

feature which adds interest and value to the book, is the frequent allusion to general zoological theories. For example, the relations of the Nemertini to the theories of the origin of metamerism are considered in sufficient detail to make the matter clear. On this particular question the author takes no positive stand one way or the other, but is inclined, on the whole, to follow Hatschek and Mayer. These additions greatly enhance the general interest of technical works like the one under consideration and materially lessen the burden of the load of detail which the student must struggle under.

The style of writing, although somewhat heavy, is clear and definite, and awkward phrases like 'a pair of groups,' and 'than which,' or careless statements, such as 'the very close relationship of these two groups (Turbellaria and Nudibranch molluscs) with the Cœlenterata' (p. 12), are rarely encountered. The author puts himself in the way of a great temptation by describing at the outset what he considers to be an 'ideal' Platyhelminth, and throughout the book we find him, consciously or unconsciously, setting up this ideal as a phylogenetic fetish. Such a method of presentation may or may not be subject to criticism, according as the book is to be used as a text-book or as a reference book. The 'type' method is very handy for teaching purposes, but as a basis for phylogenetic deductions it appears somewhat out of place and becomes a source of possible error. These are but minor criticisms, however, and may be easily overlooked when we consider the many merits and interesting suggestions which the author has embodied in this volume.

GARY N. CALKINS.

COLUMBIA UNIVERSITY.

Yale Bi-Centennial Publications. Contributions to Mineralogy and Petrography from the Laboratories of the Sheffield Scientific School of Yale University: Edited by S. L. PENFIELD and L. V. PIRSSON. 1901. With three plates and several figures.

The volume comprises 'a series of reprints from some of the most important of the papers containing the results of the researches made

in the chemical, mineralogical and petrographical laboratories at Yale in the lines of mineralogy and petrography.' Part I. by Professor Penfield includes a history of the mineralogical department and of the development of mineralogy at Yale, which goes back to the first years of the last century and continues since then to represent American mineralogical research. A bibliography of mineralogical papers and summary of new mineral species determined, or of formulas established, is added. Forty-three papers on mineralogical subjects are reprinted, mainly from the *American Journal of Science* between 1850 and 1901; the authors are S. L. Penfield, Geo. J. Brush, E. S. Dana, H. L. Wells and others. Part II. by Professor Pirsson gives a similar history and bibliography for the petrographical department, which, notwithstanding its comparatively recent organization, makes a valiant exhibit even compared with its older companion. Eight petrographic papers, several of classic interest to American petrographers, are reprinted. The volume is a valuable collection of important papers, and a striking record of original research in the departments included.

JOHN E. WOLFF.

HARVARD UNIVERSITY.

Velocity Diagrams. By CHAS. W. MACCORD, A.M., Sc.D. New York, J. Wiley & Sons; London, Chapman & Hall. 1901. 8vo. Pp. 113. Figs. 83. \$1.50.

Professor MacCord has published in this form an abstract of lectures forming a part of his course of instruction, illustrating his methods of treatment of problems in kinematics involving the construction of 'velocity diagrams' and supplementing the work embodied in his larger treatise on 'Kinematics of Practical Mechanism.' He has, for many years, found this class of graphical construction peculiarly interesting as bearing upon the work of the designing engineer planning combinations of mechanical movements, and he has developed this feature of his work with rare skill, ingenuity and practicality. The occasional appearance of an article by the same hand in the technical journals, notably in the *Scientific American Supplement*, has been al-

most the only evidence since the time of Willis that any master-hand has been working in this important field. The present publication places on record, in a convenient form, a considerable collection of such work and one likely to prove valuable to all mechanical engineers and draughtsmen.

The points here discussed and graphically treated are the general principles of the science, angular velocities, instantaneous axes, contact motions, including cams, rolling contacts, eccentric and related motions, linkwork, including 'slow advance and quick return' compositions, which are extensively treated, and, finally, the accelerative motions.

These discussions are concise, accurate, direct and clear. The theory of each case is developed as the construction progresses, in an admirable manner, and the graphical work is always equally clear, exact and legible. The author is an expert in this field and his skilful hand is recognized in the graphical constructions and their beautiful lines quite as well as in the text.

The book is printed on fine paper—which is, in fact, essential to the proper production of the illustrations—and the type and finish are alike appropriate to the artistic work of the writer of the treatise.

R. H. T.

GENERAL.

ON behalf of the Committee on Historical Documents of the American Historical Society, Supreme Court Justice Mitchell reported at the last meeting that arrangements had been made for the publication in full of the original journals of Lewis and Clark. These notebooks were deposited with the Society nearly a century ago by Governor Clark at the request of President Jefferson, under whose direction was sent out the expedition which gave the country the first knowledge of the newly acquired northwestern possessions.

THE Berlin and Copenhagen Academies of Sciences have commenced the task of collecting all the manuscript left by Galen and compiling a new and complete edition of his works.

THE preliminary work upon the preparation of a revised catalogue of the birds of Ohio has resulted in the addition of twenty species to the list since Dr. Wheaton's catalogue was published. Nearly 150 preliminary lists have been sent out for additions and corrections, but hardly a third of them have been returned to date. From those returned annotated much valuable information has been gained, particularly of an ecological nature, furnishing a basis for comparisons with conditions in Dr. Wheaton's time. Considerable field work must still be done in the extreme western, the eastern and the southern fifth of the State before the ideals upon which the work of revision was founded can be even approximately realized. As an aid to the furtherance of this work the compiler solicits information from all who are familiar with Ohio birds, who have not already examined a preliminary list. Communicate with Lynds Jones, Oberlin, Ohio.

SOCIETIES AND ACADEMIES.

BIOLOGICAL SOCIETY OF WASHINGTON.

THE 348th meeting was held on Saturday evening, January 25.

Under the heading of notes W. H. Dall called attention to the practice indulged in by some writers of rejecting names in biology which differ only by terminations indicating gender, as *Cyprina* from *Cyprinus*. He reprobated the practice as, if carried out strictly, likely to overthrow many names which have been in universal use for a century or so, and with absolutely no gain to science. As a particularly glaring instance of this he cited a recent experience with the work of Duméril, 'Zoologie Analytique,' issued in 1806. Duméril gave names to the animals of mollusca, distinct from those applied to the shells, by adding to the latter the termination *arius*. Thus we have the animal of the shell called *Nassa* by Lamarck, referred to a genus *Nassarius* by Duméril. On the ground that this name existed, though like all Duméril's names an absolute synonym, the later genus *Nassaria* of Adams and Reeve has been rejected by a recent writer. On looking up the facts in the