DEATH OF MR. DARWIN.

The greatest naturalist of our time, and, perhaps, of all time, has passed away. Charles Robert Darwin died on Wednesday afternoon, at his residence, Down House, Down, near Beckenham, Kent. He had suffered but a short illness; for a few days he had been somewhat seriously indisposed, but was believed to be recovering. Unfortunately the hope was doomed to disappointment. On Tuesday night he underwent a relapse, being afflicted with pain in the chest and nausea, and this continued and grew worse till four o'clock on Wednesday afternoon, when he expired. Happily, he continued conscious till within a quarter of an hour of his death. During his illness he had been attended by Dr. Norman Moore, Dr. Andrew Clarke, Dr. Moxon, and Dr. Alfrey, of St. Mary Cray. He had continued his experiments almost to the last day, in harmony with an active life, which in its latest year saw that remarkable work on the production of vegetable mould by worms. There would seem to be something in science which prolongs life. Newton died at 85; Herschell the elder at 84, and the younger at 79; Lyell at 78; Murchison, 79; all proofs, at any rate, that hard thinking need not shorten existence. Mr. Darwin completed his 73rd year on the 12th of February last, having on that date in the year 1809 first seen the light in the town of Shrewsbury. He was in his own person a striking illustration of his doctrine of descent and heredity, having inherited genius from both sides of the house. On his mother's side he was grandson of the famous Josiah Wedgwood, the founder of the modern English manufacture of pottery; his father, Dr. Robert Waring Darwin, a physician of Shrewsbury, had done sufficient original scientific work to entitle him to the coveted "F.R.S.;" while his grandfather was the "poetical, philanthropic, scientific physician" who wrote "The Botanic Gardens," "The Temple of Nature," "Zoonomia," and "Origin of Society," and who actually held and taught two generations ago the essentials of the doctrine which has made his grandson immortal. Thus there was in the author of "The Origin of Species" a survival of the spirit of philosophic inquiry and daring speculation of his grandsire, and of the inventive faculty, and, perhaps, also the æsthetic and artistic love of beauty that made Nature lovely to him—of Wedgwood.

Educated first at Shrewsbury Grammar School, then for two years in the University of Edinburgh, and, finally, at Christ College, Cambridge, Charles Darwin exhibited in very early years the qualities that made him famous. He was not a bookworm, but a student—not a victim of "cram," but a quiet keen observer, pursuing knowledge for her own sake, and by his own efforts. Like all other great men, he made himself. His advantages, nevertheless, were considerable. He had the good fortune, for instance, to learn botany from the Rev. Professor Henslow; and though all through life he never ceased to proclaim and regret that "he was not a botanist," he yet so distinguished himself that the eminent professor marked him out for useful work; and when, in 1831, the Admiralty were sending out her Majesty's ship Beagle on her surveying expedition in the Southern Seas, Charles Darwin was selected to accompany the ship in the capacity of naturalist. He showed on that occasion the ardour of his zeal for knowledge, serving without salary and paying part of his own expenses, on the condition that he should have the disposal of the zoological, botanical, and geological collections made during the cruise. The voyage lasted nearly five years, from Dec. 27, 1831, to Oct. 22, 1836, and extended round the world. It must have been rather a rough time with Mr. Darwin, for he was, it is said, a bad sailor, and never quite got the better of sea-sickness. He suffered, we believe, all through life from a certain weakness of the stomach, which showed that constitutionally he was scarcely fitted for the circumnavigation of the globe. But the voyage did more for his scientific education than school or college; it taught him how the forces of nature are gradually at work re-moulding and chiselling the face of the earth—as Lyell was at that very moment demonstrating in his memorable work. He saw how the earthquake forces on the one hand were, on the coast of South America, here sinking and there raising coast lines; while in mid-ocean tiny insects, insignificant creatures in themselves, were building coral islands and archipelagos. Of this voyage he wrote first a "Journal of Researches into the Geology and Natural History" of the countries he had visited, accompanied by a general account of the voyage by Captain Fitzroy, who commanded the ship; then "Zoology of the Voyage of the Beagle," "Structure and Distribution of Coral Reefs," "Volcanic Islands," and "Geological Observations on South America." In 1839 he married, and in 1842 he published his "Theory of Coral Islands," and retired to Down, where he published his

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a "Journal of Researches into the Geology and Natural History" of the countries he had visited, accompanied by a general account of the voyage by Capt. Fitzroy, who commanded the ship; then followed "The Voyage of the Beagle;" "Structure and Distribution of Coral Reefs," "Geological Observations in Volcanic Islands," and a similar work on the "Geology of South America." To these succeeded a monograph on the "Cirripedia" (1851) and on "Fossil Species" (1853). Readers of this series of works know there is a charm about them apart from the important contribution to knowledge. As shows the quality of Mr. Darwin's mind, they are writings that will possess a permanent interest though they were presently to be eclipsed by a book on which his fame will rest.

