CHARLES ROBERT DARWIN.

A Sketch of His Life.

Mr. Darwin, whose death was announced in the EVENING POST last night, had been suffering for some some time from weakness of the heart, but continued to work to the last. He was taken ill on Tuesday night with pains in the chest, faintness and nausea. The nausea lasted during Wednesday, and culminated in death in the afternoon of that day. He remained fully conscious until within a quarter of an hour of his death.

During two-thirds of the last century there lived and wrote in England a poet and a man of science, whose ambitious and imaginative theories, whose love for scientific research and generalization have born fruit in the present century, not by the realization of his theories in fact and their acceptance by men of science, but by those mysterious and effective laws of heredity, to which he directed much of his research, producing an illustrious descendant who, from the germ of truth hidden in his volumes of fantastical theories, has developed a scientific theory which has influenced the whole scientific thought of the present day. Old Dr. Erasmus Darwin, who died in 1802 at the age of seventy-one, wrote a poem called the 'Botanic Garden,' which gained him much notoriety. Its sole merit lies in the genuine scientific enthusiasm and knowledge of nature which pervade it, and not in any beauty or grace in its poetical form. It is stilted and unnatural, and was a fit subject for Canning's parody, 'The Loves of the Triangles.' The whole bent of his mind was scientific, and the most notable work which he produced was 'Zoonomia' (1794), which contains a system of pathology and a treatise on generation, which, in the words of his famous grandson, who is the subject of this sketch, "anticipated the views and erroneous grounds of opinions of Lamarch," one of the prophets of the evolution theory. The essence of Erasmus Darwin's views is "that one and the same kind of living filament is and has been the cause of all organic life," which is an opinion certainly akin to the modern theory of development from the primordial protoplasm. But the works of Erasmus Darwin are vague generalization, and of little value in this age of exact research, and in future years it will be said of him, as has been similarly said of James and John Stuart Mill—the greatest work of Erasmus Darwin was Charles Robert Darwin.

The father of Charles Robert Darwin was Dr. Robert Waring Darwin, F. R. S., a son of Erasmus Darwin. He was a physician of Shrewsbury, England, and there Charles was born February 12, 1809. His mother was a daughter of Josiah Wedgwood, the founder of the modern English pottery manufacture. Charles Darwin was given his early education at Shrewsbury Grammar School. Later he went to Edinburgh University for two years, and in 1827 entered Christ's College, Cambridge, where he was graduated in 1832, receiving from the same institution the degree of M. A. in 1837. The aptitude for science which he had inherited from his illustrious grandfather plainly manifested itself during his college course. When a naturalist was to be chosen to accompany H. M. S. *Beagle* on its second voyage of discovery and exploration in Southern seas the Rev. Mr. Henslow, Professor of Botany at Cambridge, eagerly urged his apt pupil, Charles Darwin, for the position. He volunteered his services without salary, and they were accepted. The *Beagle* sailed from England December 27, 1831, and returned October 27, 1836. A work of three volumes was published, giving the results of this expedition. Of the first two, Captain Fitz Roy was the author. Charles Darwin contributed the third, on the natural history and geology of the countries visited (1839). This book was afterward republished in a modified form, under the title of 'Journal of Researches into the Natural History and Geology of the Countries Visited during the Voyage of the *Beagle* round the World.' This journal exhibited clearly Mr. Darwin's singularly active perceptive powers. No phenomenon is described until it has been carefully examined. Then safe deductions are made from the facts thus ascertained. The theory of Mr. Darwin as to the origin of the coral reefs of the Pacific is a good illustration of his method of investigation.

At the age of thirty Mr. Darwin married his cousin, Miss Emma Wedgwood, and settled at Down, near Farnborough, in Kent. There he has ever since resided, leading a retired life of studious industry, the points of which have been given to the world in a number of memorable scientific works. In 1845 was published 'Geological Observations on Volcanic Islands'; in 1846, 'Geological Observations on South America;' in 1851–54 his 'Monographs on the Family Cerrhipedia' and 'On the Fossil Species.'

In the *Journal of the Linnæan Society* in 1859 was published an essay by Charles Darwin on 'The Variation of Organic Beings in a State of Nature,' which was the forerunner of his notable work, the 'Origin of Species by Means of Natural Selection,' which was published in the same year. In this work his famous theory is propounded that all the various forms of vegetable or animal life, past or present, have been produced by a series of gradual changes in natural descent from parents to offspring. In this work, and indeed in all his works on biological evolution, Mr. Darwin confines himself to the discussion of the causes which brought about the present condition of living matter, assuming such matter to have once come into existence. James Sully says of this theory: "The philosophical significance of this hypothesis of natural selection, especially associated with Mr. Darwin, is due to the fact that it introduces a strictly mechanical conception in order to account for those intricate arrangements known as organic adaptations, which had before been conceived only in a teleological manner. By viewing adaptations as conditions of self-preservation Mr. Darwin is able to explain how it is that the seemingly purposeful abounds in organic nature. . . . Mr. Darwin, in his doctrine of the organic world as a survival, refers this appearance of systematic plan to perfectly natural causes, and in so doing he gives new meaning to the ancient theory that the harmony of the world arises out of discord."

