

in which there is now an excess of bricks of information, but nobody has yet managed to construct an acceptable building from them (*Science*, **142**, 339; 1963). The reason for this situation is that the subject is very complex; there is therefore an almost infinite combination of experimental parameters.

As is proper for a journal devoted to a subject dependent on highly complex heterogeneous catalysis, the editorial and advisory boards show a wide range of expertise in different disciplines. It is to be hoped that this will be reflected in the range of the papers published and that the high proportion of morphological papers will be balanced in future numbers by papers providing information about the chemistry of the processes involved.

The journal is well printed and the quality of the photographs is adequate. If the present policy of not giving the date of acceptance of papers is continued the speed of publication will not be able to be assessed. There is no doubt that all "mitochondriacs" will feel they must add this journal to their lengthy reading list. In my view, very specialized journals could serve a useful purpose if they published the best work from all approaches to the problem as well as providing a forum for the critical evaluation of the earlier published work. If future numbers of this journal show that this is the case, then it will have justified its creation. W. N. ALDRIDGE

## PARKINSONISM

### Parkinsonism

Physiology, Pharmacology and Treatment. By Donald B. Calne. Pp. xiii + 136. (Arnold: London, September 1970.) 45s.

THE interest of the medical profession in Parkinsonism and related disorders has been revived within the past few years following the discovery that many patients suffering from this disease may be greatly helped by treatment with L-dopa. This is one of the first chronic and disabling diseases of the central nervous system in which a form of replacement therapy based upon sound pathological and pharmacological evidence has become possible. This short monograph by Dr Calne is therefore timely and, in general, it can be warmly commended as giving a succinct and topical review of the condition.

The author's short neurophysiological introduction is, in general, clear and concise, yet reasonably comprehensive, although, like many others before him, he has tended to circumnavigate skilfully the dangerous and largely uncharted territory of basal ganglia physiology. His second chapter, in which he describes the clinical features, aetiology, natural history and pathology of Parkinsonism, is much less satisfactory, largely on account of its brevity, because occasional but important clinical features of the condition, as seen particularly in post-encephalitic cases, are not mentioned. His comments on aetiology are also rather sketchy for, in a sense, he perpetuates the myth that Parkinsonism (with a capital P) may be produced by chronic trauma (sic) or that it may result from intracranial tumours, carbon monoxide poisoning, Wilson's disease or manganese intoxication. He also avoids discussing in any depth the vexed and controversial question as to whether diffuse cerebral arterial disease causes true Parkinsonism or a syndrome resembling it. Even in a monograph which, as its title implies, purports to deal essentially with physiology, pharmacology and treatment of this disorder, the informed reader deserves a more comprehensive and carefully argued commentary on aetiology; although one accepts that a definition of what one means by Parkinsonism is all-important, and although the author attempts to define the syndrome on page 18, most neurologists would agree that many of the aetiological processes referred to earlier more often give distinctive clinical syndromes

which bear only a superficial relationship to the clinical condition which most would regard as classical Parkinsonism.

There are also one or two other minor points of criticism in that in chapter three, on tremor, the author fails to distinguish between action tremor on the one hand and the intention tremor of cerebellar dysfunction on the other, and, subsequently, in an otherwise admirable short summary of present views concerning rigidity, he perhaps does less than justice to recent work on alterations in the H-reflex which have been reported in patients with this disease. He is at his best in considering the pharmacology of Parkinsonism, the methods of assessing treatment, and in his comprehensive and up to date review of the place of L-dopa in treatment. All of the important and topical questions are discussed here, though he gives little if any clear guidance as to whether patients should or should not be given standard anticholinergic remedies along with L-dopa. It may be that the answer to this important question is not yet known; not surprisingly he has also been unable to include in this monograph reference to reports which have appeared very recently concerning the use of decarboxylase inhibitors in combination with L-dopa in patients with this disease. Nevertheless, the book is surprisingly up to date and many references to papers appearing in 1970 are included in the bibliography. The book is clearly written, the reference list is comprehensive, there is a good index, it is inexpensive, and in spite of the criticisms mentioned earlier, it is on the whole a faithful summary of current knowledge concerning the pharmacology and treatment of Parkinsonism. JOHN N. WALTON

## HORMONE REGULATION

### Hormones and the Environment

Proceedings of a Symposium held at the University of Sheffield, September 2-5, 1969. Edited by G. K. Benson and J. G. Phillips. (Memoirs of the Society for Endocrinology, No. 18.) Pp. xvi + 629. (Cambridge University: London, July 1970.) 140s; \$22.50.

THE increasing awareness of the importance of environmental factors in the regulation of hormonal mechanisms prompted the symposium on "Hormones and the Environment", the proceedings of which form this, the eighteenth memoir of the Society for Endocrinology. The result is a stimulating, albeit heterogeneous, collection of the twenty-three papers presented, together with the edited discussions.

There are sections dealing with the aquatic, terrestrial and biotic environments as well as neuroendocrine mediation and temporal changes in endocrine secretions. The considerable variety of subject matter in the text precludes the possibility of a single theme emerging. One requires fertile imagination to link "Intersexuality in Fishes", with "Malnutrition and the Endocrine System in Man", or with "Pheromone-endocrine Interactions in Insects". In spite of this range, however, the smoothly edited discussions of papers reveal the ability of participants to bring their own special endocrine interests to bear on the quite different problems of others. The record of the discussions is a pleasing facet of the book.

It may be argued that several of the papers in this memoir contain relatively little about hormones; notably the account of "Mechanisms of Salt and Water Transfer across Membranes in Teleosts" by Dr J. Maetz, and "Kidney Function in Desert Vertebrates" by Professor W. H. Dantzler. These two distinguished contributors, however, clearly illustrate the need for a complete background knowledge of the phenomena over which hormones may be assumed to have control.

In a symposium concerned with the environmental influences on hormonal systems, it is inevitable that