"Great things," says Tyndall, "come slowly to birth. Copernicus pondered his great work thirty-three years; Newton for nearly twenty years kept the idea of gravitation before his mind; for twenty years also he dwelt upon his theory of fluxions; Darwin for two-and-twenty years pondered on the problem of the origin of species, and doubtless he would have continued to do so had he not found Wallace upon the track." Few things in the history of science are more remarkable than the fact that on one and the same night in 1858 Mr. Alfred Wallace and Mr. Charles Darwin presented to the Linnæan Society of London papers asserting the doctrine of evolution; and nothing in annals is more noble than the entire absence of rivalry between these two simultaneous discoverers of the greatest doctrine in natural history. "The behaviour of Mr. Wallace in relation to this subject has been dignified in the highest degree," wrote Dr. Tyndall; while Mr. Darwin freely admitted the merit of Mr. Wallace's researches. This generous rivalry died. After accumulating facts for two and twenty years Darwin found that he must submit to the world his theory, or he would be anticipated, and in 1859 appeared "The Origin of Species"—a work that, as the Germans say, was *Epochemachend*—epoch-making—that re-created natural history, that gave a new impetus and a fresh direction to research in everything relating to plant and animal life, and profoundly modified men's thoughts and beliefs. Buckle, in his "History of Civilisation" attributes to Adam Smith's "Wealth of Nations" greater and more beneficent effects than have flowed from any other production of man's pen; but the effects he admits took a long time to make themselves felt, the ideas filtering slowly through the minds of statesmen and economists. It would certainly be hard to name a book in the same short space has produced all effects to "The Origin of Species." At first ridiculed and treated with easy ridicule, then seriously attempted to be confuted, it has in twenty-and-twenty years made a mark on the intellectual world, if not, indeed, a conquest of it, which is without a parallel. It is well known that Agassiz, the brilliant naturalist, declined to accept Darwinism. One day he was standing before a window at Mr. Winthrop's beautiful residence near Boston, and was continuing there with a number of *savants* a discussion held at luncheon about the new doctrine. Earnestly and almost sadly," says one who was there, "Agassiz turned and said to the gentlemen standing round: 'I confess that I was not prepared to see this theory received as it has been by the best intellects of our time. Its success is greater than I could have thought possible.'" It is indeed a wonderful book. Its modest title page—"The Origin of Species by means of Natural Selection; or, the Preservation of Favoured Races in the Struggle for Life"—gave no idea of the far-reaching generalisations to which the reader was insensibly led. An eminent Swiss naturalist, in rejecting its teachings, declared that it was a "seductive book." Its facts were indisputable, and the theory seemed to hang by the facts. And what was the theory? Broadly this—the unity of all organic nature; that all animals now living—and similarly all plants—are connected, forming the great family; and, not only so, but that they are connected with those of all past ages, and are, in fact, derived from them. If we trace animal and plant life downwards in the scale and backward in point of time we are always coming to simpler forms, which, nevertheless, are all connected with the higher. The most marvellous thing in the world is the human brain; but there are two self-evident things about it; first, that its wondrous faculties are derived from previous brains running back for countless generations; secondly, that, if it be compared with the brains of apes and other mammals, with the cephalic organs of reptiles, and fishes, with the curious distributed through insects—nay, further that strange, structureless little point the *amœba*, which somehow, though it has brain, nor nerve, nor stomach, nor of any separate organ of any kind,

enigmas. Mr. Darwin had to meet the objections that the struggle for existence in the animal world seemed insufficient to account for the facts. The following extract shows how he met the argument in the case of the slowest breeding animal:

