

### Virological Technique

By D. W. G. Busby, W. House and J. R. Macdonald. Pp. x + 218. (London: J. and A. Churchill, Ltd., 1964.) 30s. net.

**T**HERE is, undoubtedly, need for an up-to-date handbook describing the techniques used in applied virology, and the aim of this one has been to provide a "reliable guide to laboratory practices in everyday use". The laboratories in mind are clearly those engaged in the routine isolation and identification of human pathogens and the measurement of immune responses to them.

There is a concise and lucid section on the cleaning and sterilization of apparatus, while filtration is described shortly. In discussing disinfectants it is difficult to see why ether and glycerol are mentioned and why more emphasis is not given to the proven virucidal range of agents recommended. Apparatus such as egg incubators, gassed incubators, homogenizers and the high-speed centrifuge are described in some detail.

The section on light microscopy is sometimes unhelpful; for example, the only use mentioned for inverted microscopes is to "examine cell monolayers growing in Petri dishes . . .". Electron microscopy is given brief introductory treatment. The account of inclusion bodies is outdated and contains some inaccuracies; for example, basophilic elementary bodies are described in the cytoplasm of cells infected with herpes febrilis and type B, intranuclear inclusions are attributed to herpes febrilis and zoster, both NITA viruses.

The chapter on animal isolation and inoculation techniques is clear and simple, though it is difficult to see why arterial cannulation is preferred to cardiac puncture for obtaining chicken plasma. Embryonated egg techniques, cell-culture methods and media receive good attention, but there are disturbing generalizations; for example, "Results obtained from cell cultures are invariably quicker . . . than those from laboratory animals". There is a brief general description of serological tests.

A very useful practice throughout the book is to append footnotes giving the addresses of suppliers for recommended items.

Systematic virology is dealt with in the final third of the book. In view of the apparent aim to cater particularly for workers in Britain, it is occasionally difficult to understand the relative allocation of space. For example, there are more than two pages devoted to a list of arboviruses, but no mention of rubella. The final chapter is a short account of freeze-drying techniques—not intended to be a practical guide to those required to carry them out but directing attention to more comprehensive reference works.

This well-produced volume will be very useful in its intended sphere and goes a considerable way towards filling the previous hiatus.

### The Nature of Parasitism

The Relationship of Some Metazoan Parasites and Their Hosts. By W. P. Rogers. (Theoretical and Experimental Biology: an International Series of Monographs, Vol. 2.) Pp. ix + 287. (New York: Academic Press, Inc.; London: Academic Press, Inc. (London), Ltd., 1962.) n.p.

**T**HE first edition of this compact, original and attractively-written book earned for itself a unique place in the considerable and growing literature about parasitology. It is not a text-book, nor is it a book for those who wish merely to know about the structure of parasites and how to identify them, or about the diseases they cause and the treatment and control of these diseases. The aim of the book is expressed rather in its sub-title. It is written for those who wish to understand the biochemical and other conditions which govern the way of life called parasitism as revealed especially by the nematodes and flatworms parasitic in Metazoan hosts.

As the author rightly observes, the mere entry of a parasite into a host does not constitute parasitism. Once a parasite has successfully overcome the many difficulties that may prevent it from reaching the right host and succeeded in entering it, it is confronted by many powerful factors challenging its very presence and continued existence inside the host. Against these adversities it must feed, grow and reproduce its kind and, if it can, overcome the biochemical, physiological or immunological resistance reactions of the host.

*The Nature of Parasitism* contains an excellent account of our knowledge of the biochemistry of these factors which govern the relationship of parasite and host. These are illustrated by reference to the more common and better known parasites of man and domesticated animals. To understand the text the reader will require a considerable knowledge of biochemistry and its technical terms and at least an elementary knowledge of the structure and life-histories of the parasites used to illustrate Dr. Rogers's views. He discusses in detail the remarkable effects of parasitism on the parasite and gives much space to a discussion of the basis, especially the biochemical basis, of the key problems of the host-specificity of parasites, the biology of their infective stages, and the modifications of the reproductive processes of the parasite, including the structure, formation and biochemistry of the parasite's egg-shell, its production of eggs and sex ratio and other factors which enable it to ensure reasonable chances of infection of the right hosts. The later chapters of the book discuss the ecological factors which influence the origin of parasitism and Dr. Rogers's own interesting views on the evolution of this mode of life.

The book deserves, and will no doubt achieve, many more editions, to which all parasitologists who wish to understand the way of life they are concerned with eagerly look forward.

G. LAPAGE

### Cats of the World

(World Wildlife Series No. 1.) By Armand Denis. Pp. 119 + 36 illustrations. (London: Constable and Co., Ltd., 1964.) 30s.

### Rhinos Belong to Everybody

By Dr. Bernhard Grzimek. Translated by Oliver Coburn. Pp. 207 (138 photographs). (London: William Collins, Sons and Co., Ltd., 1964.) 63s. net.

**T**HESE are two animal picture books by television personalities; both emphasize the impending extermination of much of the world's fauna and plead for effective conservation before it is too late. It remains to be seen whether such conservation is possible while the human population pressure increases at its present rate. Unless war, pestilence or famine reduces the number of men in the comparatively near future there will literally be no room for wild animals before many years have passed. Although politicians refuse to face the one problem of overwhelming importance to mankind, and fritter their efforts away on parochial controversies and international paper-pushing, they will before the end of this century be forced in all civilized countries to abandon subsidizing human breeding, to institute family planning permission and the imposition of heavy taxes on families of more than two children. The most optimistic estimates of the size of the world population in A.D. 2000 show that through the whole of the twenty-first century there will be food-rationing all over the world for at least a hundred years; the ration-book and the food queue will be as much a normal part of life to our great-grandchildren as the motor-car and the television are to us. Conservation of the fauna, ardently as it is desired by zoologists, is no more than a pipe-dream if the population explosion is not very soon extinguished.

Mr. Denis acknowledges the help of his editor, Dr. Bruce Campbell, in writing his book, and indeed it seems