

The book follows familiar lines; naturally it is largely structural formulæ, without which this branch of chemistry could not be intelligible—more than a word of praise is due to all concerned for the clear manner in which these are produced. The three sections into which it is divided comprise the intermediates, the dyestuffs and a practical one giving precise directions for the preparation of a considerable number of substances.

Criticism in detail of such a compendium is of interest only to the expert; it will be of more value perhaps to indicate the lines along which most progress is being made. Outstanding is the general movement towards the production of faster dyestuffs, particularly the vat dyes of the anthraquinone series. This has in part been made practicable by the greater availability of anthraquinone itself, prepared from naphthalene by the very striking modern aero-oxidation method. The story would be incomplete also without mention of the discovery of 'caledon jade green', the best green vat dyestuff. The second line of development has been the production of dyestuffs suitable for viscose and acetate silks, which has been attended with a success obvious to all of us. Mention may be made of the 'ingrain' colours produced from the coupling components direct on the fibre, of the self-mordanting 'neolan colours' and of the 'indigosol' solubilised leuco esters.

The main facts of the dyestuffs story have been driven home to the nation—research and always more research, research which makes us prepared for war and strong in peace, always finding new wonders of applied organic chemistry. Nature is full of colours; as James Joyce writes, "they glow and fade, hue after hue, sunrise gold, the russet and green of apple orchards, azure of waves": yet man has been able to surpass them in brilliancy if not in beauty with his synthetic dyes.

The work will take its place on our shelves as the standard textbook on its subject. E. F. A.

Structure and Development of Man

Human Embryology and Morphology. By Sir Arthur Keith. Fifth edition. Pp. viii + 558. (London: Edward Arnold and Co., 1933.) 32s. 6d. net.

THIS, the fifth edition of Sir Arthur Keith's textbook, will be heartily welcomed, as it has occupied for many years a somewhat unique

position. It embodies various distinct improvements over the fourth edition which appeared in 1923, but in spite of the accumulation of new facts and new points of view since that date, the author is to be congratulated on having been able to preserve the volume from undue expansion. His clear and popular style of exposition conveys to the readers whom he has in view—students of medicine—the end results of the work of embryologists better than perhaps any other textbook. The text is reduced to the minimum consistent with clarity. Much detail has necessarily been omitted, but the needs of the medical student have been in this respect kept in view. Although ideas differ regarding the relative importance of facts of observation and interpretation, Sir Arthur Keith's selection, in view of his long and varied experience, may be accepted, at least so far as organogenesis is concerned, as satisfactory.

The old title of 1901 is perhaps rather out of date. Descriptive embryology has now become largely merged in a new and more comprehensive morphology, and in this connexion the author's introduction of a new chapter on "Experimental Embryology" is to be commended. The text of the old description has not been greatly altered, but it is fully brought up to date, and the addition to each chapter of a bibliographical appendix—coupled with notes—constitutes a valuable improvement. The notes provide material for a different class of reader from the elementary text. Many deal with more abstruse and doubtful points, and open vistas regarding the most recent advances, while the references to literature send the inquiring student to the sources where he will find—what the keener senior student desires—some knowledge of the actual evidence in sections and reconstructions from which the story has been compiled, and upon which the purely diagrammatic illustrations are founded. These last have not been greatly added to, but we welcome some newcomers which show the same ingenious and informing quality as the old.

The chapters on organogeny maintain the old level of clear elementary description which has given this textbook the success it has attained. The section on the early stages of development is perhaps scarcely so successful. It is relatively more popular and introductory. This is inevitable without the use of more comparative data critically considered, but as a brief introduction it may serve sufficiently well the aim of the book as a whole. T. H. B.