

**The Afferent Innervation of the Heart.** By A. YA. KHABAROVA. Authorized translation from the Russian, By BASIL HAIGH, M.D., B.M.B. Chir. Cloth. \$12.50. Pp. 175 with 87 figures. Consultants Bureau Enterprises, Inc., New York City, 1963.

This is a morphological description of the afferent innervation of the human and animal heart. The initial chapter recounts previously published work in this field and states that "all that can be found in the non-Russian literature on this subject is either a repetition of work done by Russian scientists or an insignificant addition." The remainder of the book is occupied with a description of the author's technique, her findings, copiously illustrated, and her conclusions. The fact that afferent nerves take a deeper silver stain than do efferent nerves is the basis for much of the work. While the various nerve endings and plexuses are described in great detail, no attempt is made to discuss the physiological significance of these. The only physiological cardiac reflex alluded to is the Bainbridge Reflex.

This monograph may be of considerable value to anatomists and to those studying cardiac reflex activity. However, it holds little of interest to most anesthesiologists. The book is well printed and the figures reproduced nicely.

JAMES E. ECKENHOFF, M.D.

**Blood Volume.** By SOLOMON N. ALBERT, B.A., M.D., D.A., F.F.A.R.C.S., F.A.C.A., F.C.C.P., Senior Attending Anesthesiologist, Director of Research, Department of Anesthesiology, Washington Hospital Center; Assistant Clinical Professor of Anesthesiology, The George Washington University, Washington, D. C. Cloth. \$8.50. Pp. 175, with 41 figures, 16 tables and 8 charts. Publication No. 517 American Lecture Series. Charles C Thomas, Publisher, Springfield, Illinois, 1963.

As physiology of circulation becomes better understood and the importance of blood flow becomes more evident, the need of adequate blood volume is being recognized. Practical application of blood volume determination has been delayed due to inadequacy in methodology. This monograph attempts to establish the significance of blood volume measurements and to present information concerning the most useful techniques employed today.

After a rather cursory review of the constituents and functions of blood, the basic principles underlying regulation of cardiac output are simply presented. Homeostasis of blood volume is shown to be dependent on variations of capillary membrane permeability, volume receptors, anti-diuretic hormones, and the liver. Systemic response to hypovolemia and hypervolemia are differentiated and are classified with reference to changes of both red cell mass and plasma volume. Variations of normal blood volume with age and weight are presented, including correction factors to be em-

ployed. The author stresses the inadequacy of the hematocrit as an index to blood volume, and points out discrepancy between peripheral and central hematocrit values, and lack of correlation to red cell mass. The chapters on effects of disease on blood volume, and changes during anesthesia employing various agents, techniques, and position, are of importance to anesthesiologists. Numerous case reports clearly illustrate the use of red cell and plasma volume determinations in preoperative preparation, and postoperative management of surgical patients.

Part two is devoted to technology, including dilution techniques used and calculations involved. The superiority of determining red cell mass over plasma volume is confirmed. The remainder of the book presents physical principles, instrumentation and preparation of isotopes employed.

This concise monograph should be read by every anesthesiologist and will be rewarding reading for clinicians, surgeons and cardiologists. Although the final solution has not been found, the methods offered will suffice for those who have isotopes available. The book is easy to read and understand. The paper and print are of excellent quality, the index detailed, and references abundant. By revealing short-comings of present methods, this book will encourage investigators to seek further development of simple and reliable methods of blood volume determination, and evaluation of blood volume deficiencies.

D. C. GROSSKREUTZ, M.D.

**The Regulation of Human Respiration.** Edited by D. J. C. CUNNINGHAM, M.A., M.B., Ch.B., Fellow of University College, and B. B. LLOYD, M.A., Fellow of Magdalen College. Cloth. \$17.50. Pp. 591, with illustrations. F. A. Davis Co., Philadelphia, 1963.

This book contains the proceedings of the J. S. Haldane Centenary Meeting, which was held in the University Laboratory of Physiology, Oxford, at the end of July, 1961 under the aegis of the Physiological Society. The Centenary was marked by a four day symposium on the Regulation of Respiration, followed by a meeting of the Physiological Society at which tributes were delivered to Haldane's pioneer work in a number of fields of pure and applied physiology. The occasion was commemorated not only by members of the Physiological Society but also by many other distinguished scientists from overseas: this complete record of the papers presented (including references) and the ensuing discussions is an authoritative summary of present day knowledge of respiratory physiology and at the same time a worthy tribute to the work of J. S. Haldane.

As described by the editors' introduction, this volume begins with a reprinting of the obituary notice written in 1936 for the Royal Society by Professor C. G. Douglas. All that Professor Douglas said in his short addresses at the be-