

PREFACE

This book gives the substance of a series of lectures delivered in Yale University, where I had the privilege of holding the office of Silliman Lecturer in 1907.

The delay in publication was brought about by a variety of causes.

Inasmuch as the purpose of the lectures is to discuss some of the wider problems of biology in the light of knowledge acquired by Mendelian methods of analysis, it was essential that a fairly full account of the conclusions established by them should first be undertaken and I therefore postponed the present work till a book on Mendel's Principles had been completed.

On attempting a more general discussion of the bearing of the phenomena on the theory of Evolution, I found myself continually hindered by the consciousness that such treatment is premature, and by doubt whether it were not better that the debate should for the present stand indefinitely adjourned. That species have come into existence by an evolutionary process no one seriously doubts; but few who are familiar with the facts that genetic research has revealed are now inclined to speculate as to the manner by which the process has been accomplished. Our knowledge of the nature and properties of living things is far too meagre to justify any such attempts. Suggestions of course can be made: though, however, these ideas may have a stimulating value in the lecture room, they look weak and thin when set out in print. The work which may one day give them a body has yet to be done.

The development of negations is always an ungrateful task apt to be postponed for the positive business of experiment. Such work is happily now going forward in most of the centers of scientific life. Of many of the subjects here treated we already know more than we did in 1907. The delay in production has made it possible to incorporate these new contributions. The book makes no pretence at being a treatise and the

number of illustrative cases has been kept within a moderate compass. *A good many of the examples have been chosen from American natural history, as being appropriate to a book intended primarily for American readers.* The facts are largely given on the authority of others, and I wish to express my gratitude for the abundant assistance received from American colleagues, especially from the staffs of the American Museum in New York, and of the Boston Museum of Natural History. In connexion with the particular subjects personal acknowledgments are made.

Dr. F. M. Chapman was so good as to supervise the preparation of the coloured Plate of *Colaptes*, and to authorize the loan of the Plate representing the various forms of *Helminthophila*, which is taken from his *North American Warblers*.

I am under obligation to Messrs. Macmillan & Co., for permission to reproduce several figures from *Materials for the Study of Variation*, illustrating subjects which I wished to treat in new associations, and to M. Leduc for leave to use Fig. 9.

In conclusion I thank my friends in Yale for the high honour they did me by their invitation to contribute to the series of Silliman Lectures, and for much kindness received during a delightful sojourn in that genial home of learning.