

effected in practice; it is, indeed, one of the merits of the book that it is capable of a considerable degree of modification in actual use to adapt it to different conditions of instruction or to differences of view regarding classification.

On the whole, the new text-book deserves a warm welcome, and while not sufficiently extended to take the place of some of the larger manuals, such, for example, as Lang's fine treatise on comparative anatomy, we believe it will be found an invaluable aid not only to special students of zoology, but also to a large number of those whose main interest lies in other branches of scientific study. Written with a clearness, accuracy and method that bespeak the practiced teacher, it is admirably illustrated with a profusion of figures—there are nearly twelve hundred in all—of the highest excellence. A large proportion of these are original; they are often of an artistic merit rarely attained in text-books; they are almost without exception clear, yet are rarely schematized. In all these respects the book offers a model which cannot be too highly praised.

E. B. W.

Traité de zoologie, publié sous la direction de Raphaël Blanchard. XVI., Mollusques, par PAUL PELSENEER; XI., Némertiens, par LOUIS JOUBIN. Paris, Rueff et Cie. 1897. 8vo. Illustrated. Pp. 187 and 59.

The present work comprises 24 pages of general introduction, followed by chapters on the five molluscan classes adopted, two pages on phylogeny and an appendix of two pages on the problematical *Rhodope*, which the author regards as forming a subdivision of the Flatworms. Each chapter comprises a general discussion of the anatomy taken up by successive groups of organs, followed by a synopsis of the development, habits and classification.

The work consists chiefly of a rearrangement, with some additions, of the material in the author's 'Introduction à l'étude des mollusques,' published in 1892 in the *Annales de la Société Royale Malacologique de Belgique*.^{*} Like that work, it contains a useful compilation of the principal data on the anatomy and development of mollusks, more or less biased, as to in-

clusions and omissions, by the author's personal views in regard to sundry contested topics. While all the advances of the last six or eight years may not be chronicled, the general discussion contains for the gastropods and amphineura a fairly complete summary of current opinion relating to the recent members of these groups. In the case of the Pelecypods the author adheres to the views introduced by him some years ago, and omits to mention the facts which have been put on record since that time, which, to say the least, have rendered his speculations decidedly less probable than they at first appeared to be. The treatment of the Cephalopods, from the ignoring of data furnished by paleontology, is the least complete of all.

In the matter of classification the work is hardly up to the level of criticism, and would have gained in strength and dignity if the feeble and unequal attempts at systematic arrangement had been entirely omitted. Of the most important advances in the systematic study of mollusks during the last few years, such as Pilsbry's work on the *Pulmonata* and Chitons, Hyatt's contributions to the developmental knowledge of extinct Cephalopods, or Bernard's researches on the development of the hinge in bivalves, this treatise contains not the slightest trace. On the other hand, the useful work of indicating to the student the lines on which research is most needed, or likely to prove fruitful, has not been attempted. The illustrations are clear and good, though most of them are familiar. It can hardly be claimed that the occasional dabs of color add much to their value.

Joubin's work on the Nemerteans seems to be a satisfactory and well written summary of our knowledge of this interesting group. The illustrations are particularly good, and the author's style is attractively clear. He accepts the classification of Bürger as on the whole the most precise and natural. The paper concludes with an interesting discussion of the relations of the group to other worms, in which the conclusion is reached that they are very closely allied to the Turbellarians, with which (including the Cestodes and Trematodes) they constitute the order of Plathelminthes.

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^{*}Tome VII., quatr: sér., pp. 31-243.