

REVIEWS

NATURAL SELECTION AND HEREDITY. By P. M. SHEPPARD.
Hutchinson. 18s.

A hundred years ago the famous Darwin-Wallace papers were delivered to the Linnean Society, and a year later the *Origin of Species* was published. Although the ideas of evolution and of natural selection were not new, these works presented evidence that evolution had occurred, and explained it in terms of natural selection so convincing that, after much controversy, they were generally accepted. The advance of the subject was impeded by ignorance of the laws of heredity; they remained unknown until the discovery of Mendel's work which, although published in 1865, was entirely overlooked until 1900. Genetics is thus no older than the present century, but with its aid, progress in analysing natural selection and evolution has been rapid during the last thirty years.

The author of this excellent book starts with an historical chapter that reviews the subject generally, and he then gives two chapters to explain mendelian inheritance to those with no previous knowledge of the subject. He begins with segregation and leads on through multiple allelomorphs to linkage, crossing-over, mutation and polyploidy. Two chapters on polymorphism follow in which the specific cases of industrial melanism in *Biston betularia*, and stable polymorphism in *Cepea nemoralis* are fully discussed. Dr. Sheppard then deals with polygenic inheritance, mutation, the evolution of dominance, with pro-cryptic and aposematic colouration, and other aspects of the subject. The author has explained the principles of the subject very clearly without giving the impression that most problems concerned with natural selection are already solved—a vast field of research still awaits cultivation, but the results obtained are sufficient to convince all biologists that “not only has natural selection occurred, but that it is competent to account for the facts of adaptation and evolution, as we know them. It is, moreover, the only hypothesis which will explain them adequately”.

Everyone who wishes to understand the principles underlying the mechanism of evolution—principles that have been established as the result of an enormous amount of recent biological research—should read this book.

L. H. M.