LIFE AND DEATH, HEREDITY AND EVOLUTION IN UNICELLULAR ORGANISMS

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H. S. JENNINGS

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Trieste

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LECTURES DELIVERED
UNDER THE
RICHARD B. WESTBROOK FREE LECTURESHIP FOUNDATION
AT THE
WAGNER FREE INSTITUTE OF SCIENCE
PHILADELPHIA

LIFE AND DEATH

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PREFACE

THE present work is not a book on Protozoology, but on Genetics, employing Protozoa as material, and comparing the conditions there found with those in higher organisms.

To select from a great mass of varied material, not yet reduced by science to unity, those features that appear most significant for certain general questions is a task of difficulty, not unattended with the danger of justifying the critic. I cannot hope to entirely escape that danger. Much that is of extreme interest must be omitted, if any clearness of outline is to be preserved. A certain one-sidedness appears inevitable, unless an encyclopedic work is attempted. The relatively great prominence given to the infusoria in these lectures is an example; the heterogeneous and still more imperfectly known genetic phenomena in the other Protozoa lend themselves less readily to a unified presentation. I can only hope that the limitations of the work aid in defining certain large problems.

Technical terms have been avoided. This is not alone because the lectures were for an audience not composed of specialists. Technical terms, in spite of their convenience, bring many disadvantages, even in strict scientific work. They seem to give to phenomena a distinctness and uniqueness which does not exist in nature. They create separate entities for things that are mere variations on a general theme. Any phenomenon has many-sided relations to the others; to bring these out we have not hesitated even

to employ in different passages diverse designations for the same thing. What we observe in the Protozoa are combinations of chemicals; of matter and energy, with their characteristic activities. Technical terms tend to set these apart and render them unintelligible; what we need is to render them intelligible by showing their community with the world of every-day experience.

The book deals with heredity, variation, evolution, as present physiology, not as past history. It discusses what now occurs, not what may have occurred in the past. Hence discussion of the origin of the conditions now existing will hardly be found.

Acknowledgments

To the Editor and Publishers of *Genetics* I am indebted for the use of the blocks for Figures 12 and 23, taken from *Genetics*, volume 1. To my wife, Louise Burridge Jennings, I am indebted for the drawing of the remainder of the figures in the book.

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