

SHORT REVIEWS

Lehrbuch der Entwicklungsgeschichte und Entwicklungsphysiologie der Tiere

By Prof. Dr. Otto Pflugfelder. Pp. xv + 347. (Jena: Veb Gustav Fischer Verlag, 1962.) Dm. 49.80.

THIS well-produced and well-illustrated text-book seeks to give some account of the embryology of all the major kinds of multicellular animal. The difficulties of such an undertaking should earn for the author a good deal of latitude in matters of treatment, and immunity from carping criticism of his text. It is therefore with regret that it must be said that Prof. Pflugfelder has failed to provide a really satisfactory book, and the regret is the greater because the need for one is real and its welcome would have crossed the language barrier.

Part of the trouble stems from the sort of compromise the author has chosen to make in order to be both comprehensive and brief. Here there is, of course, room for argument, but it cannot be right to offer students an account of sponge development which ignores the findings of Duboseq and Tuzet; one of onychophoran development which ignores those of Manton; one of lamprey development which ignores those of Damas; one of vertebrate development which barely mentions Harrison's contributions to our knowledge of the histories of neurone and limb. The list could be prolonged, but without profit.

The gaps in the accounts of developmental physiology are also too important to be passed over. Much is attempted in the sections on experimental embryology; but this only serves to make the omissions more pronounced. The development of physiological function; the roles of the placenta; and nucleo-cytoplasmic interactions are among the topics which pre-occupy modern developmental biologists, but which Pflugfelder has felt able to neglect.

Despite these defects, the book says what it has to say with exemplary clarity. D. R. NEWTH

Regeneration

Edited by Dorothea Rudnick. (Twentieth Symposium of the Society for the Study of Development and Growth.) Pp. v + 272. (New York: The Ronald Press Company, 1962.) 9 dollars.

REGENERATIVE phenomena reveal few unifying principles other than that implied by their common name. Each can, does, or might, result in the replacement of lost parts. None, however, is wholly bound by all the rules governing another. Perhaps this diversity spoils the experimental morphologist by allowing him to choose material with almost any properties he cares to specify; it certainly makes regeneration even less susceptible of generalization than the embryonic morphogenesis whose problems it inherits. Ultimately, we may expect both to yield to approaches at the cellular level suggested by the new conceptions of the control of synthetic activities in cells. Meanwhile, the exploration of widely different systems must go on.

The published proceedings of the twentieth "Growth Symposium" consist of eight review articles. The selection of topics and of authors was happy; the result is accordingly useful. Three of the eight are devoted to the Amphibia; Reyer on the eye, Rose on the control and Hay on the cytology of limb regeneration. Three more deal with invertebrate systems and of these two, Rasmont on gemmulation in sponges and Barnett on morphological homeostasis in *Hydra*, bridge the sometimes narrow gap between regenerative and non-regenerative phenomena. Wolff reviews recent work on planarian regeneration, to which his own laboratory has contributed so much. Two

papers from plant workers, Stonier on *Nicotiana* and Steeves on fern leaves, show a generous willingness to relate plant experience to animal. D. R. NEWTH

Blood Vessels and Lymphatics

Edited by David I. Abramson. Pp. xx + 812. (New York: Academic Press, Inc.; London: Academic Press, Inc. (London), Ltd., 1962.) 186s.

THE aim of this volume is to assemble and consolidate present-day data on the embryology, anatomy, physiology, pharmacology, biochemistry and pathology of the blood vessels and lymphatics. The subject-matter is divided into four main parts. The first part gives "General Considerations of the Circulation of the Blood", in seven chapters. The second part deals with "Special Vascular Beds", in eleven chapters. In the third part the "Disorders Affecting the Arterial or Venous Circulation" are discussed in four chapters. The fourth part deals exclusively with the "Lymphatic System". In each chapter the embryology, gross anatomy, microscopic and submicroscopic anatomy, physiology and pharmacology are discussed. Pathology is also discussed in appropriate chapters.

Since the scope of the subject-matter is so vast, it has been deemed advisable to ask no fewer than fifty-two investigators to contribute. Each chapter has been written by a number of different investigators, who are authorities on the specific subjects of their sections. Some of the contributors have written more than one section. There is an extensive bibliography of present-day research as well as reviews of earlier investigations.

The format is pleasing and is such that each chapter and section follow the same general pattern in respect of headings, sub-headings and style of presentation. This I find most helpful. The Editor must have had a formidable task, and he must be congratulated for the way the different sections have been integrated into a systematic and co-ordinated work. The book gives a critical and authoritative summary of our present knowledge of the blood vessels and lymphatics which will be of great value to specialists and research workers who wish to obtain information on subjects allied to their own particular fields. This book can be recommended without reservations. W. J. HAMILTON

The International Zoo Yearbook

Vol. 3, 1961. Edited by Caroline Jarvis and Desmond Morris. Pp. vii + 322 + 46 plates. (London: Hutchinson and Co., Ltd., 1962. Published for the Zoological Society of London.) 84s. net.

VOLUME 3 of *The International Zoo Yearbook* maintains the high standard it set itself in the two previous numbers, particularly in Sections 1 ("Small Mammals in Captivity") and 2 ("New Developments in the Zoo World"). Both these sections have been admirably compiled and will prove of great benefit to directors of zoos throughout the world.

Regarding Section 3, the reference section, I wish it were possible to verify the information which is provided. There are a number of zoos mentioned here which, strictly speaking, should not be in this section at all. In most of the cases with these zoos, the information supplied is completely inaccurate and would be very misleading to directors living in different parts of the world who had not been able to see them. If the compilers of this information feel that such zoos should be included, then they should include all zoos of that status, and that would mean hundreds.