GENETICS AND METABOLISM. By Robert P. Wagner and H. K. Mitchell. John Wiley, New York, and Chapman and Hall, London. 1955. Pp. vii+444. 60s.

Many research workers will find this book indispensable. It is however in some respects uneven. There might be more attention to non-American work. There might also be more care in stating what has been discovered rather than in referring the reader (in the manner so common among our periodical abstractors and summarisers) to a bibliographic reference. And there might be a little more consideration of plants, especially in regard to development and to the cell. Such amendments would make the book appeal to a wider circle of students. C. D. DARLINGTON.

THE DISTRIBUTION AND ABUNDANCE OF ANIMALS. By H. G. Andrewartha and L. C. Birch. University of Chicago Press. Pp. xv + 782. £5, 12s. 6d.

This is the best book on the subject that has so far been produced, and an outstanding contribution to ecology. It is up-to-date, original and extremely well documented : the bibliography, of over 1100 references, is a compilation of great value. It is particularly unfortunate, therefore, that so important a work should have been published in America and, therefore, at a price which virtually places it beyond the reach of private purchasers in other countries. It will be widely used for many years to come, but most biologists will be driven to consult it in libraries.

There is really no justification for this excessive price. The book is certainly very long, I think unnecessarily so, and it contains numerous line-drawings, graphs and tables, but only six photographs. These occupy less than half a page each, and they all show views in the interior of Australia. The lack of balance which this suggests is fortunately not apparent in the text. Both the authors work in Australia but, while good use is made of the wonderful opportunities for ecological study which that region provides, their world-wide choice of examples is commendable. It is, indeed, not clear why these six photographs have been chosen since, though instructive in themselves, hundreds of other environments are mentioned which merit illustration as much or more. It would have been better to omit these pictures if they are to any degree responsible for the excessive cost of the work.

The chief purpose of this book is to explain, as far as possible, the distribution and numbers of animals in nature. With that end in view, it analyses the environment, and the reaction of animals to it, in great detail. In the course of that task, it disposes of several widely held concepts which have long confused ecological discussions. For instance, it challenges the importance of " competition " in regulating numbers, along the lines suggested by Nicholson and many others. Andrewartha and Birch rightly point out that animals in nature are remarkably rare relative to their requirements, and that it is not usual for them to use up their food, possible places for shelter or other requirements and, therefore, that competition for them does not normally control population-size (p. 23). They further stress, and rightly so it seems to me, that the widely accepted sub-division of the environment into " density dependent " and " density independent " components is misleading, because the latter type does not exist : there appears to be no evidence that the density of the population is independent of any aspect of the enviroment (p. 17).

Too much importance seems to be attached to the chance loss of genes