of steppes, tundras and forests in the same region, he must recognize that the time has been very long—so long, that the few thousands of years since history began seem insignificant in comparison.

John J. Stevenson

The Psychology of Management. By L. M. Gilbert, M.L., New York, Sturgis and Walton. 1914. Pp. 344. $2.00 net.

The gap between psychology and industry is being bridged both by psychologists, who write of industry, and by industrial engineers, who attempt to point out the psychological laws underlying the success of their practise. This book is of special interest since it is written by a woman worker in an industrial laboratory where the give and take of psychology and technology is being encouraged in many interesting ways.

The book aims "not so much to instruct as to arouse an interest in its subject and to point the way whence instruction comes." In the mind of the reviewer, these aims are fully realized. The main theme is that modern form of management generally known as the "Taylor system." In this book the art of management attempts to become conscious and to develop or borrow a vocabulary. Management is defined as "the art of directing activity," and by the psychology of management is meant "the effect of the mind that is directing work upon that work which is directed, and the effect of undirected and directed work upon the mind of the worker." Such topics as the following indicate the general scope of the various chapters: selection of individual workers; proper instructions; functionalization of tasks; definition of duties and qualifications; motion studies and time measurements; analysis and standardization of task, tools, methods and materials; records, routing and work programs; the rôle of the various types of direct and indirect incentives (punishment, reward, prizes, bonus, profit sharing, etc.); welfare work; attitudes of employer and employee and their effect on work; methods and measurement of teaching; aids in learning; effective distribution of effort. Cooperation is urged in the accumulation of standardized industrial records for the purposes of psychological analysis.

As might be expected, the psychology of management, in its present state, shows several traits similar to those displayed by the science of education in its earlier days. In the present book, for instance, there is artificial systematization and an occasional lapse into discursive generality. There is a somewhat labored attempt to suggest forward movement in the thought by means of divisions and paragraph headings in the text; many paragraphs consist of a single sentence. There is an apparent attempt to give text-book form to a subject that is not yet ready for it.

In spite of these remediable features the book is a real contribution to applied psychology as well as to the work of the student of efficiency engineering. It well typifies the growing tendencies toward cooperation between science and practise and suggests a stimulating program for future work. Applied psychologists should not fail to make themselves acquainted with the Gilbreth laboratory.

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Monographien einheimischer Tiere. Bd. 5, Die Strudelwürmer (Turbellaria). Von Privatdozent Dr. P. Steinmann und Professor Dr. E. Bresslau. Pp. xi + 380, 2 pls., 156 figs. in text. Bd. 6, Tintenfische mit besonderer Berücksichtigung von *Sepia und Octopus.* Von Dr. Werner Th. Meyer. Pp. 148, 1 pl., 81 figs. in text (Klinkhardt, Leipzig).

The latest numbers in the admirable series of monographs prepared under the editorship of Professors H. E. Ziegler, of Stuttgart, and R. Woltereck, of Leipzig, both deal with animals widely used in experimental or in morphological work in the biological laboratories of our universities and colleges, and both are particularly welcome. The volume dealing with the turbellarians is doubly welcome, since no brief and comprehensive treatise has dealt with these easily obtained and widely utilized animals since Benham's (1901) short account in Lankester's "Treatise on Zoology." More-

over, we find in the volume in hand fuller treatment of four aspects omitted in Benham's, namely the ecological, the physiological, the experimental and the systematic, and these are as adequately done as are the morphological and embryological phases, indicative of the breadth and catholicity of current German biological scholarship. Under the head of "Biologie," for example, we find a discussion of such topics, among others, as locomotion, nutrition, food-taking, commensalism, parasitism, hunger, excretion, sexual and asexual reproduction, autotomy, regeneration in different species, influence of external factors in accelerating and inhibiting regeneration, form regulation, heteromorphosis, duplication, natural malformation, sensory reactions, foes and parasites. Both triclads and rhabdocœls are very fully treated. An abundance of simple diagrams truly illustrate the text, and a key to species, a glossary, and a bibliography complete it.

The work is exceptionally comprehensive in scope, though brief, and well-proportioned, as well as admirably conceived and worked out. If any criticism is to be passed upon it one might suggest that the illustrations are below the standard to be expected in German books, and that the experimental work of Morgan and his school, and the mine of information in Pearl's monographic treatise on the behavior of Planaria have been wholly overlooked, in fact, the sources as well as the "Tiere" appear to have been "Einheimischer."

The information pertaining to the Cephalopod type has been much more accessible, thanks to Brook's chapter in his "Invertebrate Zoology," to Bauer's admirable "Einführung" (1909) in the Naples "Mitteilungen" prepared especially for the assistance of experimentalists deficient in zoological training, to Isgroves (1909) monograph on *Eledone* and Williams (1909) on *Loligo*. Dr. Meyer's booklet is supplementary to these in that it deals with *Sepia* and *Octopus*, forms equally desirable as laboratory types. The work is very largely anatomical, a departure from the general scheme of the series, justifiable perhaps in view of Bauer's paper and of the fact that the devil-fish is never seen in living condition by the biological student outside of the seaside laboratory with ample aquaria, for cephalopods do not long withstand removal from the normal habitat. One expects a fuller morphological treatment of the kidney, the eye, the hectocotylus, the chromatophores and the phosphorescent organs, than he finds here, and in fact the whole treatise might have been elaborated in greater detail on both genera to the advantage of the reader. The discussion is direct, lucid and well-adapted to serve the purpose of an elementary introduction to cephalopod morphology.

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The Copper Handbook. By WALTER HARVEY WEED. Published by the author; Houghton, Michigan, 1914. Vol. XI., 1912–13. Pp. 1413. Price $5.00.

The "Copper Handbook," well-known to all those interested in copper mining, has been taken over by Mr. W. H. Weed, who has issued a new revised edition bearing the date of 1914. Since its establishment by H. J. Stevens in 1900 this useful compendium of information about the copper mines of the world has gone through ten previous editions. The reliable information and fearless criticism contained in it were greatly appreciated by mining men. Since the unexpected death of its founder in 1912 the work of preparing a much needed new edition has been undertaken by W. H. Weed, the well-known geologist and mining engineer, formerly connected with the U. S. Geological Survey. Mr. Weed has reduced the former unwieldy volume of nearly 2,000 pages to about 1,400, largely by the elimination of the introductory chapters on mineralogy, geology, mining and metallurgy, and by the segregation of the "dead" companies. The copper mines of North America are now described alphabetically in a first chapter which is followed by a much needed index by states and countries. The third section describes the mines of South America and other continents in alphabetic, non-geographic arrangement. Much new