

THE WORLD OF LIFE.*

It is a wonderful achievement for a man eighty-eight years old, to write a book of 400 pages on Life and to maintain from the first page to the last a high standard of noble thought and of clear language. Besides, there is a singular distinction about books written by men who have grown old in the service of Science. Such books recall to the reader what Socrates told Crito, that he always loved talking to old men; they recall, also, that very beautiful passage in *King Richard the Second*.

"Oh, but they say the tongues of dying men
Enforce attention like deep harmony :
Where words are scarce, they are seldom spent in vain ;
For they breathe truth that breathe their words in pain."

Not that Dr. Wallace is in the plight of John of Gaunt: but his latest book has that especial dignity which is in "the setting sun, and music at the close." He looks back over a long and honourable career: it is more than half a century since that eventful day, July 1st, 1858, when the papers by him and Darwin were read to the Linnean Society.

The book is in two parts: one of them is concerned with the main factors of evolution, which are heredity, variation, and rapid powers of increase; the other is concerned with the conditions under which these factors have done their work. The earlier part gives a good account of Galton's "numerical law of inheritance" and of his "law of recession towards mediocrity"; and it goes on to vivid and admirable accounts of certain instances of teeming and overcrowded life, such as the flocks of passenger pigeons a century ago in North America, and the blind miracle of the migration of the lemmings. Then come instances of adaptation, such as the use of the insect world to be the food of the bird world; and some wonderful statistics are given of the number of insects consumed by every nest, and of the parent birds' diligence and their "high-pressure search for food":—

"A pair of march tits were observed to feed their young entirely with small green caterpillars, and in one case made 475 journeys with food in seventeen hours. A gold-crest, with eight young, brought them food sixteen times in an hour for sixteen hours a day. A wren fed its young 278 times in a day. . . . And this vast destruction of insect life goes on unchecked for several months together, and the supply never seems to fail."

There are excellent discourses on "recognition-marks," which are a subject that Dr. Wallace has made his own, and on the disappointing probability that butterflies are attracted to each other, not by colour, but by smell; and these and the like facts bring us to the second part of the book and to the evidences of geology. These evidences, it appears, go not so far as

half-way back toward the beginnings of life on this earth: the earliest fossils are hardly to be called early in a strict sense of that word. The whole account of the geological evidences is fully and finely argued and written; there is especial interest in the description of the mistake which Nature seems to have made, and to have corrected, over the skulls of the Proboscidea, and in the evidence that man appeared on the scene long before the mastodon had ceased to cumber the earth.

Then we come to the final chapters of the book, which Dr. Wallace mostly gives to the exposition of arguments of religious faith. Here he is on sure ground, attacking with proper and easy contempt Haeckel's cheap talk about soul-atoms and cell-souls. He would be on ground even more sure if he had a more metaphysical way of looking at things: but any stick will do to beat Haeckel with.

The conclusion of the whole matter, he seems to say, is the very obvious conclusion that we have not, and never shall have, the very faintest idea what life is. To think of it as a power somehow locked up in a cell, and somehow expanding the walls of that diminutive prison, is to think in terms fit only for an asylum. He puts on his title-page the words of Candolle: "Every plant, whether beech, lily, or seaweed, has its origin in a cell, which does not contain the ulterior product, but which is endowed with or accompanied by a force which provokes and directs the formation of all later developments. Here is the fact, or rather the mystery, as to the production of the several species with their special organs." Taking these words as a sort of text, and feeling sure that the wonderful beauty of created forms is explicable in religion, and wholly inexplicable in science, he confesses the ancient faith in a Divine Mind ruling the universe and administering it, in the interests of man, and for the final advancement of man to spiritual perfection.

It was inevitable that Dr. Wallace should fall, near the end of the book, into a trap of his own setting. Anti-vaccination, anti-vivisection, and spiritualism are part of his creed; and, confessing it, he feels bound to confess them. At the very end of the book they suddenly turn up, all three of them at once, like the three King Charles's heads in the picture by Van Dyck. Happily they come too late, and vanish too soon, to spoil the general harmony of the book.

Some of the numerous illustrations are very bad. This poverty is no great fault in a book written by a man of science. It is not a "gift-book"; and there is enough, and more than enough, of books enriched with better illustrations than they deserve. The bison, the lemming, the grey plover, he is talking of them, and he wants a little picture just to show what they are like, and an old wood-cut satisfies him. That is as it ought to be: books of science ought not to be over-dressed.

It is a grand book for a veteran to have written: it has that character which we call in books lovable. He is pleasantly haunted by the greatest of all questions: Why is the world beautiful? He makes a passing suggestion that the beauty of butterflies' wings and peacocks' tails may be an outlet for vital energy, a surplus of vital energy for breeding, a sign of sexual maturity and vigour; but he would hardly like it if we took this conventional explanation as his final answer to the question, Why is the world beautiful? He does not really care twopence for any naturalistic answer; and, after all, there is no reason why he should.

**The World of Life a Manifestation of Creative Power, Directive Mind, and Ultimate Purpose.* By Alfred Russel Wallace, O.M., D.C.L., F.R.S. Profusely illustrated. London: Chapman and Hall. [12s. 6d. net.]