BOOK REVIEWS

THE MODE OF ACTION OF ANÆSTHETICS, by T. A. B. Harris. Pp. xii + 768, including Index. E. and S. Livingstone, Ltd., Edinburgh. 1951. 42s.

This book is another "classic" addition to Messrs. Livingstone's imposing list of medical publications and it should rapidly become a standard textbook for all who are specialising in this branch of medicine. It is not just another book dealing with the controversial theories of how anæsthetics act. In contrast, it is an extremely comprehensive treatise on the chemical, pharmacological and therapeutic properties of the typical anæsthetics in common use. Throughout, the author has endeavoured to correlate the clinical effects observed with the pharmacological and physiological mechanisms involved. While the information it contains is really extensive, it is readily understood, due to the clear and concise manner in which it is presented.

The book is divided into four parts, each consisting of a number of chapters, followed by a very complete list of references. Part 1 deals with the chemical and physico-chemical properties of narcotics and their mode of action on living cells. Part 2 describes their absorption and selective action, together with a review of the biological responses observed in clinical practice. Part 3 correlates the level of anæsthesia with the activity of the motor nerves and the autonomic nervous system. Two excellent chapters adequately describe the chemical transmission of the nervous impulse, while another explains very clearly the properties and uses of D-tubocurarine chloride. It is perhaps unfortunate that the newer neuromuscular blocking drugs, "Flaxedil" and decamethonium, could not have been included. Part 4 underlines the scope of the book, no less than 190 pages being devoted to the side actions of anæsthetics.

G. F. SOMERS.

PHARMACOGNOSY, by Robertson Pratt and Heber W. Youngken, Jr. Pp. xi + 644 (including 4 plates in colour and 63 other illustrations). J. B. Lippincott Company, London. 1951. 70s.

This book presents the subject of pharmacognosy from an angle quite different from that usually found in textbooks. The main emphasis is laid on the constituents of crude drugs rather than on the crude drugs themselves, and the authors point out that this shift of emphasis really stems from the work of Pelletier, Caventou and others who were the first to isolate active principles from crude drugs. A distinction is made between the therapeutically active constituents and those chiefly of pharmaceutical importance, e.g., acacia, starch. This novel presentation of the subject effects the plan of the book. The early chapters give a general account of the constituents as follows: their formation in the living cell, their function in the plant or animal in which they are formed and their pharmacological activities. The crude drugs themselves are then studied and are classified on a pharmacological basis, the chief emphasis being on the chemistry of their constituents and their therapeutic and pharmaceutical uses. The later chapters deal with the production of crude drugs (including a discussion of plant breeding and weed control), their evaluation and the pests which cause deterioration during storage. This book should be considered as complementary to, rather than a substitute for, the normal textbooks of pharmacognosy. The crude drugs themselves are not the real object of study so that the information on their morphological, anatomical or even botanical characters is scanty, and the few drawings illustrating these

features lack the precision we expect in pharmacognosy. Thus the drawing of the trichomes in Figure 37 gives little real information as to the structure of nux vomica trichomes and in Figure 34 a rare type of glandular trichome of digitalis is drawn, whereas the much more common type is omitted. However, the book does not claim to cover these "highly specialised phases of the subject" and the student or practising pharmacist who has already had some basic training in pharmacognosy will find this book stimulating, interesting and informative. The authors are to be congratulated for this refreshingly different study of vegetable and animal materia medica. J. W. FAIRBAIRN.

QUALITATIVE ARZNEIMITTEL-ANALYSE, by Hans Mühlemann and Adolf Bürgin. Pp. 278 + Index. Ernst Reinhardt, Basle. 1951. Cardboard cover, 10 Swiss francs. Linen cover, 12.50 Swiss francs.

This book is intended primarily for pharmacists and students of pharmacy as an aid to the ready identification of common medicinal substances. The opening chapters give a brief description of the more commonly employed physical and chemical techniques, including distillation, fractionation, crystallisation and sublimation, which are available for the isolation of pure substances. There follows an explanation of the way in which these methods are applicable to the examination of various types of dispensed preparation. Aqueous, alcoholic and other non-oily substances are classified together and preliminary tests are suggested for (*a*) reaction to litmus, (*b*) miscibility, (*c*) residue on evaporation, (*d*) alkaloids and bases, (*e*) carbohydrates, (*f*) ammonium salts, and (*g*) substances reacting with ferric chloride. Powders, tablets, pills and dragees are treated as a group and are examined for water- and alcohol-soluble substances. Special methods are described for the examination of preparations containing oils and fats, such as emulsions and suppositories. The remainder of the work is devoted to a series of short monographs describing the physical and chemical tests for the identification of a number of simple chemical and medicinal substances. These are arranged in groups of compounds, chemically related, and include alcohols, aldehydes, ketones, carbohydrates, phenols, acids, esters, ethers, organo sulphur compounds, cyano compounds, organo arsenicals, halogen derivatives, organic bases, alkaloids, sulpha drugs and a group of miscellaneous natural products. The book does not provide a truly systematic approach to the problem of identifying organic medicinal substances, though it does fill a need for guidance in the use of the methods which are available for the isolation and identification of the active ingredients of dispensed medicines.

JOHN B. STENLAKE.

BOOKS RECEIVED

ENZYMATISCHE ANALYSE by Herman Stetter. Pp. 196 and Index. Verlag Chemie, GMBH., Weinheim/Bergstr. 1951. DM. 17.50.

PAPIERCHROMATOGRAPHIE by Friedrich Cramer. Pp. 81 with 47 illustrations. Verlag Chemie, GMBH,, Weinheim/Bergstr. 1952. DM. 9.80.

PHYSICAL BIOCHEMISTRY (2nd Ed.) by H. B. Bull. Pp. viii + 334 and Index. Chapman and Hall, London, 1951, 46s.

THE VITAMIN B COMPLEX by F. A. Robinson. Pp. xi + 629 and Index. Chapman and Hall, London, 1951, 60s.