

# REVIEWS.

**A JUNIOR COURSE OF PRACTICAL ZOÖLOGY.** By A. MILNES MARSHALL, M.D., D.Sc., M.A., F.R.S., Professor in the Victoria University; Beyer Professor of Zoölogy in Owens College, Manchester; Late Fellow of St. John's College, Cambridge. Assisted by C. HERBERT HURST, Ph.D., Lecturer in the Victoria University; Demonstrator and Assistant Lecturer in Zoölogy in Owens College, Manchester. Third edition. London: Smith, Elder & Co., 1892.

THIS is the third edition of Professor Marshall's work, the first having appeared in December, 1886, and having been compiled for his classes in Owens College, Manchester, England. The work is now, owing to its usefulness, employed as a text-book in many other quarters.

The title of this justly popular work is misleading, inasmuch as, strictly speaking, the volume does not treat of "Practical Zoölogy," but is rather a guide-book to practical zoötomy, or a manual of animal morphology. In plan, it almost exactly follows Huxley's *Practical Biology*, and is even still nearer T. J. Parker's admirable little treatise on *Zoötomy*; but it is more extensive than either, and consequently correspondingly more useful to the practical student in the morphologic laboratory. Although quite brief, the sections in the introduction on the observations of animals during life, drawing, methods of killing animals, dissections, injection, manipulations of the microscope and reagents, and many other useful hints to the anatomist, are very clear and extremely valuable. Chapters beautifully illustrated by means of the finest woodcuts are devoted to the protozoa, the hydra, the liver-fluke, leech, earthworm, mussel, snail, crayfish, cockroach, lancelet, together with appropriate types from the vertebrate series. We fail to see, however, why Professor Marshall took up the study of the fowl and pigeon after the chapter on the rabbit rather than before it. The fact has its disadvantages, and should be remedied in the next edition. Moreover, we would suggest that a chapter on some appropriate reptilian form be added, as well as one devoted to some typical teleostean fish. Upon the whole, the volume is remarkably free from mistakes of any kind.