

mount. This has been achieved in the book under review, though how far it is due to editing and how far to clear thinking by the Dutch workers over a number of years cannot be said; whichever it is, the credit is due to Prof. Kruyt. It should be read word by word more than once. Its particular merits are that it stimulates and disciplines. It is suitable for advanced students and research workers interested in colloids, and should find a place wherever colloids are studied seriously.

It will be most interesting to see in Volume I how the authors deal with irreversible colloids, for which the thermodynamic approach to stability is so much less useful than the kinetic. There is a real danger to-day that research workers dealing with macromolecular colloids may be lamentably ignorant of the other types. This is due in part to the common habit of young workers of regarding investigations more than about ten years old as obsolete; and in part to nomenclature and the need for revision of the treatment of the classical colloids. It is as well to remember that there is one basic and fundamental property only common to all types, namely, the large size of the free kinetic unit of the solute. Can one imagine a book on ordinary solutions which did not mention the colligative properties? We must recognize that although many of the properties, especially their commercially useful ones, depend upon the interaction between particles, the single molecule, whatever its size, still remains the fundamental chemical unit, and it can still be studied only in ideal solution, that is, at a dilution such that mutual interaction effects are reduced to zero. There is nothing new in this situation: exactly the same applies to metals. The confusion really arises from the word 'colloid'. Is there such a thing, or are there only colloidal solutions? The answer is, of course, that the colloidal state is a state of dispersion, and that there is therefore no such thing as a 'colloid'.

A. S. C. LAWRENCE

FREE-LIVING NEMATODES

Soil and Freshwater Nematodes

A Monograph. By Dr. T. Goodey. Pp. xxvi+390. (London: Methuen and Co., Ltd.; New York: John Wiley and Sons, Inc., 1951.) 45s. net.

THIS monograph by Dr. Goodey will be welcomed not only by specialists but also by the general zoologist. To the latter the nematodes are a somewhat troublesome group: they are superficially so similar, there are so many of them, they are so widespread and the relevant literature scattered. Dr. Goodey previously published a useful volume on the nematodes parasitic on plants which gave access to these forms; but there are still a large number commonly found living free in the soil and in fresh water. It is to these that the present book is devoted. Many of the plant parasites are also to be found in the soil and so are included, but only as soil inhabitants, since details concerning their relationship with the host plant are to be found in the other volume.

The systematic arrangement to a considerable extent follows that of Chitwood and Chitwood, starting with the two main sub-classes Phasmodia and Aphasmodia. This division rests, in the main, on the presence or absence or reduction of the curious, paired, possibly sensory organs, termed phasmids, situated in the lateral areas of the caudal region.

The introduction includes a useful section on the technique of handling nematodes and an account of their structure sufficient to follow the systematic definitions that follow. A uniform treatment is adopted throughout and the descending classificatory groups are clearly defined down to genera. For each genus, in addition to the definition, there is a more detailed description of one species, accompanied by diagrams sufficient for accurate diagnosis. The species generally chosen is the genotype; but, where this is unsuitable, for example, if it is marine, another typical, more accessible species is described.

The illustrations are comprised in 190 figures in the text, but as each figure contains three, four or five diagrams a very large amount of information is conveyed. Most of these line block illustrations are excellent, but a few suggest they have been reproduced from worn or inadequately inked blocks. In the review copy Figs. 53 and 98 are examples. The treatment does not extend to descriptions of species, but under each genus is a list of the recognized species accompanied by a brief reference to the original description. As a number of species in a genus may be large—*Dorylaimus* contains 195 species and ten additional varieties—treatment of the individual species would require a number of volumes the size of the present one and would prove too unwieldy and expensive to have a wide appeal. At the conclusion of the account of each genus is a paragraph on its bionomics, and in looking through these the reader is at once struck by the large gaps in many genera. In some genera, as in *Aphelenchoides*, where a good deal is known, a letter after the specific name indicates whether it is an obligate plant parasite, saprophagous, connected with insects or predatory. Thus a great deal of information is conveyed in a concise manner.

In fact, to the reviewer, conciseness is the most outstanding feature of this book; indeed, it is remarkable how much information is contained within its 390 pages. The last part of the book, apart from an adequate index, is a list of references. Here again this is a selective bibliography, and the further references that can be obtained easily from Stiles and Hassall's catalogue or the *Zoological Record* are not included unless for a special purpose.

The author is to be congratulated on producing a volume that, like its predecessor, will be an essential to all interested, however remotely, in the field it covers.

C. H. O'DONOGHUE

RECENT DEVELOPMENTS IN METAL PHYSICS

Progress in Metal Physics, 2

Edited by Dr. Bruce Chalmers. Pp. viii+213+23 plates. (London: Butterworths Scientific Publications, Ltd., 1950.) 45s.

THE appearance of the second volume of this series is most welcome, and all interested in the science of metals will find much of value. In the reviewer's opinion the editor has been wise in refusing to make the book a report on the progress in any one period, and in again presenting a series of self-contained articles most of which can be read with profit by an honours graduate in metallurgy, physics or chemistry with no specialized knowledge of the subjects concerned. The standard of writing varies, and some articles would have profited if the authors had