The widespread influence of the 'Origin of Species' is illustrated by the fact that at least four editions of it have appeared in English, nine foreign editions in French, German, Dutch, Italian, Russian, and it has given rise to more separate books and pamphlets than any book of the age. A catalogue of the literature of Darwinism has been published, which gives thirty-six octavo pages of the titles of works and the names of 312 authors.

In illustration of his theory Mr. Darwin published, in 1862, a work on the 'Fertilization of Orchids,' and in 1868 the 'Variation of Animals and Plants under Domestication.'

A work which marked another distinct step forward in the development of this theory was published in 1871. It is entitled 'The Descent of Man, and Selection in Relation to Sex.' It is complementary to the 'Origin of Species,' and aims to prove the descent of man from a higher order of animal life. In the introduction to this work Mr. Darwin said: "The sole object of this work is to consider, firstly, whether man, like every other species, is descended from some preëxisting form; secondly, the manner of his development; and thirdly, the value of the differences between the so-called races of man. . . . During many years it has seemed to me highly probable that sexual selection has played an important part in differentiating the races of man; but in my 'Origin of Species' I contented myself by merely alluding to this belief. When I came to apply this view to men, I found it indispensable to treat the whole subject in full detail." The conclusion arrived at in this work is that "Man is descended from a hairy quadruped, furnished with a tail and pointed ears, probably arboreal in his habits." The last paragraph of the book is a notable one. Mr. Darwin said: "Man may be excused for feeling some pride at having risen, though not through his own exertions, to the very summit of the organic scale; and the fact of his having thusrisen, instead of having been aboriginally placed there, may give him hope for a still higher destiny in the distant future. . . . We must, however, acknowledge, as it seems to me, that man with all his noble qualities, with sympathy which feels for the most debased, with benevolence which extends not only to other men but to the humblest living creature, with his godlike intellect, which has penetrated into the movements and constitution of the solar system—with all these exalted powers, man still bears in his bodily frame the indelible stamp of his lowly origin." In this work the exact connection of the mental and bodily organism is not inquired into in an exact way. He assumes that just as the bodily organism is capable of varying in an indefinite number of ways, so may the mental faculties indefinitely vary in correspondence with certain physical changes. Thus all the higher mental powers are accounted for.

His treatise on the 'Expression of the Emotions in Man and Animals' appeared in 1872. His attention was called to this subject by a work of Sir Charles Bell's, in which he maintains that man is endowed with certain muscles solely for the sake of expressing his emotions. As this view was opposed to the belief that man is descended from some other and lower form, it was necessary that the founder of Darwinism should refute it. The work also exhibits how far the emotions are expressed in the same manner by the different races of men.

The only ethical system which Mr. Darwin has propounded as the outgrowth of his theory makes "the end of evolution the conscious end of man's action." He defines the general good as "the rearing of the greatest number of individuals, in *full health and vigor, and with all their faculties* perfect under the conditions to which they are subject."

Among his later works are 'Movements and Habits of Climbing Plants,' 1875; 'Cross and Self-Fertilization in the Vegetable Kingdom,' 1876; and 'Different Forms of Flowers in Plants of the Same Species,' 1877.

Many honors have been bestowed upon Mr. Darwin for his scientific achievements. In 1834 he was elected a Fellow of the Royal Society. From that society he has received the Royal and Copley medals, and from the Geological Society the Wollaston Palladian medal. The Prussian Government created him a knight of the order *Pour le Mérite*. In 1871 he was elected a corresponding member of the Academy of Vienna; in 1875 he received the honorary degree of M. D. from the University of Leyden; and in 1877 the degree of LL.D. from the University of Cambridge. He was elected a corresponding member of the French Academy of Sciences in 1878.

Although the idea of evolution is not a birth of this century, but is as old as the myth of the ancient Parsees, in which the gods Ormuz and Ahrimar are said to evolve themselves out of primordial matter, yet Charles Darwin, more than any other, has given it that foundation in the facts of Nature which has made it possible for Herbert Spencer to proclaim a new philosophical system, the hymn of which is, in the verse of George Eliot:

"Oh, may I join the choir invisible
Of those immortal dead who live again
In lives made better by their presence. So
To live is heaven."