

on which information is lacking listed in conjunction with the more detailed notes on one particular species. This is confusing at first sight: for example, the entry for the European wild cat is followed by brief details of six other genera of cat, and that for the snowshoe rabbit (*Lepus americanus*) of North America by notes on thirteen other species of African and Asiatic hare. Scientific names are occasionally antiquated, such as *Rhachianectes* for *Eschrichtius*, the Californian grey whale, or incorrect, such as *Enhydra* for the more usual *Enhydra*, the sea otter. There is no bibliography, the author instead listing some of the more important sources in the preface. A few of the drawings lack a caption or other indication of the animal portrayed. Small errors which have been overlooked include a cross-reference to the New Guinea water rat, *Parahydromys*, which receives no further mention, *Crossomys* being correctly included; *Talpa europaea* is said to extend to Japan: the Japanese mole is *T. micrura*; the British water vole (*Arvicola*) does occur in the Scottish Highlands; perhaps through summarizing too zealously, the author implies that the world record African elephant tusk is 11 ft. 5½ in. in length and weighs 226½ lb. In fact, he has combined the length of the longest tusk with the weight of the heaviest.

Nevertheless, this book will be invaluable to amateur and professional student alike. Its detailed treatment of representatives of the entire class sets it apart from others of its kind, and the author is to be congratulated on his useful and comprehensive summary of the literature.

J. H. HILL

DRUGS AND THEIR ACTIONS

Drugs, Medicines and Man

By Prof. Harold Burn. Pp. 232. (London: George Allen and Unwin, Ltd., 1962.) 25s. net.

THE readers of this useful and clearly written work will be grateful to Prof. H. Burn for having used his great gifts of exposition in presenting them with an easily understandable account of drugs and their actions. This is a subject that deserves such a treatment, not only because of its scientific interest, but also because drugs are of importance to all, patients and users of the National Health Service, and the tax-payers. For all these reasons it would probably have been more appropriate to have this book reviewed by one who is not in his daily work concerned with the action of drugs and who is not familiar with many of Prof. Burn's ideas and with his contributions to the analysis of drug action. However, I myself experience an additional pleasure in reading this book: that of meeting old acquaintances in a new setting. I realize, also, that there is much for me to learn in this volume. One is glad to be reminded of the fact that the attempts to fight disease with the help of the synthetic chemist are of surprisingly recent date. In the field of the hypnotics, of the general and local anaesthetics and of the analgesics, the efforts of the chemists can be traced back to the nineteenth century; but many other types of therapy by synthetic drugs, some of the most successful ones, such as the treatment of parasitic and infectious diseases, of hormonal dysfunction, of the disorders of the cardiovascular system and of mental illness, are achievements of the twentieth century.

Prof. Burn describes many instances where the pharmacologist's efforts in the analysis of the effects of

drugs on biological processes have guided the work of the synthetic chemist and led to valuable new therapeutic agents. However, the book also gives many examples of advances that were the outcome of fortuitous findings. The account of some of these accidental discoveries, or the chapter on the doctor-patient-drug relationship, will be readily appreciated and enjoyed by the non-scientific reader. Prof. Burn also deals at some length with the habit-forming drugs such as alcohol and nicotine. One of the attractive features of the book is that he discusses the mode of action of these substances (and of other drugs) but that he does not pass many judgments of value; still, we do learn from him that we should neither eat too much nor take too little exercise, nor disregard the danger of excessive mental strain during our daily work.

Anyone who really wants to learn something about the usefulness of drug therapy should read this book, and particularly the last chapter, which gives a brief summary of the achievements of drug therapy. For having given the lay reader a clear account of these successes Prof. Burn has earned the gratitude of all pharmacologists.

H. BLASCHKO

COMPENDIUMS OF MINERALOGY

Rock-Forming Minerals

By Prof. W. A. Deer, Dr. R. A. Howie and Dr. J. Zussman. Vol. 1: Ortho- and Ring-Silicates. Pp. viii + 333. (London: Longmans, Green and Co., Ltd., 1962.) 95s. net.

WHEN J. D. Dana, in his early twenties, put together the first edition of his *System of Mineralogy* (published in 1837) he followed the then current fashion and used external characters almost exclusively as a basis of classification, but in the third edition (1850) he rejected the whole of the so-called 'natural history system' and accepted chemical composition as fundamental. This feature was retained through the sixth edition (by E. S. Dana, 1892) which, supplemented by a series of appendixes, remained the standard mineralogy for half a century. A chemical classification was followed, too, in the *Handbuch der Mineralogie* by C. Hintze. In the seventh edition of 'Dana', now in course of publication, a change is being made where feasible to a classification based on crystal structure and chemistry as elucidated by X-rays, a scheme already adopted by A. N. Winchell in 1933 for the section on silicates in his *Optical Mineralogy*.

The volume under review is the first of a series of five which is to treat the restricted field of the rock-forming minerals. The first four, on silicates, follow the now customary structural classification; the fifth will describe non-silicates. Volume 1 deals with twenty-two mineral groups or species classified as ortho- and ring-silicates. The description of a group is prefaced with a brief general account; for each species the ideal chemical formula, the crystallographic and optical data, and the unit cell are listed. No data of morphological crystallography are given, drawings of crystals being used only to show the optical orientation of biaxial minerals (in the single case of axinite recourse is had to a stereogram). A description of the atomic structure leads naturally to a discussion of the chemistry in terms of a selection of analyses, to each of which is appended a recalculation showing the structural balance; information