Hydra*,' an acœlomate invertebrate, and a chapter on 'the morphology of *Paramœcium* and *Amœba*.' The fourth part of the book is composed of a chapter on 'embryology' (38 pp.), one on 'the life history of the cockroach and the butterfly, and their chief structural differences' (9 pp.), one on 'karyokinesis, oögenesis and spermatogenesis, maturation and impregnation of the eggs, and parthenogenesis' (10 pp.)!—the author is seeing the limits of his permitted space; then one on 'heredity' (26 pp.), and finally one on 'variation' (15 pp.).

When one departs from the usual and presumably approved manner of make-up of zoological text-books, the real court of appeal for the final decision as to the worth of the new manner is that composed of teachers who have tested in actual class work the usefulness and practicalness of the innovation. Thus does the reviewer easily put aside the necessity of expressing an opinion about the matter. He will hazard the guess, however, that most present-day teachers of zoology will not choose a text-book of comparative anatomy under the name of a text-book of zoology for their first-year classes.

The work outlined in the book is sound and thorough, and the discussions of heredity, variation and the scope of biology are modern and interesting. The book is compact, well-made and fully indexed. V. L. KELLOGG.

Lehrbuch der Zoologie. By ALEX. GOETTE. Leipzig, Wilh. Engelmann. 1902. Pp. 504; 512 figs.

The author of this zoological text-book is professor of zoology in the University of Strassburg. The book is intended for university classes; it is of the reference or manual of classification type of text-book, not of the laboratory guide or specifically outlined course type, as is the English text-book reviewed above. After twenty-five pages of introduc-

tion, defining homology, analogy, etc., and describing protoplasm, the cell, etc., and mentioning some names and dates in the history of zoology, the rest of the book is arranged according to the present classification of animals, beginning with the Protozoa, and systematically discussing systematic zoology with orders and sometimes suborders for units. The systematic consideration of the Metazoa is preceded by a fifty-page discussion of the tissues, organs and development of the many-celled body.

Where all animals are touched on none can be adequately considered. Text-books of zoology which get in the name of every order of living animals are misnamed; they are dictionaries of systematic zoology, catalogues of the animal kingdom. The beetles, of which there are 12,000 known species in North America—and how many thousand in the world?—with a variety of form and habit comparable in extent with that of the endless pattern pictures of a busily handled kaleidoscope, get one page and one figure of this book. Three fourths of this page are given to dividing beetles into four suborders. Why not make it one line, and be more truly and just as effectively a catalogue and less a pretense of being something else? The rest of the page could then go to the needed expansion of the account of the special structure and physiology of the class of insects. The student who is going to study beetles beyond the name Coleoptera has no possible use for one page and a subdivision into four suborders. He must have thirty pages and half of the families if he is to go a single step forward in their systematic study, or as many pages as he can have, with no subdivision, if he is to get a glimpse of their life and habits. The author, in trying to get all the animals catalogued in his 'Lehrbuch,' makes of it no text-book at all, and a sort of catalogue vastly inferior to a professed synopsis like Leunis's.

V. L. KELLOGG.

L'Hypnotisme et la Suggestion par le Dr. Grasset. Paris, Octave Doin. 1903. 8vo. Pp. 534.

The culmination point of the contributions to the literature of hypnotism was reached

quite a number of years' ago. There was a period when the contributions to this topic quite overshadowed those to any other division of abnormal psychology. Dessoir issued in 1890 a supplement to his bibliography of hypnotism first issued in 1888, and recorded nearly four hundred titles to the credit of these two years.* The more recent contributions that have been comprehensive in scope have likewise been more selective in purpose. Some have been devoted to the analysis and description of the psychology of suggestion; others to the therapeutic applications; others to the analogies between that and other states normal and abnormal. As a number of the International Library of Experimental Psychology now appearing in fifty volumes under the editorship of Dr. Toulouse, there has appeared a volume on 'Hypnotism and Suggestion,' of which the author is Dr. Grasset, of the University of Montpellier. As the representative of this library, the volume on hypnotism will command wider attention than would be accorded it as an independent contribution.

It can not be said that the volume, though it compares favorably enough with many others that have appeared, really adds much of note or illumination to the present status of the subject. It does, indeed, bring forward with a fair sense of their relative importance the several problems that are most worthy of attention in contemporary psychology. It wisely dispenses with much introductory or historical matter, which in former compends found a somewhat undue place. It recognizes that the fundamental problem, the

* Beginning with 1896, the number of entries for this group of topics in the 'Psychological Index' is 51, 84, 154, 143, 77, 35, 35, 28. These numbers are not comparable, since the falling off in the more recent years is in part due to a subdivision of the topics that brings 'Hypnotism' into a separate division in the later but not in the earlier years. Parallel with this, there is some widening of the scope of the 'Index' since its foundation. None the less, the 'Index' shows the general falling off in the productiveness of this topic. Such falling off is a welcome consummation, so far as it represents the cessation of wordy and unorganized—not to say amateur—contributions.