

Recent Advances in Pharmacology

By Prof. J. M. Robson and Prof. R. S. Stacey. Third edition. Pp. x+406. (London: J. and A. Churchill, Ltd., 1962.) 54s. net.

PROGRESS in pharmacology continues at a great pace and it is pleasing to see that the third edition of *Recent Advances in Pharmacology* contains chapters or parts of chapters written by a number of experts who cover topics of specialized fields. However, this is not the only change in the arrangement of this popular book as the co-authors are a new team, Prof. Stacey replacing Prof. Keele as the colleague of Prof. Robson.

Some thirteen chapters are included in this edition, and the attempt has again been made to present pharmacology as a science covering all aspects of drugs from mechanisms of action to uses in the treatment of disease. Some overlap in material is bound to happen where individual chapters cover, for example, pharmacologically active substances in the central nervous system, psychotropic drugs, catecholamines, 5-hydroxytryptamine, polypeptides and hypotensive drugs. Nearly half the book (178 pages) is allotted to these topics, which obviously are becoming of great importance to medicine. Nevertheless, it is interesting to read that the mechanism of central synaptic transmission still remains in doubt. These early chapters are well set out and easy to read, except where several cross-references occur on one page (as on p. 11). The position of the important Table 1 in the text (on pp. 2 and 3) could have been better arranged and the word "Screening" on p. 78 is also a bad choice. Other chapters are concerned with hypoglycaemic agents, diuretics and steroids, and these are followed by excellent accounts of bacterial chemotherapy and of antimalarial and anthelmintic drugs. The importance of derivatives of peptides and glutarimides is stressed several times throughout the material of the book.

There are several spelling mistakes (as for example on pp. 124, 142 and 150), at least one printing mistake (p. 173) and an incorrect formula (p. 141). One is not sure if $\frac{1}{2}$ per cent is a scientific expression (p. 179), and it is intriguing to find that the titles of three of the chapters (Nos. 5, 8 and 12) differ from those in the list of contents. However, *Recent Advances* is a most valuable book for all who work with drugs. It is well printed on good paper. It can be thoroughly recommended, particularly as there are plenty of references cited at the end of each chapter, and important reviews are indicated by asterisks. So far as can be judged, the literature survey does not extend much beyond 1961, indicating that the edition took much time to produce.

G. B. WEST

A History of Mechanical Engineering

By Prof. Aubrey F. Burstall. (Technology Today and Tomorrow.) Pp. 456. (London: Faber and Faber, Ltd., 1963.) 50s. net.

FRANZ REAULEUX once defined a machine as a "combination of resistant bodies so arranged that by their means the mechanical forces of nature can be compelled to work accompanied by certain determinant motions". "Determinant motions" are the theme of Prof. Burstall's magisterial nine chapters. They represent a formidable compression of much recent research, and not a little of his own, in a powerful and impressive story.

Imaginatively deployed from the Sumerians to the space age, scrupulously written and documented, it is also illuminated by some 291 illustrations, many, with considerable advantage, redrawn for the purpose. His solicitude for the reader has extended beyond the text, for each chapter is buttressed by a workman-like system of references as well as a series of invaluable bibliographies.

It triggers off many reflexions. Did science (as L. J. Henderson maintained) owe more to the steam engine

than the steam engine did to science? The contrast between quantitative experimentalism of continentals like Navier and Carnot and the lack of knowledge (or, as Prof. Burstall goes on to call it, "foolhardiness and in some cases sheer stupidity and carelessness") of several of the early English railway engineers force one to the conclusion that their luck has been our misfortune. For their very adventuresomeness and irresponsibility made them the major figures in a Smilesian rather than a technical hagiography, and hagiography is what Prof. Burstall warily and wisely eschews. He provides instead a developmental study of machines, materials, tools and power available to and improved on in nine specific 'periods' in history, accompanied by pointed descants on the general scientific climate of each period. The developmental framework, however, includes certain 'failures' which on closer inspection betray significant technical features. The author's experience, erudition and insight are reflected in the index, which, to teachers of the subject, offers entry to the text under suitable topics as well as individual entries. It is a satisfying book to have written and to possess. W. H. G. ARMYTAGE

Differential Equations

By Prof. H. S. Bear, jun. (Addison-Wesley Series in Mathematics.) Pp. viii+207. (Reading, Mass., and London: Addison-Wesley Publishing Co., 1962.) 42s.

ANY first course in differential equations must deal with the classical devices of explicit integration, particularly for the first-order equation and for the linear equation. Prof. Bear departs from the norm of such texts by giving special attention to simple forms of existence theorem, for a single equation or a system, and by taking rather more pains over the theoretical basis of the Laplace transform. There are worked examples and exercises for the student. Thus the book is probably best suited for the young professional mathematician in the making, as a bright sixth-former or as a first-year honours student.

T. A. A. BROADBENT

Water Plants

By B. B. Singh Bhadri and B. L. Desai. Pp. x+44+5 plates. (New Delhi: Indian Council of Agricultural Research, 1962.) Rs. 3.75.

Seasonal Flowers

By Bhanu L. Desai. Pp. x+180+16 plates. (New Delhi: Indian Council of Agricultural Research, 1962.) Rs. 11.00.

THE Indian Council of Agricultural Research is making a praiseworthy effort to popularize gardening in the Indian sub-continent. To that end it is financing the publication of a series of hand-books on various aspects of this recreation. One of the latest, on water plants, is by no less a personage than the Lieutenant-Governor of Himachal Pradesh assisted by Bhanu L. Desai, who himself is the author of the second work *Seasonal Flowers*. The price of both is well within the means of the average householder.

Both these booklets can be recommended as explaining in clear and simple language how the beginner can make the best of a garden pool or a flower border. There is much, too, that will be of value to the enthusiastic amateur.

I myself find the illustrations in *Water Plants* very pleasing, taken as they are from colour photographs of the plants in their natural habitat. Those in *Seasonal Flowers* are less satisfactory. The bunches of flowers are photographed against a coloured background which in some instances detracts from the beauty of the flowers themselves.

These books should make an appeal to the many who wish to brighten what, so often in India, is a drab compound, and who would like to know how to start, to learn the pitfalls, to ensure success. A study of these booklets will solve their difficulties.

N. L. BOR