THE LESSON OF EVOLUTION

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The Lesson of Evolution by Frederick Wollaston Hutton

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FREDERICK WOLLASTON HUTTON

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FREDERICK WOLLASTON HUTTON, F.R.S.

CURATOR OF THE MUSEON, CHRIST CHURCH, NEW ZRALAND



LONDON DUCKWORTH & CO. 3 HENRIETTA STREET, COVENT GARDEN, W.C. 1902 "We conceive that this state of things has had a beginning; we conceive that it will have an end. But in the meantime we find it fitted, by a number of remarkable arrangements, to be the habitation of living creatures."

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WERWELL'S "BRIDGEWATER TREATINS," p. 204.

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" Yet I doubt not three the ages one increasing purpose runs, And the thoughts of men are widen d with the process of the suns." LOCKSLET HALL.

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PREFACE

THE first of these essays was delivered at Hobart on the 8th January, 1902, as the inaugural address to the Australasian Association for the Advancement of Science. As it was not possible to give in that address any adequate account of the facts of biological evolution, I have added the second essay, which deals entirely with that subject. Of this essay, the first part, on "Early Life on the Earth," formed the President's address to the Geological Section of the same Association at its meeting in Sydney in January, 1898; but it has been corrected and brought up to date. The second part, on "Later Life on the Earth," appears for the first time.

This little book, taken together with a former volume on "Darwinism and Lamarckism," gives an account of what is known about the theory of evolution, sufficiently complete, I hope, to inculcate the lesson we learn from a study of nature, a lesson which all should know and think over for themselves.

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F. W. H.

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CHRISTCHURCH, NEW ZEALAND, January 1902.

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ESSAY I

THE LESSON OF EVOLUTION

SCIENTIFIC men may be divided into two groups; the investigators of theory, and the reducers of theory to practice. The workers in applied science have for their aim the material advancement of the human race. Not only do they bring health to the sick and an increase of comfort to us all; but they help to make every-day work more interesting to the intelligent, and thus they lift the toiler on to a higher level. Also, by increasing the wealth of the world, they give to some men sufficient leisure to pursue pure science or philosophy undisturbed.

On the other hand, the student of pure science whether he be an astronomer engaged in studying the movements and composition of the starry host, or whether he be a humble entomologist—he also has a high object to attain beyond the facts he so industriously gathers together. Consciously or unconsciously he is helping to solve the riddle of the Universe by collecting evidence which may, perhaps, enable us to ascertain the laws which the Creator has imposed upon his work. He is seeking the truth, partly no doubt out of curiosity, but partly because he feels that a knowledge of the truth is of the greatest importance to the human race. We can never know the whole truth about the Universe, but we may make

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