

together with a bibliography of about 10,000 references in addition to the special lists of references for most sections, it will be seen that it is a mine of information for ophthalmologists, physiologists, biologists and psychologists, and it will remain a great source book for many years to come. Although it is such a comprehensive and learned work, it is pleasantly written and eminently readable. Our warm thanks are due to Prof. Heinrich Klüver for his devotion to the task of completing the work and seeing it through the press.

R. W. PICKFORD

DRUGS AND THE BRAIN

Chemotherapy and the Central Nervous System

By Dr. Henry Mellwain. Pp. viii + 328. (London: J. and A. Churchill, Ltd., 1957.) 45s. net.

Neuropharmacology

Transactions of the Third Conference, May 21, 22 and 23, 1956, Princeton, N.J. Edited by Harold A. Abramson. Pp. 381. (New York: Josiah Macy, Jr. Foundation, 1957.) 4.50 dollars.

THESE volumes are two of an increasing number of books dealing with the biochemical and pharmacological problems of the most complex of living tissues. They do, however, represent different extremes in approach to the subject. In one, an eminent research worker and teacher surveys the whole field of chemotherapy, past and present, in relation to the nervous system: in the other, we can read a more-or-less word-by-word account of a conference in which a group of no less eminent scientists discuss many current problems of the pharmacology of the central nervous system.

The task of Prof. Mellwain was formidable. Of all diseases, those of the nervous system are among the most intractable and present the greatest challenge to science; it is therefore to the author's credit that he has given a clear account of present and past methods of chemotherapeutic attack, while at the same time emphasizing the general principles of chemotherapy as a subject in its own right. Of further interest to the general reader is the emphasis given in the early chapters of the book on the history of the subject. The mid-nineteenth century researches of Snow on the action of ether and chloroform are considered in detail, as in a later chapter are the more familiar studies of Ehrlich with arsenicals.

But this does not detract from the use of the book as an up-to-date text. In fact, when one considers the length of the book, the field covered is vast. The control of body temperature, the metabolism of drugs, convulsants and anti-convulsants, analgesics and antibiotics—all are included. There is a succinct but thoughtfully written section on tranquillizing drugs that reflects the scepticism of an authoritative investigator.

The subject-matter is meticulously documented with a list of references at the end of each chapter. Where suitable, information is summarized in the form of tables and graphs, which makes for easy reference; there are both a subject and author index, the former more than adequate. This book seems likely to pass through several editions.

The Transactions of the Third Conference of Neuropharmacology make perhaps for lighter reading. In the preface it is stated that "the goal of this conference . . . is the promotion of communication, the

exchange of ideas and the stimulation of creativity among the participants". Selected research projects are introduced by the worker involved and the ensuing discussions have apparently been recorded in full. The individuals taking part in the conference came from many different scientific disciplines and the main interest of the book derives from the *rapport* between the participants whose contributions appear in the form of question and answer. Some of the questions, it might be added, are not answered; nevertheless, this technique can be very effective, as in the section devoted to the action of alcohol on the nervous system.

The subjects discussed vary in interest and importance. There is a long and interesting section on the effects of psychomimetic drugs in animals and man (Prof. J. Elkes); and a study of serotonin and norepinephrine as antagonistic chemical mediators in the central nervous system is effectively given by Dr. B. B. Brodie. Other subjects, for example, the effects of lysergic acid diethylamide on snails, are perhaps more esoteric.

Some of the passages in the discussion seem to me to be of a trivial nature and scarcely worth recording, for example:

"R. Is this commercial epinephrine solution or is it specially prepared?"

"J. It was a saturated solution of epinephrine made from the dried base.

"A. It was 1 to 6,000.

"R. Was it made as a pharmacologic solution?"

"A. It was a solid base added to the solution."

On the other hand, the book is well produced on high-quality paper, is adequately illustrated and is complete with subject index. For an American publication its price is very reasonable (through the generosity of the Josiah Macy Jr. Foundation it is sold at cost), and it certainly gives the reader an insight into contemporary trends in neuropharmacological research.

G. B. ANSELL

BASIC ZOOLOGY

Principles of Zoology

By Prof. John A. Moore. Pp. xiv + 667. (London and New York: Oxford University Press, 1957.) 60s. net.

ASKED recently what she would expect to find in a book entitled "Principles of Zoology", a young student volunteered the answer, "the main things you would need for an examination". For reasons not entirely based on false etymology, the reviewer approached Dr. Moore's book with similar misgivings, which turned out to be quite unfounded. This is a genuine and surprisingly successful attempt to give zoological concepts and principles first place and to reduce the memory work of mastering intricate detail to a minimum.

The book is a first-year text designed for an American liberal arts college, for students with no previous knowledge of the subject. The author says in his preface that in order to illustrate the methodology, philosophy and strategy of science, "superficial treatment of a wide variety of topics must be sacrificed for a meaningful consideration of a few". He selects for these few (a) cytology and 'classical' genetics, (b) embryology and (c) evolution, and not many will quarrel with his choice; his detailed handling of these topics is preceded by an introductory section of 140