There is no exception to the rule that every organic being naturally increases at so high a rate that if not destroyed the earth would soon be covered by the progeny of a single pair. Even slow-breeding man has doubled in twenty-five years, and at this rate in a few thousand years there would literally not be standing room for his progeny. Linnæus has calculated that if an annual plant produced only two seeds—and there is no plant so unproductive as this—and their seedlings next year produced two, and so on, then in twenty years there would be 1,000,000 plants. The elephant is reckoned to be the slowest breeder of all known animals, and I have taken some pains to estimate its probable minimum rate of natural increase. It will be under the mark to assume that it breeds when thirty years old, and goes on breeding till ninety years old, bringing forth three pair of young in this interval; if this be so, at the end of the fifth century there would be alive 15,000,000 elephants descended from the first pair.

But Mr. Darwin, besides being a close observer and a shrewd reasoner, was an experimenter. Everybody remembers the almost amusing example of this given a few years ago. The *dionœa*, or Venus's Fly-trap, had been known for a century for its singular power of catching unwary insects. What did it do with them? It has been said that the difference between plants and animals is that the latter digest their food, the former find it ready-made, so to speak, and assimilate it from the vegetable juices. Doubting whether there were any such well-marked lines between plants and animals, Mr. Darwin suggested a series of experiments with the *dionœa*. The result went to show that the little plant actually and truly digested the fly, though the process took three weeks to accomplish. More than this, bits of cheese, pieces of iron, and other indigestible substances were presented to the *dionœa*, which, strange to say, rejected and threw out what was unsuitable for food. Where, then, did animal life begin and plant life leave off? The best instructed philosopher cannot answer the question, such is the unity of nature. These experiments led Mr. Darwin to produce, only eight years ago, a work on "Insectivorous Plants," which added a new chapter to Natural History. His last communications to the Linnæan Society were of an experimental character. They were two papers, read only a month ago, "On the Action of Carbonate of Ammonia on the Roots of Plants," and of the same substance on the chlorophyll of plants. Since his *magnum opus*, the author has developed his theories in the much-criticised "Descent of Man," "The Fertilisation of Orchids," "The Expression of the Emotions in Man and Animals," and "Movements and Habits of Climbing Plants." In some of these works there was thought to be a tendency to over speculation, and the theory that "man is descended from a hairy quadruped furnished with a tail and pointed ears, probably arboreal in its habits," has provoked a good deal of easy ridicule, in most cases apparently from those who have not read the "Origin of Species" or the "Descent of Man." Some of the views of Darwinians, especially the pedigrees of animals, must appear strange till the world becomes familiar with them, but the great merit of the new doctrine is that it has re-created Zoology, Botany, Embryology, and Geology, and their kindred sciences. Everything connected with the past and with the future of man and of society is seen to be more or less bound up in the question of evolution, development, and descent.

Mr. Darwin married, in 1831, his cousin, Miss Emma Wedgwood, and he leaves behind him, besides his widow, five sons and two daughters. Of his sons, two are already known to fame, Mr. Francis Darwin following the pursuits of his father, and Mr. George Darwin as an investigator into recondite branches of physics. Out of respect to the memory of Mr. Charles Darwin, the Linnean Society, whose fortnightly meeting was held yesterday evening in their rooms at Burlington House, Sir John Lubbock, Bart., M.P., in the chair, adjourned immediately after the formal business was concluded. Mr. John Collier's portrait, the last painted of Mr. Darwin, is about to be hung in the rooms of the society.

PARLIAMENTARY BUSINESS.—In the House of Lords this evening the Earl of Galloway will put a question to the Lord Chancellor respecting the intervention of the American Government in the Lamson case.—In the House of Commons Mr. R. Power, on the motion to go into Committee of Supply, will propose the following resolution: "That the restricted nature of the borough franchise in Ireland, as compared with that existing in England and Scotland, is a subject deserving the immediate attention of Parliament, with the view of establishing a fair and just equality of the franchise in the three countries."

Her Majesty received the address and returned a gracious answer.

The Lord Mayor and the mover and seconder of the address (Mr. J. H. Hale and Mr. F. T. Isitt) were then severally presented to her Majesty.

The deputation from the body of English Presbyterian ministers, headed by the Rev. Dr. Martineau, was next introduced by the Lord Chamberlain, and the Rev. Dr. Martineau presented their address.

