

his habits of work. Even this can scarcely be called a popular book in the sense of one intended to reach that wider section of the public which most requires to have its misconceptions removed, and to be enlightened as to the close connexion between the activities the Civil Service is required to pursue and the services which that public demands of the State.

A recent B.B.C. inquiry into television has made it only too clear that the chances of reaching that section of the public by means of the printed word is slender. For those who do read his book, Mr. Munro should dispel a good many popular misunderstandings and remove the basis of some ill-informed and unfair jibes. Even more important, by his interpretation of the attitude of the Civil Service and explanation of the reasons behind its practice and procedure in handling such matters as complaints, planning, and the operation of controls, he goes far to promote the understanding and goodwill that are essential for the smooth functioning of government organization and the efficient service of the purposes of the State.

The success of this book is mainly due to the fact that, unlike so many other writers on the Civil Service, Mr. Munro confines himself to the one aim and does not allow himself to be beguiled into examining the problems which are being created for the Civil Service by the demands of a Welfare State. Nevertheless, he shows himself well aware of those problems, and he discusses with humanity as well as imagination such questions as those of controls and planning, the organization of government departments and their relations with Ministers.

Mr. Munro's very success induces the hope that, having explained so clearly the Civil Service as it is, he will now, in another book, discuss the ways in which the Civil Service could find answers to the new problems which are facing us all in the Welfare State and give us his view of the new public service which this new conception of the State requires. That hope is the more warranted because Mr. Munro displays to the full in this book the very qualities that can contribute most to bridging the gap between Civil servants and the community they serve, and to stimulating the circulation between the Civil Service and other professions which is now so desirable.

R. BRIGHTMAN

COMPARATIVE ANIMAL PHYSIOLOGY

Comparative Animal Physiology

By Prof. David W. Bishop, Prof. Frank A. Brown, Jr., Prof. Theodore L. Jahn, Prof. C. Ladd Prosser and Prof. Verner J. Wulff. Prof. C. Ladd Prosser, Editor. Pp. ix+888. (Philadelphia and London: W. B. Saunders Co., 1950.) 63s.

IN physiological research, difficulties of technique or of interpretation may sometimes be overcome by extending the investigation to include other methods or different species. It is natural that mammalian physiology should be studied intensively, but in fact the investigation of other forms has contributed greatly to the solution of many fundamental problems, and continues to do so. The advances recently made in the knowledge of nerve impulse transmission show how various methods can profitably be brought to bear on a problem.

In view of the outstanding intrinsic interest and possible wider complications of many aspects of non-mammalian physiology, it is surprising how few are the texts devoted to comparative animal physiology. This book provides a notable contribution in this field, and it should be of value to many classes of readers.

Prof. C. L. Prosser appropriately begins by stating his concept of the functions and aims of comparative physiology: "Comparative physiology treats of organ function in a wide range of groups of organisms. Comparative animal physiology integrates and co-ordinates functional relationships which transcend special groups of animals. It is concerned with the ways in which diverse organisms perform similar functions. Genetically dissimilar organisms may show striking similarities in characteristics and response to the same environmental stimulus. By the same token closely related animals frequently react very differently to their surroundings. While other branches of physiology use such variables as light, temperature, oxygen tension, and hormone balance, comparative physiology uses, in addition, species or animal type as a variable for each function. The generalisations which emerge from this experimental approach are important as biological principles which often aid in solving problems of cellular or special group physiology".

In presenting animal physiology from this point of view, the authors do not deal exhaustively with mammalian or cellular physiology, but these are included in enough detail to present an adequately balanced picture. The book is intended for advanced undergraduate or graduate needs, and to "introduce investigations to particular branches of the subject". In view of this, descriptive physiology of the various species is, of course, a prominent feature of the book, while ecological and evolutionary implications and biological generalizations are introduced at appropriate places, and emphasized at the end of chapters.

The whole book bears evidence of much thought and care, and the declared objectives are kept well in evidence throughout. The scope of this extensive text is very wide, so wide, in fact, as almost to defy a truly critical detailed appraisal by one person. The inclusion of so much material demands a concentrated type of exposition, which in this book is shown to be compatible with admirable clarity and precision. There are many excellent tables of quantitative data on various physiological and biological aspects of many kinds of animals; the variety and scope of these add appreciably to the value of the book. Throughout the text, attention is directed to numerous important questions in need of solution.

The bibliography is stated to be selective rather than comprehensive, and if occasionally an apparently important paper is not included, this fact must be remembered. Also, the student of mammalian physiology must be reminded that this branch is not intended to be stressed, although in fact most of mammalian physiology is very satisfactorily covered. The bibliography contains more than three thousand references.

The text is almost free from typographical error; on p. 121 of my review copy, however, part of the text seems to have been omitted.

The authors are to be congratulated on the ambitious conception of this book, its originality, wide scope and excellent balance. Their work has made easily accessible a mass of information useful to student and specialist alike, and the book should provide an added stimulus to the study of animal physiology on a comparative basis. W. BURNS