Her Majesty received the address and returned a gracious answer.

The Rev. Dr. Martineau, the Rev. Dr. Sadler, and the Rev. J. P. Ham were then severally presented to her Majesty.

The deputation from the Corporation of the City of Edinburgh, headed by the Lord Provost, was introduced by the Lord Chamberlain, and the Lord Provost presented the address of the Corporation.

Her Majesty received the address and returned a gracious answer.

The Lord Provost and the mover and seconder of the address (Bailie William Anderson and Bailie James Colston) were then severally presented to her Majesty.

The deputation from the Corporation of the City of Dublin, headed by the Lord Mayor, was introduced by the Lord Chamberlain, and the Lord Mayor presented the address of the Corporation.

Her Majesty received the address and returned a gracious answer.

The Lord Mayor and the mover and seconder of the address were then severally presented to her Majesty.

Luncheon was served in the Waterloo Chamber previous to the presentation of the addresses.

Levée dress was worn by the gentlemen in attendance.

A guard of honour of the Scots Guards, with the band of the regiment, was mounted in the Quadrangle of the Castle.

THE ROYAL MARRIAGE.

Princess Helen, the *fiancée* of the Duke of Albany, and her parents, the Prince and Princess of Waldeck, are expected to arrive at the Windsor station of the South-Western Railway about half-past one o'clock on Tuesday next, and will drive through Thames-street and the High-street to the Palace.

The brilliant and sapphire bracelet, the Windsor wedding-gift to Princess Helen, will be exhibited at the Town Hall on Monday.

The King and Queen of Holland are expected to land at Queenborough from their yacht on Wednesday next. Extensive preparations are in progress at Queenborough to receive the distinguished personages. It is expected that the Penelope will be ordered to the Nore to fire a salute on the landing of the Princess.

A Reuter's telegram, dated Berlin, April 20, says: "In honour of the marriage of the Duke of Albany a grand ball will be given on the 27th inst., at the British Embassy here, at which the Crown Prince and Crown Princess, Prince William, and other members of the Royal family, will be present. The Court Chamberlain, Count Seckendorf, will convey the congratulations of the Crown Prince and Crown Princess to Windsor."

TO-DAY'S ARRANGEMENTS.

Institute of Mechanical Engineers.
Royal Alfred Aged Merchant Seamen's Institution—Annual Meeting at the Mansion House.
Royal United Service Institution, 3.0.
Society of Arts—Professor V. Ball on the Mineral Resources of India.
Dinner in aid of Asylum for Idiots, at the Albion.
Anti-Vivisection Society, Willis's Rooms, 3.0.
Sandown Park Races.

The Duke and Duchess of Connaught, attended by Major Egerton and suite, arrived in London last evening from Paris. The Duchess's health is very much improved, and she is now able to walk without assistance.

Lord Granville arrived in town yesterday. Lady Granville has not yet returned to London.

The King and Queen of the Netherlands have accepted the invitation of the Corporation to luncheon in the Guildhall, and have fixed Tuesday, May 2, for their visit.

Yesterday's bulletin respecting the health of the Earl of Stamford was of a most reassuring character. His lordship's medical attendants reported that their patient had passed a much more comfortable night, and that his health was considerably improved.

The name of Mr. Barran, M.P., should have been added to the list of gentlemen who dined with Mr. Gladstone in Downing-street on Wednesday evening last.

His Excellency Li Fong Pao, the Chinese Minister, yesterday visited the works of Messrs. Yarrow and Co., of Poplar, and inspected with great interest the various torpedo boats building by that firm.

The funeral of the late Sir Henry Cole will take place at ten a.m. at Brompton Cemetery tomorrow. We are asked to state that, having regard to the eminent services of Sir Henry Cole, and the desire expressed by many of those connected with the department with which he was so long associated to attend his funeral, the Lords of the Committee of Council on Education have decided not to open the Museum and offices at South Kensington till twelve o'clock tomorrow.

THE MARQUIS CONYNGHAM.—The Marquis Conyngham's condition was more favourable yesterday morning. At ten a.m. the following bulletin, signed by his lordship's medical advisers, was issued: "Lord Conyngham has passed a good night, and his general condition is reassuring." Late last evening (ten p.m.) the following bulletin was issued: "Lord Conyngham has passed a good day, and the strength is maintained."

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